

EVERYDAY
FOODS

—
HARRIS
AND
LACEY

RIVERSIDE
HOME
ECONOMICS
SERIES

HOUGHTON
MIFFLIN CO.

THIS BELONGS TO

Margaret L. Ross
Framingham Normal



Sept. 1930

Margaret L. Ross.

Household Arts

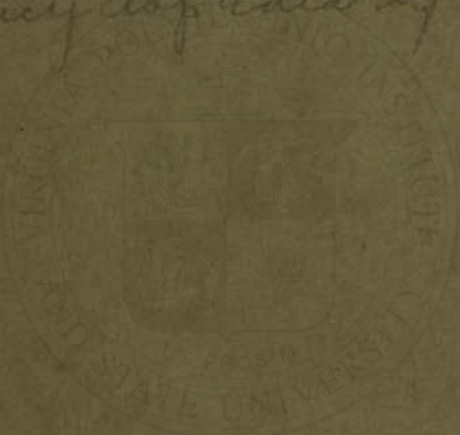
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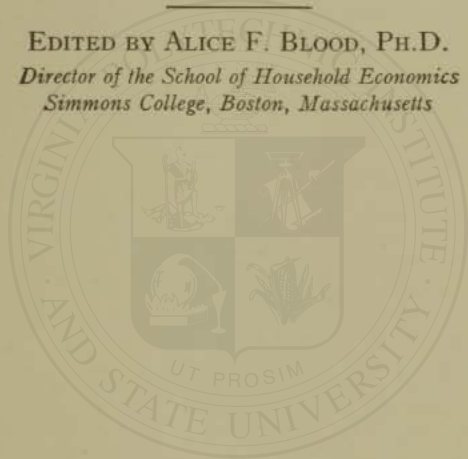
grocer's encyclopedia

Encyclopedia of Food



RIVERSIDE HOME ECONOMICS
SERIES

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EVERYDAY FOODS

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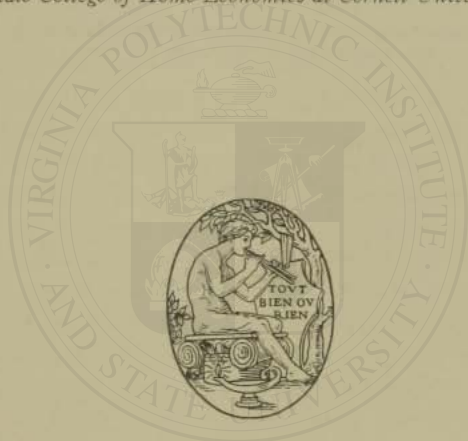
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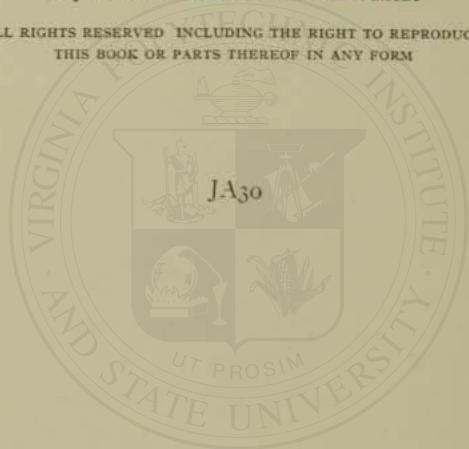
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PREFACE AND SUGGESTIONS TO TEACHERS

EVERYDAY FOODS has two chief objectives: (1) It is written with the idea of making food study a science comparable to the other school sciences. It is a health and nutrition text and does not overemphasize cookery or the processes of production and the manufacture of foods. (2) The book is equally usable at home and at school. The home work is as carefully suggested as the class work. Home work is recognized in EVERYDAY FOODS as practical and necessary for the successful teaching of food study.

This book is written primarily for girls from thirteen to seventeen years of age, in secondary schools. Because high school organization varies widely throughout the country, the grade is difficult to specify. For high schools that are on the 8-4 plan the book may be used in any foods class. For high schools that are divided into junior and senior schools (6-3-3 plan) it is suitable for use in the upper years of the junior school or for the senior high school. It is conceded that the introductory year of the junior high school should be a series of short units; hence this text is not recommended for use in the sixth or seventh grades.

Although the book is written primarily for girls, EVERYDAY FOODS may be used for boys' classes, because it is a science text and not primarily a laboratory manual of cookery. There is good reason for offering food study to both boys and girls.

The unit organization and the connection of home work and school work make EVERYDAY FOODS suitable for use in continuation schools.

The material used comes within the experience of high school girls and is selected in accordance with their daily contacts, interests, and responsibilities both at school and at home in matters pertaining to food: the wise selection of food for themselves and others; good manners and courtesy; marketing; preparing and serving meals; planning for special occasions.

The book is divided into six units. A glance at the Table of Contents will show, as a distinctive feature, that Unit Four is a general reference section and that Unit Six is the laboratory manual or Cook Book. Attention is also called to the chapter organization, where the subject-matter is reinforced by a few pertinent references and by Class Problems and Questions which serve as a summary, and by suggested home work.

This book is written primarily for girls from thirteen to seventeen years of age, in secondary schools. Because high school organization varies widely throughout the country the grade is difficult to specify. The book is usable in foods classes of both Junior and Senior High Schools.

EVERYDAY FOODS covers a year's work in food study. It is recommended that the time devoted to this study be distributed through two or three years. In a two-year course, one semester of food study may be offered each year. Breakfasts and the Miscellaneous Unit (Five) may be offered the first year; and Luncheons and Dinners the second year, with Unit Four and the Cook Book used for reference and laboratory work during both years. In a three-year course Breakfasts, Luncheons, and Dinners offer logical divisions, with certain chapters from Unit Five selected for each year; Unit Four, the general reference section, and Unit Six, the Cook Book, would be used each year. The chapters need not be used in sequence.

The recipes have been thoroughly tested in the authors' classes. Small recipes are given for convenience in the school laboratory, and family-sized quantities for home work.

Notebook work should have educational value. There is no good reason for putting into the notebook material found in the text. The notebook should be a record of the reference work, of home work, and of results, judgments, and conclusions of the student based on home work and class work. It is expected that free use will be made of bulletins, and that the library will contain a few well-selected references.

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¹ Illustrations from the United States Department of Agriculture are Figures 3, 8, 10, 11, 12, 13, 18, 19, 20, 21, 24, 26, 27, 28, 29, 30, 31, 45, 46, 47, 48, 49, 54, 55, 70, 71, 72.

CONTENTS

UNIT ONE. BREAKFAST

CHAPTER I. WHAT SHALL WE HAVE FOR BREAKFAST?	I
Introduction — American breakfast menus — The importance of eating breakfast — What are the reasons for eating breakfast? — Breakfast and the day's food.	
CHAPTER II. FRUIT FOR BREAKFAST	8
How fruits help to keep us well — Fruits as appetizers — Fruits are laxative — Energy value — Mineral content — Vitamins in fruits — Dried fruit — Canned fruit — Is fruit a luxury? — Buying and caring for fruit — Preparation and serving of fruit for breakfast — Cooking fruits — The addition of sugar to cooked fruit.	
CHAPTER III. MILK	19
Importance of milk — Composition — Milk regulations — Pasteurization of milk — Food value of milk — Protein in milk — Fat in milk — Carbohydrate — Minerals — Vitamins — Fuel or energy value — Milk products — Use of milk for breakfast — Milk cookery — Rules for care of milk in the home. <i>Cocoa and Chocolate:</i> Food value — Composition of cocoa and chocolate.	
CHAPTER IV. BREAKFAST BEVERAGES	29
<i>Water:</i> How much water should we drink? — How the body uses water — When shall we drink water? — Shall we drink water at meal time? — Is your water supply safe? — Water in cookery. <i>Tea and coffee:</i> Effect of tea and coffee — Principle involved in making tea and coffee. <i>Tea:</i> Kinds — Quality — Source — Buying — Teapots — Serving tea. <i>Coffee:</i> Source and production — Buying — Coffeepots — Coffee substitutes.	
CHAPTER V. CEREAL BREAKFAST FOODS	37
Introduction — Cereal grains — Structure of a cereal grain — General composition of cereals — Fuel value of cereals — Food value of breakfast cereals and place in the diet. <i>Cooking of Cereals:</i> Principles of cookery — The carbohydrate family — Method of cooking cereals — Ways of preventing lumping — Serving cereals — Buying cereals.	
CHAPTER VI. QUICK BREADS	46
Hot breads for breakfast — Shall we eat hot breads? <i>Toast:</i> Varieties — General rules in toast-making. <i>Quick Breads:</i> Ingredients — Leavens and leavening agents — General proportions for quick breads — Method of mixing flour mixtures — Oven temperatures — Food value of quick breads — Judging quick breads — Serving quick breads.	

CHAPTER VII. EGGS AND BACON	55
<i>Eggs:</i> Why are eggs valuable as food? — Composition of eggs — Composition of white and yolk — Comparison of milk and eggs as food — Digestibility of eggs — Tests for the freshness of eggs — Care of eggs — Commercial storage of eggs — Home storage — Egg cookery — Uses in cookery — Ways of serving eggs for breakfast.	
<i>Bacon:</i> <i>Other breakfast meats.</i>	
CHAPTER VIII. PREPARATION AND SERVING OF THE BREAKFAST	62
Planning the menu for breakfast — Order of courses for breakfast — Marketing — Planning the working schedule — Serving the breakfast.	
UNIT TWO. LUNCHEON OR SUPPER	
CHAPTER IX. WHAT SHALL WE HAVE FOR LUNCHEON OR SUPPER?	71
Some factors in planning luncheon and supper — Seasonal specials for luncheon — Relation of luncheon to other meals of the day — Daily food requirements — Luncheon hints.	
CHAPTER X. VEGETABLES FOR LUNCHEON	77
Eat more vegetables — How vegetables help to keep us well — Classification of vegetables — Some vegetables deserve special notice — Energy value of vegetables — Buying and caring for vegetables — What hot vegetable dishes shall we have for luncheon? — Vegetable cookery.	
CHAPTER XI. SALADS FOR LUNCHEONS AND SUPPERS	88
Salads for luncheon — Salad materials — Food value of salads and their place in the diet — Menu suggestions — Nuts as food — Preparation of salads — Salad dressings — Accompaniments for salads.	
CHAPTER XII. BREADS FOR LUNCHEON AND SUPPER	98
Shall we make or buy our bread? — Flour for bread-making — Kinds of wheat flour — Breads suitable for luncheon or supper — Ingredients for yeast breads — Score card for yeast breads — Yeast as leavening agent — Procedure in making yeast bread — Quick breads for luncheon or supper — Place of bread in diet — Uses of left-over bread.	
CHAPTER XIII. THE SCHOOL LUNCH	106
Is the school lunch important? — Keep your own machinery fit — School-lunch wisdom — What foods do schoolboys and schoolgirls need for lunch? — The school cafeteria — The lunch brought from home — Suggestions for pleasing school luncheons — Packing the lunch box — The lunch box supplemented at school.	

- CHAPTER XIV. THE MAIN HOT DISH FOR LUNCHEON OR SUPPER 117
 Variety in the main hot dish — Food value of hot dishes — Cheese cookery — Macaroni and spaghetti — Shellfish.
 Methods of preparing the main hot dish — Uses of left-overs — Digestibility of fried foods.
- CHAPTER XV. LUNCHEON OR SUPPER DESSERTS 126
 Choosing a dessert — That "sweet tooth" — Sugar — Production, manufacture, and food value — Place of sugar in the diet — Dessert discretion — Preparation of desserts for luncheon — Sponge cakes — Cookies — Fruit desserts — Puddings — Pastry — Custards — Fruit.
- CHAPTER XVI. PREPARING AND SERVING THE LUNCHEON OR SUPPER 134
 Planning the luncheon or supper — Labor-saving in preparing luncheon or supper — Types of luncheons — Order of courses — Marketing — Serving the luncheon or supper — The family luncheon — The formal luncheon — Supper — The buffet supper.
- UNIT THREE. DINNER
- CHAPTER XVII. WHAT SHALL WE HAVE FOR DINNER? 145
 Planning the three meals of the day — Menus that please, and why — The dinner menu — Types of dinner menus — The selection of dinner foods — A comparison of luncheon and dinner menus.
- CHAPTER XVIII. MEAT 155
 Kinds of meat — Economic importance of meat — Why we like meat — Composition and food value of meat — The digestibility of meat — Place of meat in the diet — The care of meat: (1) Federal meat inspection; (2) state and municipal control; (3) care in the home — How to buy meat — Beef — Veal — Lamb and Mutton — Pork — Meat cookery.
- CHAPTER XIX. POULTRY AND FISH 173
Poultry: Selection of chickens — Composition and food value of poultry — Dressing poultry — Ways of cooking — What to serve with chicken.
Fish: Kinds of fish — Place of fish in the diet — Buying and caring for fish — Fish cookery — What to serve with fish.
- CHAPTER XX. VEGETABLES FOR DINNER 182
 What vegetables are served for dinner? — Pleasing vegetable combinations at dinner — A comparison of vegetables for luncheon and dinner.
Potatoes: Composition and food value — Sweet potatoes — Suggested ways of preparing potatoes.
Rice: Food value of rice — Suggestions for cooking rice.
 Other vegetables in the dinner menu — Dinner salads — Bread with dinner.

CHAPTER XXI. DINNER DESSERTS 190

Comparison of desserts for dinner and for luncheon.

Frozen desserts: Kinds of frozen desserts — Food value of frozen desserts and their places in the diet.

Gelatin desserts: Source and food value of gelatin — Properties of gelatin.

Butter cakes: Ingredients and proportions — Preparations for cake-making — Methods of mixing — Baking the cake — Substitution and modification of ingredients in cake — Causes of failure in cake-making — Cake fillings — Food value of cake and place in diet.

CHAPTER XXII. THE PREPARATION AND SERVING OF DINNER 200

The dinner menu — The working schedule — Division of the working schedule — Carving.

UNIT FOUR. GENERAL

CHAPTER XXIII. WHAT SHALL THE FAMILY EAT? 216

The foodstuffs — Foodstuffs and body tissues — Articles of food classified: (1) vegetables and fruits; (2) protein foods; (3) cereals; (4) sugars; (5) fats — How shall we measure food? — How many calories are needed? — Food allowances for healthy children — Daily energy requirements for adults according to occupation — How much food shall we eat? — Food and good digestion — Rules that should govern the family meals.

CHAPTER XXIV. LET'S GO MARKETING 232

Buying in person — General conditions in the retail stores — Types of retail store — Cash-and-carry versus credit-and-delivery — Public markets — General suggestions for buying food supplies — The buying of canned goods — The buying of dried foods — Food laws — The Federal Food and Drugs Act — The Federal Meat Inspection Law — State and municipal food regulation — The food budget — The cost of food — Summary of economical buying.

CHAPTER XXV. THE KITCHEN 244

General considerations in kitchen planning — Importance of planning — Relation of kitchen to other parts of the house — Size and shape — Windows — Doors.

Interior finish: Floors — Walls and ceiling — Woodwork.

Arrangement of equipment: Kitchen triangles — Working areas within the kitchen — Preparation and cleaning areas — Height of working surface — The storage area — Pantries — Cabinets — Shelves.

Selection of kitchen equipment: Stove — Sink — Table and table-tops — Refrigerator — Utensils — Labor-saving devices — Kitchen conveniences — Score card for the kitchen.

- CHAPTER XXVI. WHERE SHALL WE EAT? 262
- General considerations — The breakfast room or breakfast nook —
The dining room — The combination dining room.
Linens: For dinner and the dining room — For breakfast or the
breakfast room — For luncheon or supper — Between meals —
Points in purchasing table linen — Sizes of table linens.
China: General rules in selecting china — Kinds of china.
Glassware.
Silver.
Flat silver.
Care of the dining room and its furnishings: Care of the silver — Care
of linen.
- CHAPTER XXVII. COURTESY AT THE TABLE 273
- Etiquette — The charm of good manners — Table etiquette — Ap-
pearance at the table — The A B C's of good table manners — Pos-
ture — Conversation — Serving and being served — The use of flat
silver — Bread — Finger foods — Napkins — Important don'ts —
Hints for the hostess — The host — The guest — Courtesy in the
school lunch room.
- CHAPTER XXVIII. TABLE SERVICE 285
- The importance of good usage — Types of table service: (1) English,
(2) Russian, (3) Compromise — Setting the table. General consid-
erations: table linen; the individual cover; dishes additional to in-
dividual cover; modification if maid service is available — Table
decorations — Serving the meal: without a waitress; rules for waiting
on the table — Seating at the table.
- UNIT FIVE. MISCELLANEOUS
- CHAPTER XXIX. FOOD FRILLS 297
- Candies:* Sugar cookery — Principles of sugar cookery: temperature;
invert sugar; crystallization — Do's and don'ts in candy-making —
Proportions and ingredients — Packing a box of candy.
Fancy cakes: Decorated cookies — Rolled wafers — Marguerites,
kisses, macaroons — Lady fingers or sponge drops — Fancy frosting
— Nut confections — Candied mint leaves.
Garnishes: General rules for garnishing foods — Garnishes appro-
priate for courses or dishes — Flowers.
- CHAPTER XXX. NOW AND THEN 306
- Introduction: I. Our Family Festivals: (1) Thanksgiving, (2) Christ-
mas dinner, (3) the picnic.
II. When the latchstring hangs out: (1) the formal luncheon, (2) the
party, (3) teas and receptions.
III. When we journey: The dining-car — At the hotel — Breakfast
— Luncheon — Afternoon tea — Dinner.
- CHAPTER XXXI. FEEDING THE SICK 318
- General considerations: Typical diets — Invalid cookery — Special
dishes for the invalid — The invalid's tray — Care of trays from the
sick-room — Special diets.

CHAPTER XXXII. FOOD FOR CHILDREN 324

Do children need special food? — The importance of careful feeding in childhood — Foods each child needs daily — Adaptation of food to age — Feeding the infant of one year of age — Feeding the two-year-old toddler — Feeding the pre-school child — Feeding the school child — The daily meals for children — Don'ts in child feeding — Summary — Steps to health.

CHAPTER XXXIII. FOOD PRESERVATION — CANNING FRUITS AND VEGETABLES 335

Ways of preserving foods: (1) drying, (2) cold storage, (3) canning, (4) exclusion of air, (5) preservatives: sugar, spices, acids, salt, smoking; harmful preservatives.
Why food spoils: molds, yeast, bacteria.
The use of canned foods: Precautions in the use of canned foods — Equipment for home canning — Methods of canning — Steps in canning — Storing.

CHAPTER XXXIV. FOOD PRESERVATION — JELLY-MAKING AND PRESERVING 346

Jelly-making: (1) Selection of the fruit; (2) extraction of juice and testing for pectin; (3) the proportion of sugar for jelly; (4) making the jelly; the jelly test; (5) score for jelly — Pectin extracts and their use.
Preserves: Marmalade — Jam — Fruit Butter — Conserves — The use of preserves and other such sweets in the diet.

UNIT SIX. THE COOK BOOK

INTRODUCTION 353

Table of measures and abbreviations for use in the recipes — Directions for measuring — Standard weights for a bushel of some staple foods — Buying guide — Approximate measure of one pound and one ounce of some common food articles — Dishwashing hints.

FRUIT	357
BEVERAGES	361
CEREALS	366
QUICK BREAD	369
EGGS	378
SOUPS	383
VEGETABLES	387
SAUCES	396
MAIN DISH FOR LUNCHEON OR SUPPER (ENTRÉES)	401
YEAST BREAD, ROLLS AND SANDWICHES	410
MEAT	415

CONTENTS

xiii

POULTRY AND FISH	420
SALADS, SALAD DRESSINGS, SALAD ACCOMPANIMENTS	427
CAKES AND COOKIES	435
PASTRY	445
PUDDINGS, CUSTARDS, AND FRUIT DESSERTS	449
GELATIN DESSERTS	455
FROZEN DESSERTS	457
CANDIES	462
CANNING AND PRESERVING	467

APPENDIX

TABLE I. BALDWIN-WOOD WEIGHT-HEIGHT-AGE TABLE FOR BOYS	477
TABLE II. BALDWIN-WOOD WEIGHT-HEIGHT-AGE TABLE FOR GIRLS	478
TABLE III. AVERAGE HEIGHTS AND WEIGHTS — MEN	479
TABLE IV. AVERAGE HEIGHTS AND WEIGHTS — WOMEN	479
TABLE V. HUNDRED-CALORIE PORTIONS.	480
TABLE VI. FOOD VALUE OF AN AVERAGE SERVING OF CER- TAIN FOOD MATERIALS	488
TABLE VII. APPROXIMATE NUMBER OF HUNDRED-CALORIE PORTIONS IN COMMON FOOD MATERIALS AS PURCHASED	494
INDEX	497

EVERYDAY FOODS



UNIT I BREAKFAST

CHAPTER I

WHAT SHALL WE HAVE FOR BREAKFAST?

Introduction. What a person eats for breakfast depends greatly on who he is. Grandmothers do not eat the same breakfasts that growing boys and girls eat. A man who works all day in his office does not eat the same breakfast as a soldier who is on the march all day. You do not have the same breakfast that a two-year-old child has. Sick people eat different breakfasts from those that well people eat. In summer we vary our menus from those of the winter.

We leave it to you to say whether boys and girls eat the same breakfasts. Rumor has it that high-school girls are sometimes prone to slip off to school without breakfast, unless their parents intervene; but we do not hear of high-school boys playing this trick on themselves.

Put in another way, all of this means that what one needs to eat for breakfast, and during the rest of the day, depends on one's age, one's occupation, one's state of health, and perhaps on one's sex, or on the season.

These factors do not entirely cover the case, for habit and custom have much to do with what one eats. For example, oranges are habitually used for breakfast in many American homes.

When large numbers of people have the same habit it is called a custom. We find that breakfast menus differ according to custom. Evidence of the effect of custom on what people eat for breakfast is found by comparing typical American, English, Mexican, and French breakfast menus; in fact, different sections of our own country have very different as well as interesting break-

2 WHAT SHALL WE HAVE FOR BREAKFAST?

fast customs. In Louisiana coffee may be served you before you rise; you will not eat many breakfasts in the Middle West before you make the acquaintance of buckwheat cakes; and in the South you will have hot biscuit or waffles for breakfast.

The division of the day's food into meals is largely a matter of custom and varies in different parts of the world.

From the following typical breakfast menus you can compare the customs of different countries with your own in regard to the first meal of the day.

French

Coffee or Cocoa or Tea
Cold Buns
Jam (occasionally)

English

Tea with cream and sugar, or Cocoa
Bacon and Eggs, or Kippers (dried fish)
Deviled Kidneys or Sausage
Tomatoes
Muffins or Cold Rolls or Light Bread
Toast and Marmalade (always)

Mexican

Early breakfast before 8.00 A.M.
Coffee or Spiced Chocolate
Breakfast 11:00 A.M. to 1:00 P.M.
(Comparable to our luncheon)
Eggs (always) Cold Rolls
Sapa de Pan (a piece of toast moistened with highly seasoned meat stock or gravy)
Frijoles (brown beans) Cakes
Spanish Rice
Fresh Fruit (always)

American breakfast menus. Breakfast varies less, perhaps, than any other meal. Any breakfast menu will contain some of these foods: fruits, cereals, beverages (usually hot), breads, eggs and bacon, or perhaps a meat. A breakfast consisting of *all* of these items is termed a *heavy breakfast*. A breakfast consisting of a goodly number of these items, but not all, is considered a *medium breakfast*. A breakfast consisting of only two or three of these items is a light or *very light breakfast*.

*Heavy Breakfast*¹

Cantaloupe
Oatmeal, Cream, Sugar
Coffee or Milk or Cocoa
Ham and Eggs
Muffins
Hot Cakes and Syrup

*Medium Breakfast*¹

Cantaloupe
Shredded Wheat,
Cream
Coffee or Milk or Cocoa
Soft Cooked Egg
Toast

*Light Breakfast*¹

Cantaloupe
Toast
Coffee or Milk or Cocoa

¹ Note that fruit occurs in each type of breakfast.

The importance of eating breakfast. The word *breakfast* means exactly what it says. We *break* our *fast*. For twelve hours or more we have eaten nothing. In fact, for at least eight hours of that time we have been relaxed in sleep, or should have been. To start our bodies out for the day with no breakfast would be like trying to ride a train without buying a ticket. Just as tramps ride without tickets, so some people force themselves to face the day's labors without breakfast. They are food tramps. There are dangers and a lack of comfort in both cases.

What are the reasons for eating breakfast? Three meals each day is the first step in good nutrition. Growing boys and girls need proportionally more food than adults, because they are building their bodies. The fact is, that three meals a day are not sufficient for young children, and at times even older children need more than three meals daily.

More people under twenty years of age are underweight than overweight. This means that if they omit breakfast they miss one of the three chances to get building materials and fuel supplies. The person who goes without breakfast runs a great risk of being undernourished, a condition which may cause susceptibility to disease, or bad teeth, nervousness, early old age, or other disorders. Three well-balanced meals constitute a full ticket for a ride in comfort on the "healthland" railway.

One of the recognized ills of modern life is constipation. The omission of breakfast, or the eating of a hasty breakfast and rushing away immediately to school, to work, or to play, are often causes of constipation.

Breakfast and the day's food. The total amount of food that any one needs in a day is measured by a unit called the calorie. To learn the number of calories you need per day see tables, "Food Allowances for Healthy Children," page 223.

Since breakfast is usually the lightest meal of the day, it is considered adequate if a fourth of the calories are furnished by breakfast.

A well-balanced meal means more than the proper amount of calories, for the measurement of food only by calories would be similar to the measurement of a supply of clothes by the pound

4 WHAT SHALL WE HAVE FOR BREAKFAST?

without any regard to the assortment of articles — shoes, hats, dresses, underclothes, etc. Two bundles of clothes may weigh exactly the same, and one of them contain a complete outfit while the other contains one or two garments but entirely lacks some very necessary apparel. Just so it is with a selection of foods. A meal to be well-balanced must meet the various body needs for food:¹

- (1) Body-building and repairing foods — protein, mineral ash, and vitamins: foods to make us grow.
- (2) Fuel foods — fats, carbohydrates, proteins: foods to make us go.
- (3) Regulating and protecting foods — vitamins, minerals, and water: foods to keep us growing and going.

The chapters that follow explain the occurrence of the various food materials that are needed daily by the body. When you have finished the series of chapters on Breakfast (Chapters I to VIII, Unit One) you should be able to plan, prepare, and serve well-balanced, satisfying, and attractive breakfasts for your family. To gain this goal it will be necessary for you to practice at home, for you cannot acquire skill and managerial ability merely through the laboratory work at school. Home practice and project suggestions are made to you at the end of each chapter, in the hope that you will make use of your own kitchen as a home economics laboratory. "Practice makes perfect."

CLASS PROBLEMS

1. List typical breakfast customs of four foreign countries. Consult the older members of families from other countries. If possible, find out what is eaten for breakfast in Oriental countries.
2. Have boys in a class write down what they ate for breakfast. Have girls in the class do the same. Compare the two lists as to the type and quantity of the food.
3. Make out a list of health habits that fit into the day from arising until school time. Score the class accordingly. Encourage the establishment of these habits by all the class.
4. The following is a typical menu card from an American Hotel. Note that there are two kinds of menus: club breakfasts, and breakfasts à la carte. Choose from each of these menus a light, a medium, and a heavy breakfast.

¹ See Unit Four, Chapter XXIII.

WHAT SHALL WE HAVE FOR BREAKFAST? 5

SAMPLE CLUB BREAKFAST MENUS

No. 1. 35 cents

2 pieces of Bacon or
1 piece of Ham
2 Hot Cakes

Coffee Tea Milk

No. 2. 50 cents

Oatmeal, Cream of Wheat, or
Stewed Prunes

Bacon or Ham or Brookfield
Sausage

With One Fried Egg

Hot Rolls or Toast
Coffee Tea Milk

No. 3. 75 cents

Fruits in Season or
Cereal with Cream

Choice of:

Broiled Steak

Fried Eggs with Bacon or Ham

Fried or Broiled Gulf Fish

Homemade Country Sausage with
Griddle Cakes

Omelet: Ham, Bacon, Spanish or
Jelly

American Fried Potatoes

Choice of: Hot Rolls,

Dry or Buttered Toast

Tea Coffee Milk Instant Postum

A LA CARTE MENU

COFFEE SHOP BREAKFAST

Fruits

Honey Dew Melon

Stewed Prunes with Cream

Fresh Peaches with Cream

Oranges

Canned Peaches or Pears

Half Grape Fruit

Sliced Bananas with Cream

Baked Bananas with Cream

Preserves and Marmalades

Preserved Figs

California Cherries

California Apricots

Strained Honey

Strawberry Jam

Orange Marmalade

Raspberry Jam

Guava Jelly

Grape Jelly

Bar le Duc

Toast and Cakes

Toast, Dry or Buttered

Milk Toast

Cinnamon Toast

Cream Toast

Wheat, Corn or Rice Cakes with

Maple Syrup or Strained Honey

Cereals

A choice of any Cooked or Uncooked Cereal

6 WHAT SHALL WE HAVE FOR BREAKFAST?

Eggs and Omelets

Boiled, Fried, Shirred Eggs	Omelet with Chicken Livers
Poached Eggs	Omelet with Mushrooms
Scrambled Eggs	Omelet wit' Minced Ham
Spanish Omelet	Bacon and Eggs or Ham and Eggs
Jelly Omelet	Omelet with Chicken Hash
Fresh Tomato Omelet	Fresh Fruit Omelet

Fish

Kipperd Herring Grilled	Redfish Grilled
Jumbo Norway Salt Mackerel	Gulf Trout Grilled
Boiled	

Steaks, Chops, Sausage

Minute Steak	Chicken Hash in Cream
Broiled Bacon	Sirloin Steak
Corned Beef Hash with Poached Egg	Broiled Calf's Liver with Bacon
Broiled Ham	Chipped Beef in Cream
Homemade Sausage Cakes	Lamb or Roast Beef Hash

Potatoes

French Fried	Au Gratin
American Fried	Hashed in Cream

Coffee, Tea, etc.

Tea	Cocoa
Half and Half	Butter Milk
Milk	Coffee
Postum	Cream

QUESTIONS

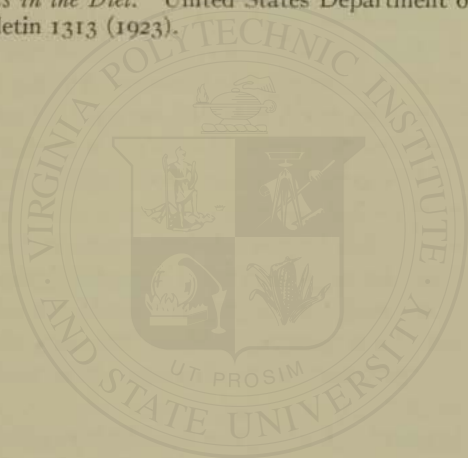
1. What foods are most often eaten for breakfast?
2. What is meant by a light breakfast? A medium breakfast? A heavy breakfast? Illustrate each with a sample menu.
3. What three functions does food serve in our bodies?
4. What are the factors that determine what one eats or should eat for breakfast?
5. Give reasons why every one should eat breakfast.
6. What is meant by a balanced meal?

HOME PRACTICE

1. List the various members of your family and for three days record what each one eats for breakfast. Keep the list as a basis for study of balanced meals throughout the breakfast series.
2. Find out what your height and weight should be for your age.
3. Begin now to eat a good breakfast, each day, regularly and leisurely, and have a little spare time before leaving for school. Why should you?

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Good Proportions in the Diet. United States Department of Agriculture,
Farmers' Bulletin 1313 (1923).



CHAPTER II

FRUIT FOR BREAKFAST

FRUIT is universally liked for breakfast. It is one of the few foods that should be included regularly in the day's dietary. We should therefore know the properties that make it valuable.

HOW FRUITS HELP TO KEEP US WELL

Fruits as appetizers. By their attractive appearance and fragrance and their appealing flavor, fruits tempt the appetite. Even the thought of a luscious cantaloupe or some other favorite breakfast fruit makes one's mouth "water." Food eaten with relish is digested quickly; the mouth's "watering" for a food means that the digestive juices are stimulated. Thus the stomach is ready for food as it is swallowed, and digestion begins at once. The fact that fruit is relished makes it doubly desirable for breakfast, because appetites need stimulating for the morning meal and there are relatively few flavor foods available for breakfast. Fresh fruits are more valuable in this way than cooked or dried fruits. Since fruit is an appetizer it is usually the first course at breakfast.

Fruits are laxative. One of the fundamental health rules is a daily bowel movement. Fruit has a most wholesome effect on the bowels. Its laxative tendency is due both to the fiber which it contains and to its acids. The woody fiber contained in fruits and vegetables is called cellulose. The body does not digest and assimilate cellulose, but the cellulose is beneficial in the digestive tract because it furnishes needed bulk (sometimes called *roughage*), which helps in the elimination of waste from the intestines. The cellulose and acids in fruits give them their laxative property.

Energy value of fruits. Fruits vary greatly in the number of calories which they contain as is shown by the following table giving one-hundred-calorie portions of some fruits. This table shows that some fruits contain rather high fuel value. Dried

fruits are no more expensive as a source of energy than butter, milk, or cheap cuts of meat; and fresh fruits, judged on energy alone, are as economical as good cuts of meat.

One-hundred-calorie portions of fruits:¹

Apple, fresh, 1 large	Orange juice, 1 cup
Apricots, canned, 3 large halves and 2 tablespoons of juice	Peaches, fresh, 3 medium
Bananas, 1 large	Peaches, canned or stewed, 2 large halves and 3 tablespoons of juice
Blackberries, fresh, $\frac{1}{2}$ cup (50 berries), stewed, $\frac{1}{4}$ cup	Pears, canned, 3 halves and 3 tablespoons of juice
Cantaloupe, 1 melon, $4\frac{1}{2}$ inches in diameter	Pears, fresh, 2 medium
Cherries, stoned, 1 cup	Pineapple, canned, 1 slice and 3 tablespoons of juice
Dates, 3 to 4	Shredded, $\frac{1}{4}$ cup
Figs, dried, 1 $\frac{1}{2}$ large	Pineapple, fresh, 2 one-inch slices
Grapes (Concord), 1 large bunch	Plums, fresh, 3 or 4 large
Grape juice, $\frac{1}{2}$ cup	Prunes, 4 medium
Lemon juice, 1 $\frac{3}{8}$ cups	Raisins, $\frac{1}{4}$ cup
Oranges, 1 large	Raspberries, 1 $\frac{1}{8}$ cups
	Strawberries, 1 $\frac{1}{3}$ cups

Mineral content of fruits. All fruits contain some mineral ash. In fact, milk, fruits, and vegetables are our chief sources of these necessities. A diet sufficient in calories is not necessarily adequate in mineral ash. There are three minerals needed by the body that haphazard eating cannot be trusted to supply; they must be consciously planned for in our daily meals — iron, calcium, and phosphorus. Raisins, prunes, strawberries, blackberries, plums, and pineapple contain more iron than some fruits, but many others contain some iron. Oranges contain more calcium than any other fruit, but there are considerable quantities in grapefruit, blackberries, raspberries, plums, pineapple, and other fruits. Phosphorus is well distributed in our food fruits. (See also Table VI in the Appendix.)

Vitamins in fruits. Vitamins are the A B C's in nutrition. At the present time five vitamins are known to exist. These have been designated as vitamins A, B, C, D, E. Very little is now

¹ From M. S. Rose: *Feeding the Family*. Reprinted by permission of The Macmillan Company, publishers.

known of the distribution of vitamins D and E. Some definite facts concerning the need of the body for vitamins are known, and a good deal is also known of the distribution in various foods of vitamins A, B, and C. See Table VI in Appendix. The vitamins are important as protective, regulating, and growth-promoting substances.



FIG. 1. HIGH SCHOOL GIRLS STUDY VITAMINS IN FOODS BY FEEDING WHITE RATS

Courtesy, University of Texas, Extension Service

Fruits may in general be said to be excellent sources of vitamin C, good sources of vitamin B, and with a few exceptions — orange, for example — poor sources of vitamin A.

Vitamin C prevents scurvy. The body does not store this vitamin, hence a daily supply is necessary. This is especially important in the diet of children. Vitamin C is very unstable. It is usually destroyed by heating, by drying, and even by the aging of foods. Milk cannot be depended on as a source of this vitamin. Fresh uncooked fruits and vegetables are its most reliable sources.

It is plain that fresh uncooked foods are our safest dependence for our daily supply of vitamin C. Fruits are especially valuable in meeting this need. Citrus fruits (lemons, oranges, grapefruit) are the most important for the vitamin in question. Other kinds are also important sources. Half an orange daily is probably enough to supply the need for vitamin C.

The following table shows the occurrence of the vitamins A, B, C in fruits, so far as present investigation has determined:

TABLE SHOWING THE VITAMIN CONTENT OF FRUITS¹

+++ means that the food is an excellent source of the vitamin.

++ means that the food is a good source of the vitamin.

+ means that the vitamin is present in significant but not abundant quantity.

? means that the food has not been investigated.

o means that the food lacks the vitamin.

FRUIT	VITAMIN A	VITAMIN B	VITAMIN C
Apples, raw	+	+	++
Bananas, raw	?	++	++
Grapefruit	?	++	++
Lemon juice	?	++	+++
Orange juice	+ to +++	++	+++
Peaches, raw	?	?	++
Pears, fresh	?	+	?
Pineapple, raw, fresh	++	++	+++
Pineapple, canned	+	+	++
Prunes	+	+	o
Raisins	?	+	o
Raspberries, fresh	?	?	+++
Raspberries, canned	?	?	++
Rhubarb	?	?	+
Strawberries	?	+	++

Many of our common fruits have not yet been investigated, but we are justified in concluding that fresh fruit is a most important source of vitamin C.

Dried fruit. At first, drying fruit was undertaken in order to save the surplus crop, but now it is an industry by itself. In California large orchards are planted for the sole purpose of procuring fruit for drying. Fruit may be either sun-dried or artificially dried.

Peaches, apricots, and apples are first sliced and then subjected

¹ Adapted from *Food: Why? What? How?* Courtesy of the American Red Cross and the Postum Cereal Co., Inc.

to sulphur fumes. The sulphur prevents the darkening of the fruit, protects it from insects, and makes it dry more easily. The fruit is dried in trays in the sun.



FIG. 2. BOYS ARE JUST AS MUCH INTERESTED IN VITAMINS AND OTHER NUTRITION STUDIES AS ARE GIRLS

Courtesy, University of Texas, Extension Service

Prunes are dried without removing the stones. They are first dipped into boiling lye; this cracks the skins so that they will dry easily. Then they are washed and dried on trays in the sun. After being dried they are dipped into a boiling solution of prune sirup or glycerine.

Canned fruit. The canning of fruits is also an important industry. Peach canning in California, and pineapple canning in the Hawaiian Islands are the two principal industries of this kind. Apricots, pears, cherries, and berries are also canned on a large scale.

Is fruit a luxury? As sources of fuel, fresh fruits cannot be considered so economical as some other foods, such as cereals, but

COMPOSITION OF FOOD MATERIALS

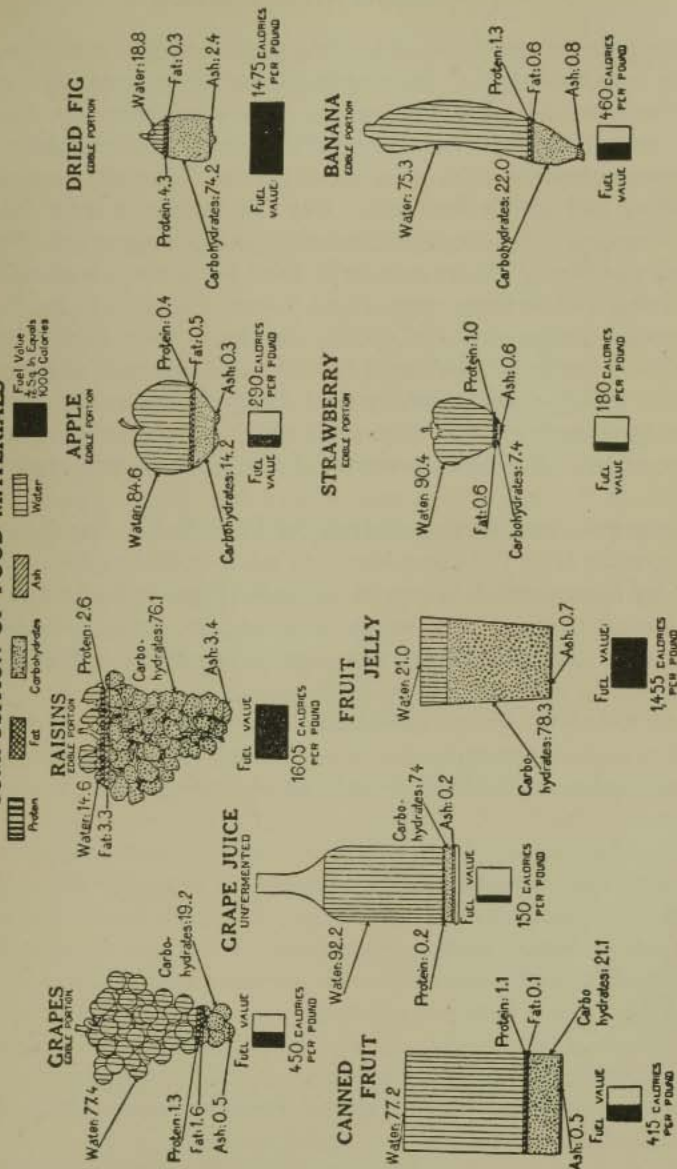


FIG. 3. COMPOSITION OF FRUITS

they are not so expensive as is often supposed. Dried fruits are cheap sources of fuel. As sources of protective and regulatory substances fresh fruits are necessities rather than luxuries. Money spent in purchasing a regular supply of fresh fruit is economical health insurance.

Buying and caring for fruit. Buy fruit when it is in season, for not only is it cheaper then, but the quality is superior. Select sound, ripe fruit. If fruit is to be kept for a while it should be purchased a little under ripe.

Oranges, grapefruit, and apples are cheaper for family use if bought by the box. Although these fruits keep well, it is necessary to watch them carefully and discard any unsound fruit. In warm weather fruits that spoil easily should be kept in the refrigerator. They will keep best if not washed until ready for use.

Preparation and serving of fruit for breakfast. The first rule in preparing fruit for the table is to wash it thoroughly. Care must be taken not to bruise it, because if cut or bruised it will spoil quickly. Only that which is sound, ripe, and fresh should be served uncooked. Little or no sugar is needed with thoroughly ripe fruit.

If fruit knives, fruit napkins, and finger bowls are used fresh fruit may be prepared at the table. Usually it is prepared in the kitchen and is on the table in individual servings when breakfast begins.

Oranges are served sliced, in the half skin with sections loosened, shredded, and as orange juice. Grapefruit is served in the half skin with the pulp cut loose from the bitter-white part of the skin and from the tough sectional divisions. It may be eaten with or without sugar. Grapefruit is also served shredded; and sometimes the juice is used for a drink.

Apples may be served raw, to be peeled at the table. Cooked apples are very well liked for breakfast. Baked apples, stewed apples, and applesauce, are all used. Pears are also served, either raw, baked, or stewed.

Bananas are often sliced and eaten with milk or cream and with sugar. They should not be prepared until it is time to serve

them, because they darken on standing. They may be eaten in combination with dry prepared cereals.

Berries should be washed thoroughly and care taken to avoid mashing them. They are served with milk or cream (and sugar), or they may be combined with dry prepared cereals and served with milk or cream (and sugar).

Cassaba melon, cantaloupe, and honey dew melon are chilled and served sliced or in half, according to the size of the melon. They may be eaten with salt and pepper, and often a little lemon juice is used.

Peaches and apricots are usually served raw and sliced, with milk or cream (and sugar). Like bananas they darken if peeled and allowed to stand. This darkening may be prevented by adding sugar. Peaches may also be served with dry cereals.

Cherries, plums, and grapes are usually chilled, thoroughly washed, and served on individual plates with no further preparation.

Fresh pineapple is peeled, sliced or diced, sweetened and then allowed to stand for several hours before being served.

Fresh figs, a delicious fruit grown in the southern part of the United States, keep so poorly that they are not shipped long distances. They do not resemble dried figs any more than grapes resemble raisins. For breakfast, they are peeled and served with milk or cream. Little or no sugar is added, because the fruit is very sweet when ripe. They are also served in combination with dry cereals.

Canned fruits are not popular for breakfast because they are decidedly sweet, but they may be used at that meal.

Prunes are the most popular dried fruit used for breakfast. They are usually cooked in the water in which they have been soaked, slightly sweetened, and served either with some of the resulting sirup, or with milk or cream.

Dried peaches, apricots, and apples are usually stewed. Although they may be served for breakfast, they are used more for luncheon and supper as a simple sweet. Dried figs, raisins, and dates are often steamed and served with cooked cereals.

Cooking of fresh fruit. Fruit should always be washed before

it is cooked. Although it is usually acceptable raw there are sometimes good reasons for cooking it.

1. Fruit is cooked to soften the cellulose. Cooking is often necessary when fruits are prepared for children, invalids, or convalescents. For very young children cooking does not soften the fiber enough, therefore the cooked fruit is pressed through a strainer or through cheesecloth.

2. If fruit is overripe, cooking it will stop fermentation.

3. Cooking increases the ways in which fruit may be served, thus giving an acceptable variety.

To prevent darkening, fruits pared or sliced for cooking should be cooked at once, or covered with cold water.

Cooking of dried fruit. 1. Carefully inspect dried fruit for insects.

2. Wash it well through several waters.

3. Soak it in water overnight (except dried apples).

4. Cook it in a covered vessel until it is tender, using the water in which the fruit was soaked. Some dried fruits (raisins, figs, dates, currants) are steamed in a double boiler.



FIG. 4. AN APPLE ORCHARD IN THE DAVIS MOUNTAINS OF WEST TEXAS
Courtesy, Farm and Ranch

The addition of sugar to cooked fruit. In cooking fruit the use of sugar retards the softening of the fiber; hence sugar may be used, with care, to prevent fruit from cooking to pieces. In such cases sugar may be added to the fruit, or it may be cooked in a sugar sirup. In baking and preserving fruits, especially the watery variety, sugar is used to help keep the shape of the fruit.

When sugar is used merely for sweetening, as in the case of prunes, it is added last in order not to delay the cooking process.

CLASS PROBLEMS

1. Have each member of the class report briefly on a different fruit. Use an encyclopedia and any other available source of information.
2. Look up the process of preparing some kinds of dried fruit for market.
3. List the fruits available in your local market and their respective prices. Discuss how each of the following factors affects the price of each fruit: production, transportation, keeping qualities, season, type of store (credit and delivery grocery, or cash-carry).
4. Compile a fresh fruit calendar for your locality showing the seasonable fruits available each month in the year. During the year revise this list and put in new prices as the seasons change.
5. List the dried fruits available in your market. Compare the prices and discuss the relative merits of dried fruit in bulk and in packages.
6. Make a class excursion to the market to study the buying of fruits.
7. Let each member of the class keep a record for a week of the fruit she eats. Tabulate this record and indicate with plus marks the occurrence of vitamins and iron, phosphorus, and calcium. (See Table VI in Appendix.)
8. By comparing costs of one-hundred-calorie portions prove the statement that dried fruits are as cheap a source of energy as milk, butter, or the cheaper cuts of meats. (See Appendix, Table V.)
9. Experiment to test the difference in composition of green and ripe fruit. Select a ripe, a slightly underripe, and a decidedly green apple or banana. Place a drop or two of dilute iodine solution on the cut surface. A blue color indicates starch. What are your results? Your conclusions?
10. Exhibit one-hundred-calorie portions of all available fruits, both fresh and dried. Make a comparison of the cost of each.
11. Prepare fresh and dried fruits in various ways for breakfast. (See Unit VI for recipes.)
12. Find out how many level tablespoons of flour there are in a cup; of water in a cup. Compare the results of the class average with Tables on page 353.
13. How many teaspoons in a tablespoon?

14. Learn the tables of measurements and abbreviations on page 353.
15. Learn the arrangement of utensils in your desk. Make a drawing from memory. Check this.

QUESTIONS

1. Explain why fruits help to keep us well.
2. Are fruits expensive sources of energy? Discuss.
3. Give the amount of one-hundred-calorie portions of five staple fruits.
4. What three minerals are of such importance that they must be planned for in our daily food? Name fruits that are good sources of each of these minerals.
5. What can you say of the vitamin content of fruit?
6. Do you think that fruit is necessary daily? Why?
7. Name several fruits rich in vitamins A and B. Give six that are excellent sources of vitamin C.
8. Is fruit a luxury?
9. Discuss the selection of fruit for the table.
10. Give ten different ways of preparing or serving fresh fruits for breakfast.
11. Why is fruit cooked?
12. State the general rules for cooking dried fruit.
13. At what stage in the cooking would you add sugar to baked apples, peach preserves, prunes? Why?

HOME PRACTICE

1. Purchase for a week the fruit used by your family.
2. Procure from your grocer the prices of fresh and dried fruits.
3. Plan for a week the breakfast fruit for your family. Compare the costs of fresh and dried fruits for these menus.
4. Keep an account of the fruit that the various members of your family eat in a week. Should your family spend more for fruit? Why?
5. Prepare the fruit for your family's breakfast for a week.
6. If you eat candy, try substituting such dried fruits as dates, figs, raisins.

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- Sherman, H. C. *Food Products*. The Macmillan Company. Chapter I for summary of vitamins A, B, and C in nutrition; Chapter IX for general discussion of fruits.
- Bailey, E. H. S. *Source, Chemistry and Use of Food Products*. P. Blakiston Son & Company.
- Ward, Artemas. *Encyclopedia of Food*. Excellent illustrations and descriptions of all kinds of fruits, rare and well known.
- Government bulletins on individual fruits.

CHAPTER III

MILK

Importance of milk. The abundant use of milk is the one way in which a housewife can save work and worry in planning well-balanced meals. Milk will cover a multitude of sins of omission in the dietary. So important is it in the diet that some scientists say we should use a quart daily until we are grown and after that a pint. It is not necessary to drink a quart per day; there are many ways of adding it to the day's food.

The importance of milk in the diet is due to its ability to support growth, to repair body tissue, to protect the body against "deficiency diseases," to supply fuel, and to help keep us young and vigorous. In various parts of the world different animals are used for the production of milk — in polar regions, the reindeer; in desert lands, the camel; in some mountainous countries, the goat; in other places, the mare, the sheep, the llama, and the buffalo. In our own country, and in others with similar climate, cow's milk is most common. The discussion in this text is of cow's milk.

Composition of milk. Milk varies in composition according to the cow, the season, and the feeding. Most of us do not use the



FIG. 5. A QUART OF MILK EVERY DAY
FOR EVERY CHILD

milk of one cow but are supplied from the mixed milk of a herd. The average composition of such milk is:

<i>Water</i>	<i>Protein</i>	<i>Fat</i>	<i>Carbohydrates</i>	<i>Minerals</i>	<i>Vitamins</i>
87%	3.3%	4%	5%	.7%	A + + + B + + C + ?

Milk regulations. Since milk is the principal diet for children and invalids, it is absolutely necessary that the milk supply be safeguarded as to both quality and cleanliness. The regulations vary somewhat, but usually they are threefold.

1. The composition of milk is usually standardized by the regulation of total solids — 3.25 per cent milk fat and 8.5 per cent of other solids. Thus 88.25 per cent may be water. By this standard, skimming and watering milk are both prohibited.

2. The bacteriological count is low in clean milk and very high in milk that is carelessly handled. Some city health departments require that the milk shall be graded in grade A, grade B, and grade C, according to the bacterial count. "Certified" milk is a grade superior to grade A. It is available in only a few localities and is intended for infant and invalid feeding.

3. For the regulation of the production and handling of milk, the most effective form of control seems to be scoring all dairies and giving publicity to the scores. Dairies registering low in such a published score lose customers, while those registering high gain them. People want clean milk.

Clean milk is assured only if (1) the cows are healthy, (2) the workers are healthy and clean, (3) the utensils are sterilized in steam or boiling water.

Bacteria multiply very rapidly in warm milk. In order to retard their growth milk should be cooled to 50° F. or below, as soon as obtained, and should be kept at this temperature. In an experiment milk kept at 50° F. for twenty-four hours increased in bacteria fivefold, but milk kept at 70° F. (room temperature) for the same length of time increased in bacteria seven hundred and fifty fold!

Pasteurization of milk. Pasteurization consists of heating the milk to 145° F. for thirty minutes. This heating changes the

taste of milk very little, and is therefore preferred to boiling. It does not destroy all bacteria, but it does destroy the disease bacteria which are sometimes found in milk — typhoid, diphtheria, tuberculosis. Pasteurization does not prevent souring or later contamination from careless handling. It should be cooled rapidly. Many cities now require that all milk offered for sale be pasteurized.

Food value of milk. In order to substantiate the claim made at the beginning of this chapter that milk is our most important food, we must study the individual constituents of milk. The pictures showing growth with and without milk offer striking proof of the claims made for milk as a food.

Protein in milk (3.3 per cent). Protein is needed by the body both for repair and for growth. The term protein designates a class of substances that differ somewhat in their properties. We may think of protein as the family or surname of these substances; "given names" of some of the protein family are: albumin (in egg); legumin (in beans); myosin (in meat); gliadin and glutenin (in wheat); lactalbumin, and casein (in milk).

Proteins are not all equally efficient for the building and repair of tissue. Those which, when used as the only protein element in the diet, will support both growth and repair are called complete proteins. That milk proteins are complete proteins is not surprising when it is remembered that nature has provided milk as the sole food for the young during the period of most rapid growth. Milk proteins are easily digested and assimilated.

Fat in milk (4 per cent). The most significant fact concerning the food value of the fat of milk is that it has in solution vitamin A, often spoken of as "fat soluble A." Vitamin A is found in all substances containing milk fat: cream, butter, and cheese. The



FIG. 6. TWO PUPPIES FROM THE SAME LITTER

Four months old when this picture was taken. The large puppy was fed on plenty of milk, the smaller one on bread and puppy biscuit. (Courtesy, Shattuck Farms.)

fat of milk is a very easily digested fat. This is due in part to its very finely divided form, and in part to its low melting point.

Carbohydrate (5 per cent). Lactose, or milk sugar, is the carbohydrate in milk. It is not very sweet. Because lactose is very easily digested and is not so irritating to the digestive tract as other sugars often are, it is used for feeding infants. When lactose ferments it changes to lactic acid, which may be beneficial in checking the growth of certain putrefactive bacteria that cause intestinal disorders.

Minerals (.7 per cent). Milk is rich in most of the minerals needed by the body. It is especially noteworthy as the cheapest and most abundant source of calcium (lime), which is so much needed by the blood, bones, and teeth. The calcium content alone entitles milk to an important place in the diet, especially the diet of children.

Milk contains less of phosphorus than of calcium, but in a daily quart of milk there is a sufficient supply of this very important mineral for an adult.

Iron is not abundant in milk, but what is there is of very superior quality. Although there is already stored in the bodies of babies at birth a large supply of iron, it is necessary before the end of the first year to supplement the iron that is in milk with some such foods as egg yolk and green-leaf vegetables — foods rich in iron. (See Chapter XXXII on Feeding Young Children.)

Vitamins (+ + +). We do not know exactly what vitamins are, but we know something of what they do. In this respect our knowledge of vitamins is similar to our knowledge of electricity. We do not know what electricity is, but we make daily use of it and understand how to produce and control it.

It has been previously noted that the absence of vitamins, our A, B, C's, results disastrously for our bodies. A serious shortage leads to stunted growth, or to some "deficiency disease," such as scurvy, beri beri, or rickets. The quantities of vitamins in foods are not large enough to admit of per-cent quotation, but their presence and relative amounts in different foods is determined by feeding these foods to animals and noting the results in growth, health, reproduction, etc.

Milk is an excellent source of vitamin A, which is associated with growth and with resistance to diseases, especially those of the eyes, lungs, and throat.

Milk is a good source of vitamin B, which is also associated with growth and good nutrition.

Milk is a variable source of vitamin C. Since this vitamin is unstable and does not resist heat or aging, it is safer not to trust to milk alone as a source of C. For this reason orange juice or tomato juice is early added to the diet. Raw fruits and vegetables are our chief reliance for vitamin C.

To summarize, it may be said that milk more nearly approximates a perfect food than does any other one article of food. It is especially good as a source of calcium and vitamin A. It is a good source of protein, fuel, phosphorus, and vitamin B. Milk needs supplementing for iron and for vitamin C. It is too dilute to be the sole food for adults; also it lacks cellulose, or roughage, which has a beneficial effect in the intestines.

Fuel or energy value. A quart of milk contains 675 calories and is equal to a pound of steak, or 8 or 9 eggs.

ONE-HUNDRED-CALORIE PORTIONS OF MILK AND ITS PRODUCTS

Whole milk, $\frac{5}{8}$ cup
 Skim milk, $1\frac{1}{8}$ cups
 Buttermilk, $1\frac{3}{8}$ cups

Butter, 1 tablespoon
 Thin cream, $\frac{1}{4}$ cup
 Thick cream, $1\frac{1}{2}$ tablespoons
 Whipped cream, 2 tablespoons

Milk products. Skim milk and buttermilk have all the food value of milk except that due to the fat (and vitamin A in solution in the fat). Whey contains some of the food value of milk. In that product the protein and fat have been removed, leaving water, carbohydrate, minerals, and water soluble vitamins (B and C).



FIG. 7. THE SAME PUPPIES SEVERAL MONTHS LATER

The little fellow was given all the milk he would drink, with the result shown. (Courtesy, Shattuck Farms.)

Condensed milk is in two forms: sweetened and unsweetened. The sweetened is condensed one third and the unsweetened is condensed one half. The latter is termed "evaporated milk." The condensing of milk does not interfere with any food value except vitamin C. Where condensed milk or milk that has been heated is used, vitamin C must be supplied by some such rich source as orange juice or tomato juice.

Dried milk is made from either skim milk or whole milk. Whole dried milk is a very important food. It retains all of the food value of milk with the possible exception of vitamin C. Both dried and condensed milk are useful in cooking and, in places remote from a safe supply of fresh milk, for all purposes. Near the source of supply fresh milk is more economical than other forms.

Cream contains from twenty to forty per cent fat. It also contains the other constituents of milk, but in less proportion.

Use of milk for breakfast. Every one may well use one glass of milk at breakfast. This may be taken as a drink or in some other way: with fruit or cereal, with toast, in breads, as a sauce for eggs, or in cocoa or chocolate.

Milk cookery. The most obvious effect of cooking on milk is the formation of a skim on the top. This is largely fat and protein (lact-albumin).

Cooking alters the taste of milk. The sugar and fat in milk burn easily, giving it a scorched taste. It is for this reason that milk is usually cooked in a double boiler.

Boiling makes milk more digestible by making softer the curd which is produced in digesting it. If milk is to be boiled it should be brought quickly to the boiling point, boiled one minute, and cooled quickly. Why?

It has already been pointed out that heating partially destroys vitamin C.

Rules for care of milk in the home. Milk should be kept clean, covered, and cool.

Buy milk in bottles.

As soon as milk is delivered it should be put in the coldest part of the refrigerator or in a place below 50° F. Why?

Wash the mouth of the milk bottle before pouring the milk. Keep milk in the bottle until it is used.

Do not mix new and old milk. Why?

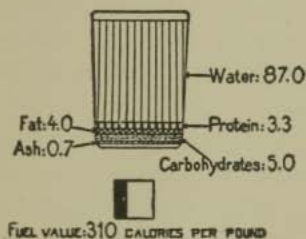
The refrigerator should be kept scrupulously clean daily and should have a thorough cleaning weekly.

Milk and butter absorb odors readily. Do not put them in contact with foods of strong odor.

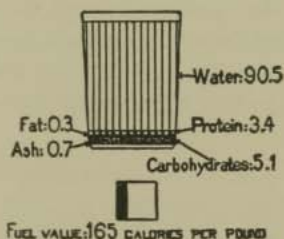
COMPOSITION OF FOOD MATERIALS



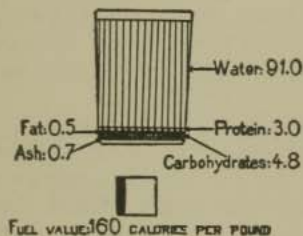
WHOLE MILK



SKIM MILK



BUTTERMILK



CREAM

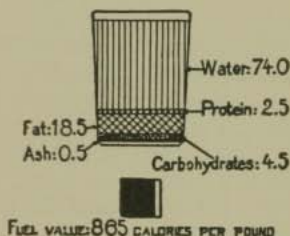


FIG. 8. COMPOSITION OF MILK

COCOA AND CHOCOLATE

One of the most acceptable forms in which milk appears in the family breakfast **menu** is as cocoa or chocolate.

Food value. The chief food value of cocoa and chocolate as breakfast beverages is due to milk, but these substances are also foods in themselves. In this respect they differ from tea and coffee. Cocoa and chocolate contain theobromine, a stimulant similar to the stimulant in tea and coffee.

Per cent composition of cocoa and chocolate. Fat is the chief food constituent. Chocolate (plain) contains about fifty per cent fat. Cocoa contains about twenty-two per cent fat.

One square of bitter chocolate yields one hundred and seventy calories and one tablespoon of grated chocolate yields thirty calories.

One tablespoon of cocoa (pulverized) yields thirty-five calories.

Both cocoa and chocolate are rich, but chocolate is the richer. Though they are made from the same cocoa beans, some of the fat is removed in the manufacture of cocoa. For this reason cocoa is favored for breakfast and is used more satisfactorily for children and for persons with weak digestion.

CLASS PROBLEMS

1. Experiment to determine the composition of milk. Test the milk by the chemical tests for protein, fat, milk sugar, iron, calcium, and phosphorus. (Chapter XXIII, pages 228-230.)
2. Experiment to study the effect of temperature on the growth of bacteria.

Procure two tubes of agar from the biology department of your school, or from a city or state health department, or from a drug store. Agar is similar to gelatin and is a food for bacteria. Melt the agar by placing the test tubes in hot water. Add to each tube ten drops of milk, using a medicine dropper.

Pour the agar into glass petri dishes which have been sterilized by being baked thirty minutes in the oven. Place one of these petri dishes in a warm room at 70° F. and the other in a refrigerator at 50° F. Let each stand for twenty-four hours. Which shows the greater growth of bacteria?

3. An animal-feeding experiment to demonstrate the value of milk in growth and development.

Select six or eight baby chicks of the same breed that were hatched at the same time. Have two separate coops and put half of the number into each. Feed one group corn and clover and give them plenty of water. Feed the other group corn and clover and milk; also give

them plenty of water. Treat the two groups just alike except in the matter of diet.

Carry on this experiment for several weeks. Weigh the chicks from time to time. What is the average weight of the chicks in each group? How do the chicks in the two groups differ in appearance? Which chicks are lively?

Note: If white rats are available the demonstration may be carried on with two white rats. Keep them in separate cages. Feed one rat three or four crackers and plenty of water daily. Feed the other one the same diet plus one fourth to one third cup of milk daily. Note the development and general state of well-being of both rats for several weeks.

4. Find out your city and state regulations concerning the production and handling of milk.
5. Procure bulletins on the value of milk in the diet. Suggested sources: (1) State Health Department; (2) State Agricultural College; (3) Children's Bureau, United States Department of Labor, Washington, D.C.; (4) Child Health Association, 370 Seventh Avenue, New York City; (5) Bureau of Home Economics, United States Department of Agriculture, Washington, D.C.; (6) National Dairy Council, Chicago.
6. Conduct a milk campaign or give a health play in your school. See suggestions in the bulletins from the sources listed above.
7. Keep a chart of the class showing the amount of milk used daily per person. Also check the class for their use of tea and coffee. Try to have every member of the class live up to "a quart of milk daily and no tea or coffee."
8. If some member of the class has a younger brother or sister who does not drink milk, a very good class project will be to devise ways and means of teaching the child to like milk. The carrying out of these plans would be a home project for the older sister.
9. Compute the calorie or fuel value of a cup of cocoa; a cup of cocoa plus a tablespoon of whipped cream; a cup of chocolate; a cup of chocolate plus a tablespoon of whipped cream.

For this problem you will need to know that two level tablespoons or one ounce of sugar yield one hundred calories.

QUESTIONS

1. What foods needed by the body are amply and satisfactorily supplied by milk? Discuss fully.
2. What food needs of the body would you consider not safely covered by milk? Explain fully.
3. How and why is milk adulterated? What regulations are usually in force to safeguard the milk supply?
4. Why is it especially necessary that milk be clean and of good quality?

5. What is pasteurization? Explain its purpose.
6. Why is it all-important to keep milk cold?
7. How does a quart of milk per day meet the body needs for vitamins?
8. Compare the food value of the following milk products with fresh milk: skim milk, buttermilk, whey, dried milk, condensed milk, evaporated milk.
9. What changes can be brought about in milk by cooking?
10. Should your family increase its use of milk? Give reasons for your answer.
11. Mention ways in which milk may be used for breakfast.
12. Compare cocoa and chocolate as breakfast beverages.

HOME PRACTICE

1. List all of the dishes containing milk prepared at your house for three days.
2. Make a list of certain dishes containing much milk that might be used to increase the amount of milk used by your family.
3. How much milk does each member of your family obtain daily? If you do not use your daily quart make an effort to acquire this habit.
4. If you have a younger sister or brother who does not like milk, try to plan the menus in such a way that the child will get a quart of milk daily. Try to teach the child to like milk.
5. Make milk toast several times for breakfast.
6. Prepare white sauce to use with creamed eggs for breakfast.
7. Prepare cocoa or chocolate several times for breakfast.

REFERENCES

- Material published by the National Dairy Council, 307 North Michigan Avenue, Chicago, Illinois — posters, suggestions for plays, pamphlets, bulletins.
- Bulletins and materials from your own State Agricultural College.
- Milk and Its Uses in the Home.* Farmers' Bulletin 1359 (1924), United States Department of Agriculture.
- Milk and Our School Children.* Health Education 11 (1922), Department of the Interior, Bureau of Education, Washington, D.C.
- Material published by the Child Health Association, 370 Seventh Avenue, New York City.
- Production of Clean Milk.* Farmers' Bulletin 602 (1919), United States Department of Agriculture.
- Sherman, H. C. *Food Products.* The Macmillan Co. Chapter III on Milk and Chapter IV on Milk Products.
- Rose, M. S. *Everyday Foods in War Time.* The Macmillan Co. Chapter I.

CHAPTER IV

BREAKFAST BEVERAGES

OF the beverages remaining for consideration in this chapter water is the only one that has any value as a food. Water does not yield any calories. Only those substances that will burn can yield heat units. Water does not, therefore, serve as a fuel, but it bases its claim to classification as food on the fact that it is a part of all body tissue and is essential in the regulation of body processes. Tea, coffee, and cereal coffee have little or no food value except for the water they contain.

WATER

How much water should we drink? Have you "done your daily half dozen"? Half dozen glasses of water, of course! The best beverage on earth! Every one should drink at least that much water, and eight glasses per day might be better. Many of us do not drink enough water. Do you?

The human body is fifty-eight per cent water. If you weigh one hundred pounds, the water contained in your body tissues and fluids weighs about fifty-eight pounds. Your body is constantly losing water through the lungs, skin, intestines, and kidneys. One cannot live if the amount of water is materially reduced. In thirst, nature has provided us with a powerful reminder of our need for water. Thirst may drive us to drink the minimum amount essential to support life, but we must rely on habit to supply generously our needs for water.

- How the body uses water.**
1. Water is a part of all body tissue.
 2. Water, the blood and lymph fluid, is the food carrier for cells of the body.
 3. Water is an important vehicle for the elimination of waste products from the body. Thus it is a cleanser for the inside of the body as well as for the outer surface.
 4. Water is a regulator of body temperature. You realize how

important a constant body temperature is, when you recall how instantly we are alarmed by fever.

5. In the alimentary canal, water is an aid to digestion, to absorption, and in preventing constipation.

When shall we drink water? You can establish no better habit than that of drinking a glass or more of water a short time before each meal and especially before breakfast.

Shall we drink water at meal time? The drinking of water at meals has been much discussed in the past. Some authorities formerly thought that this practice was harmful. Experiments have proved that water is not only not harmful when taken at meals but is an aid to digestion. One caution is necessary. Water must not be used to wash down food. Then it is harmful for two reasons: (1) the food is not properly masticated but is swallowed in "hunks," unmixed with saliva, a digestive juice; (2) washing down food leads to eating too rapidly and often to overeating.

Cold water should be swallowed slowly — sipped. Drinking very cold water in large quantities should be avoided.

Is your water supply safe? Before people learned to safeguard their water supplies from contamination, typhoid was a very prevalent disease. So universal is the vigilance of health departments nowadays that the water supply of a large city is usually safe. There is, however, much typhoid in small towns and rural districts, and at times cases occur in cities. Care must be taken that the water supply of a rural home or school is free from all surface drainage. Why?

Water that is of doubtful source should be boiled. When you go on picnics or on cross-country automobile trips, the safe thing to do is to take your own water supply, or to boil the water for ten minutes.

Water in cookery. Without water the cook would be helpless. She depends on water for all boiling, stewing, steaming, freezing, for preparing foods for cooking, for many delectable beverages, and for cleaning the kitchen and kitchen utensils.

Water with much lime in solution is hard water. Hardness interferes with its use for cooking and washing, but it does not affect its usefulness for drinking. Water not containing lime or

other minerals is soft water. What differences have you noticed in the use of soap in hard and soft water?

TEA AND COFFEE

Effect of tea and coffee. Tea and coffee may be discussed together, for they are similar in use, in composition, and in their effects on the body. Neither of these substances is a food. They are liked for their flavor and their stimulating property.

Tea has the more delicate flavor. Coffee has a delightful odor, or aroma, due to the presence of a volatile oil called *caffeol*.

Both tea and coffee contain a stimulant called *caffein*, which is a drug that stimulates the kidneys, the heart, and the nervous system. Not all people are equally susceptible to the stimulating effect of *caffein*. Some people do not sleep well after drinking these beverages, but others seem not to be inconvenienced. It is principally for this stimulating quality that tea and coffee are often used by adults as breakfast beverages.

Young people do not need stimulants; nerves, heart, and kidneys can develop more normally without them. For this reason, and for the further reasons that tea and coffee are not foods and that they take up valuable room needed for food, growing boys and girls should avoid these beverages. High flavors serve to dull the appetite, and boys and girls need to keep their appetites keen for simple, nourishing foods without high flavor. Appetites that are already too fickle certainly should not be dulled by drinking a beverage that has no stronger recommendation than a good flavor.

The nerves of adults are already developed, and since adults are rather inclined to overeat, because they are not active enough, the same arguments do not hold in discussing tea and coffee in their diets. It may be said in favor of tea and coffee that many persons take water in this form who do not otherwise drink enough water. The stimulating property is treasured by grown-ups and is especially helpful to old people, but it is not always good, even for adults.

Tannin, a substance in tea and coffee, is undesirable both because it interferes with digestion and because it spoils the flavor

of the beverage. The bitter flavor sometimes noticed in strong tea is due to tannin. Tannin is undesirable in coffee and tea even for adults, but these beverages rightly made contain little tannin.

Principle involved in making tea and coffee. Tea and coffee, properly made, we have said, contain little tannin. The method of making these beverages is based on the difference in solubility of caffeine and tannin. Caffeine is readily soluble in water just below the boiling point; tannin is soluble on boiling even for a few minutes, but is more soluble in tea than in coffee. Tea is made by steeping the leaves in water just below the boiling point from one to three minutes. Coffee must be boiled from three to five minutes. Explain the reason for this.



FIG. 9. SELLING TEA ON THE STREETS OF BAGDAD

The boiling water is being drawn onto the dry tea in the glasses. (Underwood & Underwood.)

tea plant. Green tea is unfermented and is steam dried. Black tea is fermented and is kiln dried. Oolong tea is partly fermented. The beverage made from black tea is darker in color and contains less tannin than that made from green tea.

Quality: The quality of tea varies: (a) with the country or even the district in which it is grown; (b) with the tenderness of the leaf; (c) with the degree of fermentation and other details of

TEA

Kinds: Tea consists of the dried leaves of the tea bush. There are three general kinds of tea: green, black, and Oolong. These kinds differ in the methods by which they are dried and cured and not in the variety of the

preparation; (*d*) with the length of time it has been kept. Many people who like tea are very particular about the kind that they drink, and it is polite to consider this preference when you are serving tea.

Source: Most of our tea comes from Japan and Formosa. We also import tea from China, Ceylon, India, and the Dutch Indies; South Carolina produces a very small quantity.

Teapots: You will remember that teapots you have seen were usually of earthenware, china, porcelain, or enamel, and sometimes of glass. Tea may contain tannic acid, which attacks metal; hence it is not desirable to use a tin teapot.

Serving tea: Tea is not generally used for breakfast in this country, but it is almost universally so used in England. One famous brand of tea is called "English Breakfast." Tea is usually served with cream and sugar for breakfast, but at other times lemon is preferred by many people, especially in iced tea. The English use cream in tea; the Russians use lemon.

COFFEE

Source and production: Brazil furnishes more than half the world's supply of coffee. It is also grown in Central America, Mexico, the East and West Indies, Java, and Arabia.

The coffee tree produces a red berry, the seed of which is in two flattened halves called coffee beans. These seeds, or beans, are dried and exported as green coffee.

Buying: Coffee is roasted to develop the flavor due to caffeol, a volatile oil that gives it a delightful aroma. Coffee as purchased is usually roasted and ground. Ground coffee should be sold in tin containers or paraffin bags and should be purchased in small quantities because it deteriorates rapidly.

Some people — the French in New Orleans, for example — prefer to roast their own coffee, because it has a better flavor when freshly roasted. The New Orleans French are noted for their coffee, which is a very black beverage. The intense blackness of French coffee is largely due to chicory, which also produces a marked change in the flavor.

Coffeepots: Coffeepots should not be of tin for the same reason

that tin teapots are not best. Because coffee is often made by boiling, earthenware, which is highly desirable for a teapot, is not used. Enamelware or aluminum coffeepots are most used.

Because of its convenience and because it makes more uniformly good coffee, the percolator is the most popular coffeepot. The old-fashioned coffeepot still holds sway at picnics and in many homes. Some people prefer the drip coffeepot in which the liquid is filtered through a cloth or specially prepared paper instead of through an aluminum strainer as in a percolator. The kind of coffeepot is of less importance than its cleanliness. After each use the pot should be washed, scalded, and dried.

Coffee substitute: A beverage similar to coffee in appearance and taste is prepared from parched cereals. Postum is a familiar example. This substitute coffee does not contain caffeine. People who are very fond of coffee do not care for cereal coffee. It is neither a food nor a stimulant. Although the product is made from cereal, the food value is largely destroyed in the parching.

CLASS PROBLEMS

1. Water is a part of every food. Show this by grating an Irish potato and straining water from it through cheesecloth; by slicing an apple, heating the slices in a covered sauce pan without the addition of water, and then, when the mass is cooked soft, straining it through cheesecloth. Note the water present.

Weigh some fresh peas or beans. Dry them in a warming oven, or on a wire rack over the stove, or by an electric fan. Weigh again. To what do you attribute the loss in weight?

2. Make a trip as a class to study the city water supply. If this is impracticable, invite a representative of the city or county health department to come to school and explain how the city safeguards its water supply.
3. Find out how your municipality disposes of its sewage.
4. Study the water supply on some farm or rural school ground. Does it seem safe? How can you make sure? (Send a sample of the water to the State Health Department for testing.) If your school is a rural school find out what kind of water you are drinking. Learn to make a paper drinking cup.
5. Make rules for dishwashing.
6. Write to your State Health Department for bulletins on water supplies and sewage disposal. Give class reports on these bulletins.

7. An experiment to determine how to make tea:

- (a) Put 1 teaspoon of tea in 1 cup of cold water. Steep 2 minutes. Strain.
- (b) Pour 1 cup of boiling water over 1 teaspoon of tea. Steep 2 minutes. Strain.
- (c) Boil 1 teaspoon of tea in 1 cup of water for 2 minutes. Strain.
- (d) Pour 1 cup of boiling water over 1 teaspoon of tea. Steep 12 minutes. Strain.

Make comparisons as to color, taste, etc., and draw conclusions as to factors causing the differences.

Give rules for making good tea, and state your reasons.

Note: This experiment may be tried with green, black, and Oolong tea, and comparisons made.

Unroll wet tea leaves until an unbroken one is found. Note the shape. Is it the same for the various kinds of tea?

8. Make boiled coffee and percolated coffee (see recipe, pages 361-62). Why is egg used in boiled coffee?
9. Prepare plain, buttered, and cinnamon toast to serve with coffee and tea. Serve these beverages to some of the teachers. The class should not drink them. Why?
10. Look up tea and coffee in encyclopedias or reference books on foods. Make class reports.
11. Examine the labels on the coffee and tea used at home. How much does each product sell for per pound? Compare these findings.
12. Refer to table on page 356 for the number of cups that will usually be found in a pound of ground coffee or a pound of tea leaves.

How many cups of beverage may be made from a cup of ground coffee? From a cup of tea leaves (see recipe on page 362)? How many cups from a pound of each?

QUESTIONS

1. Compare water, tea, and coffee as foods.
2. How much water should one drink per day?
3. Why does the body need water in plentiful supply?
4. Give directions for the drinking of water with meals.
5. Why is hard water undesirable for washing purposes? Is it likewise undesirable for drinking?
6. In what respects are tea and coffee similar?
7. Should any distinction be made between the use of tea and coffee by adults and by children? Discuss.
8. What kind of teapot should you select? Coffeepot? Why?
9. What is the difference between black, green, and Oolong tea?
10. How would you buy and care for tea? Coffee?

HOME PRACTICE

1. Keep note of how much water you drink in a day. If you do not drink your daily half dozen glasses, try to establish this habit.
2. Try to establish the habit of drinking a glass of water when you get up each morning.
3. If you drink tea or coffee learn to do without it. Why?
4. Help your mother with breakfast by preparing tea, coffee, or toast. Cinnamon toast will be a surprise for Sunday breakfast.
5. Help your mother with the dishwashing.

REFERENCES

- Ward, Artemas. *Encyclopedia of Food*. Contains a good discussion of the production of tea and coffee and excellent illustrations.
- Van Marle. "How Soluble Coffee is Made," *Tea and Coffee Trade Journal*, vol. 41, pp. 162-66 (1921).
- "Studies in Coffee Making," *Journal of Home Economics*, vol. 14, pp. 142-43.
- Vulte and Vanderbilt. *Food Industries*. The Chemical Publishing Co. Chapter XXI.

CHAPTER V

CEREAL BREAKFAST FOODS

Introduction. The porridge of the Three Bears was doubtless a cooked cereal, perhaps oatmeal. Who knows?

Cereals are a very old food, but some of our prepared breakfast foods of to-day look very different from the earlier cereals which were merely coarsely cracked, parched grains, cooked in water for a long, long time. The Indians taught the early settlers in this country to use corn, an entirely new cereal to our ancestors. The porridge which they made they called "Indian pudding" or "hasty pudding." It was nothing more than a cornmeal mush. In England we read of the "bag pudding" famous at King Arthur's Court. That was a hot cereal preparation.

A modern grocery store presents a bewildering array of breakfast foods. The manufacturers put these up in very attractive form and under widely advertised proprietary names. Advertisements would lead us to believe that these packages contain magic food values. Cereals are good foods, but no matter how attractive or high-sounding the claims advanced for these manufactured cereals, it is safe to say that they do not contain any greater food values than the grains from which they are made.

Cereal grains. Some kind of cereal grain grows in every part of the world except the Arctic regions. In all countries cereal products are staple food. All of the cereals vary somewhat, but they are remarkably alike in the structure of the grain, in composition, and in use.

The most common cereals are wheat, corn, oats, and rice. Other grains used for food are barley, millet, rye, buckwheat, and kaffir corn. These various grains are used principally as bread-stuffs and as cereal breakfast foods.

Cereals are extensively used because they are:

- | | |
|--------------------|----------------------|
| 1. Inexpensive | 5. Palatable |
| 2. Easily grown | 6. Digestible |
| 3. Nutritious | 7. Dry, compact, and |
| 4. Easily prepared | easy to keep |

Structure of a cereal grain. All cereals are the seeds of grains. Each kernel is made up of three parts, exclusive of the outer husk:

1. The *bran* consists of several layers of fiber or cellulose. It also contains mineral salts, vitamins, and some protein.

2. The *endosperm*, or starchy part of the grain, is the largest portion and contains chiefly starch and protein.

3. The *germ*, or embryo, from which the grain sprouts, contains fat, some carbohydrate, protein, and mineral matter.

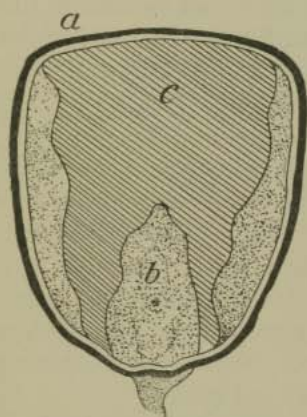


FIG. 10. DIAGRAMMATIC SECTION OF A GRAIN OF CORN
a, skin; b, germ; c, endosperm.

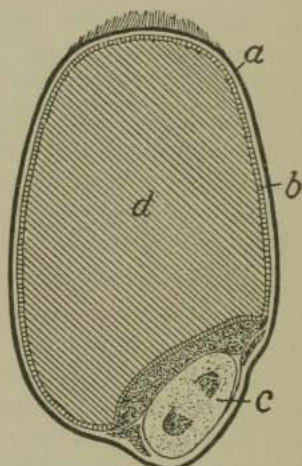


FIG. 11. DIAGRAMMATIC SECTION OF A GRAIN OF WHEAT
a, bran; b, aleurone layer; c, germ or embryo; d, endosperm.

Milled products consist chiefly of the endosperm. Thus in milling most of the cellulose, mineral matter, vitamins, fat, and much of the protein, is removed. Whole grain cereals obviously have a greater value than highly refined cereals.

From the table on page 39 it will be noted that oatmeal is richer in protein and fat than any of the other cereals. Since oatmeal is not so highly refined as some cereals, it contains the fat of the germ and some of the fiber and minerals of the bran. It is the richest cereal in iron and contains a good amount of vitamin B.

GENERAL COMPOSITION OF CEREALS¹

CEREALS	WATER	PROTEIN	FAT	CARBO- HYDRATE INCLUDING FIBER	FIBER	ASH	CALORIES PER POUND
Corn meal.....	12.5	9.2	1.9	75.4	1.0	1.0	1820
Popcorn.....	4.3	10.7	5.0	78.7	1.4	1.3	1826
Hominy (grits).....	11.8	8.3	.6	79.0	.9	.3	1608
Oatmeal.....	7.3	16.1	7.2	67.5	.9	1.9	1811
Rice.....	12.3	8.0	.3	79.0	.2	.4	1591
Farina.....	10.9	11.0	1.4	76.3	.4	.4	1640
Flaked wheat.....	8.7	13.4	1.4	74.3	1.8	2.2	1648
Shredded wheat.....	8.1	10.5	1.4	77.9	1.7	2.1	1660

Fuel value of cereals. Approximately one ounce of dry cereals is a one hundred calorie portion.

ONE HUNDRED CALORIES OF READY-TO-EAT CEREALS²

Corn flakes, 1 $\frac{1}{4}$ cups	Puffed corn, 1 $\frac{1}{4}$ cups
Cornmeal mush, $\frac{2}{3}$ cup	Puffed rice, 1 $\frac{1}{3}$ cups
Farina (cooked), $\frac{3}{4}$ cup	Puffed wheat, 1 $\frac{2}{3}$ cups
Grapenuts, 3 tablespoons	Rice (steamed), $\frac{3}{4}$ cup
Hominy grits (cooked), $\frac{4}{5}$ cup	Wheat flakes (cooked), $\frac{2}{3}$ cup
Oatmeal (cooked), 1 cup	Shredded wheat, 1 biscuit
Popcorn (popped), 1 $\frac{1}{2}$ cups	Bran flakes, $\frac{3}{4}$ cup

Food value of breakfast cereals and place in the diet. Cereals are very easily digested and are excellent sources of energy. Cooked cereals are perhaps our cheapest source of energy. A thoroughly cooked cereal is strongly recommended for the family breakfast. Children may begin eating strained cereals when six months of age. Cooked cereal (of suitable texture) made from whole grains, as oatmeal, is the most desirable cooked cereal for children. Why?

The protein in cereals is not so complete as the protein in milk; hence it is desirable to supplement cereals with milk. When cooked in milk cereals form an excellent food.

¹ From H. C. Sherman: *Food Products*. Reprinted by permission of The Macmillan Company, publishers.

² Except bran flakes, from M. S. Rose: *Feeding the Family*. Reprinted by permission of the Macmillan Company, publishers.

COMPOSITION OF FOOD MATERIALS

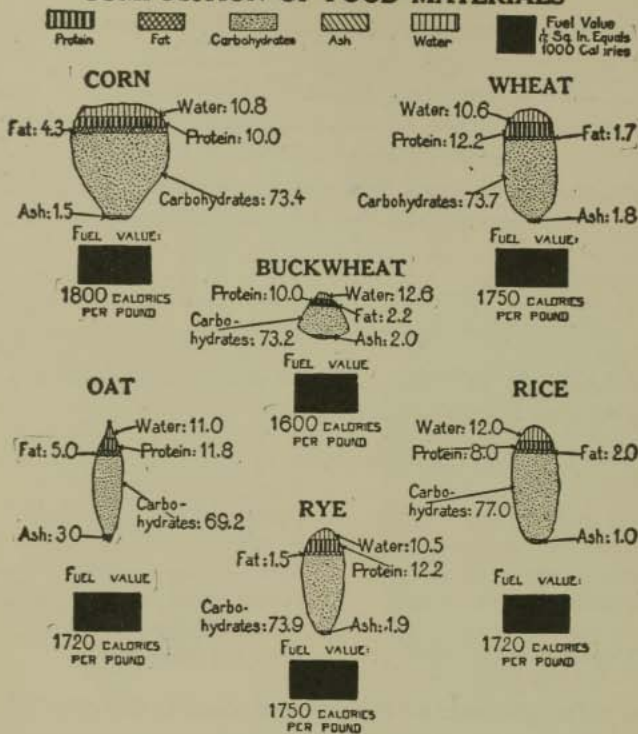


FIG. 12. COMPOSITION OF CEREALS

The bran of whole-grain cereals, especially oatmeal, contains a good supply of phosphorus, iron, and calcium. It is also laxative and helps in preventing constipation.

Vitamin B occurs in liberal amounts in whole grains. Vitamins A and C do not occur in grains in sufficient amounts for cereals to be considered a satisfactory source of these vitamins.

None of the cereals used alone will make a balanced dietary. Each should be supplemented by milk, green vegetables, and fruits, which will supply the lacking protein, minerals, and vitamins. If vegetables or fruits are hard to procure, or if the amount to be expended for food is limited whole cereals should be used in

stead of refined cereals, because the whole cereals will give a better quality of protein; more iron, phosphorus, and calcium, and a good supply of vitamin B.

Prepared cereals are expensive, but they are very convenient and palatable. They add a welcome variety to the menu, especially in warm weather when a hot cereal may not be acceptable. Some of the prepared cereals are whole-grain products.

Cooking of cereals. *Reasons for cooking:* 1. To improve the flavor. 2. To improve the digestibility. 3. To soften the cellulose.

The cooking of cereals is as important as their composition. Lumpy, half-cooked cereal is not palatable, and this reason alone should bar the poorly cooked product from our tables.

Principles of cookery. Since cereals are chiefly starch, the methods of cooking cereals are based on the *principles of starch cookery*.

Starch occurs in plants in granular form. This can easily be discerned by examining under the microscope starch from various plants. (See class problems for directions.) There are many starch granules in one plant cell. The cell wall and the covering of the starch granule are cellulose, or woody fiber. Three distinct changes take place as starch cooks:

1. The starch grains absorb water. The scientists describe this property of absorbing water as *hygroscopic*. The property is utilized when rice or some other starchy material is mixed with salt to keep it dry. You have noticed the increase in bulk as cereals cook, due to the absorption of water.

2. The heat of cooking converts into steam the water absorbed by the starch granules. The steam bursts the granules, and the starch fills the cells. It is this bursting of the granules and the forming of soluble starch paste that causes starch to thicken as it cooks. We can imagine that each of these little microscopic starch granules explodes from the steam pressure just as a grain of popcorn does when it pops.

3. Long, slow cooking also affects the cellulose, softening it and thus rendering the food more accessible to the digestive juices.

The carbohydrate family. The carbohydrate family consists

of three groups, each of which contains several members. This grouping is made according to the chemical size. Just as the children of a family may be grouped according to age: three children under six years, three between the ages of six and twelve years, and three over twelve years of rather uncertain age, and each individual child have an individual name, so the carbohydrate family is grouped according to chemical size, each individual member having a special name.

CARBOHYDRATES

Simple sugars (monosaccharides):

Glucose, or grape sugar

Fructose, or fruit sugar

Galactose (from digestion of milk sugar)

Double sugars (disaccharides):

Maltose, or malt sugar

Sucrose, or cane sugar

Lactose, or milk sugar

Complex sugars (polysaccharides):

Starch

Dextrin

Cellulose

When starch is cooked in the presence of an acid, or by means of dry heat it changes first to soluble starch, then to dextrin. Starch may cook so long that some maltose is produced. Have you noticed that oatmeal that has cooked a long time is rather sweet without the addition of sugar? This is because in the cooking some of the starch has been changed to sugar. Corn sirup, with which you are familiar, is glucose produced from starch by long cooking in the presence of an acid.

As starch is digested in the body, it is changed to simple sugars. We aid the digestive process by performing some of the work thoroughly in cooking vessels. Cereals are seldom overcooked. Overcooking is harmless. Undercooking, on the other hand, is very common and is unwholesome. Why?

Method of cooking cereals. Cereals are cooked in boiling salted water or in hot milk. The quantity of water depends upon the

kind and age of the cereal. The amount of salt will vary somewhat with individual taste, but one to two teaspoons of salt to each quart of liquid is a safe general proportion. (See Table for Cooking Cereals, page 366.)

For the first few minutes (ten) all cereals are cooked directly over the fire in boiling water. In adding cereal to boiling water precautions must be taken to prevent lumping. Lumps are not only unsightly and unpalatable, but they contain uncooked starch.

Ways of preventing lumping. 1. Coarse cereals, such as rice or oatmeal, may be sprinkled slowly into rapidly boiling water. Stir constantly.

2. Fine cereals may be mixed with cold water and poured into boiling water. Stir constantly.

After the first ten minutes of cooking directly over the fire, the cereal may finish cooking in a double boiler, a fireless cooker, or a pressure cooker. (See Unit Six, The Cook Book.)

Serving cereal. Cereals are usually served with milk or cream. Whole milk is preferable for children and invalids. Cream is richer in calories, but it is not so adequate a food and is more difficult to digest. Some prefer butter on hot cereals.

The use of sugar with cereals should be discouraged. Sugar blunts the appetite for the milder flavors of cereals, and, in quantities, is irritating to the digestive tract. One author has pointed out the fallacy of putting sugar on cereal to get the cereal eaten by saying that "this is establishing the sugar habit and not the cereal habit."¹

Dried fruits (dates, figs, raisins) make a palatable addition to cooked cereal. They should be chopped and added to the cereal after the first ten minutes of cooking. Stewed, fresh, or dried fruit may be served with cooked cereals.

Prepared cereals are improved by toasting in the oven just before serving. Fresh fruits are often served with such cereals. Berries, sliced bananas, figs, and peaches are those most frequently used in this way.

¹ From M. S. Rose: *Everyday Foods in War Time*. Reprinted by permission of The Macmillan Company, publishers.

Buying cereals. Cereals are cheaper per pound in bulk, but package goods are usually cleaner. Insects spoil cereals quickly. For this reason it is better to purchase small quantities at a time, particularly in hot weather. All things considered, it is more satisfactory to purchase cereals in packages.

CLASS PROBLEMS

1. Study cost of cooked and uncooked cereals by measuring one-hundred-calorie portions. From these one-hundred-calorie portions estimate the calories in one serving of each of the common cereals.
2. Examine various grains to find the three parts — bran, endosperm, germ.
3. Read the labels on package cereals. Compare them. From the similarity of labels can you determine what the Federal Foods and Drugs Act requires to be stated on a package?
4. Iodine test for starch. Starch turns blue in the presence of dilute iodine. Test a number of foods for starch.
5. Starch granules. Place a drop of water containing starch and iodine on a glass slide. Cover them with cover glass and then examine them with a high-powered microscope. Use corn, potato, wheat, rice. Draw the shapes of these starch granules.
6. Changes in starch granules during cooking. Make slides using a very thin shaving of raw, of slightly cooked, and of well-cooked potato. What change does cooking produce in the starch granules and plant cells?
7. Collect and mount on white cardboard colored advertisements of cereals to show attractive ways of serving cereals.
8. Bring to class some advertisements of cereals. Discuss the claims made for these products.
9. Cook different cereals in various ways. See recipes.

QUESTIONS

1. Why are cereals so extensively used?
2. Describe the structure of a grain. Contrast the food value of the parts of a grain.
3. What are the differences between refined, or highly milled cereals, and whole cereals? Explain these differences.
4. How much dry cereal is there in a one-hundred-calorie portion?
5. Give the one-hundred-calorie portion of five cereals as served.
6. What do cereals lack of being a balanced dietary? How would you supplement them?
7. Where economy is important, what would you advise in regard to the use of cereals? Why?

8. Why do we cook cereals?
9. What changes take place as cereal cooks?
10. Name the carbohydrate family. Which of the carbohydrates are produced from starch either by digestion or by cooking?
11. Describe three methods of cooking cereals.
12. What precautions can be taken to prevent cereal from lumping as it is cooked?
13. Discuss ways of serving cereals.

HOME PRACTICE

1. Prepare the cereal for your family breakfasts for a week. Plan to have some variety.
2. Try to learn to eat cereal with little or no sugar and with whole milk.
3. Buy the cereal for your family for the next month. Notice the sanitary conditions in the store. Does your observation bear out the statement that package cereals are cleaner than bulk goods?
4. Estimate each morning for a week how many calories you eat in the form of breakfast cereal plus the milk or sugar you eat with it.

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CHAPTER VI

BREAKFAST BREADS

Hot breads for breakfast. Bread for breakfast offers man, tempting variations. Piping hot, crisp toast is a prime favorite, but there is no denying the appeal of a muffin or a biscuit that is delicately browned and "melts in your mouth." Bread has been called the staff of life, but the hot breakfast breads served with butter are better termed "a gold-headed walking cane." A staff is a support, but style and one's personal taste determine the carrying of a walking cane. It may be only semi-occasionally that we serve waffles, griddle or "batter" cakes, muffins, popovers, or biscuit for breakfast, but when we serve them they must be good.

Shall we eat hot breads? Toast is the safest and best bread for our daily use at breakfast. It is easily digested and is suitable for serving to every member of the family except infants. Toast given to children should be dry, and, in order to develop and strengthen the jaws, somewhat hard.

Opinion differs as to the digestibility of hot breads. There seems to be little experimental evidence. Some scientists think that children should never be allowed to eat them. It seems reasonable that hot bread is less digestible than other kinds, because it is less likely to be chewed. It is safer not to use hot breads frequently and not to give them to young children, or to persons with weak or impaired digestion. Hot breads with a large proportion of crust are to be preferred.

Toast. Some people like toast daily for breakfast. Variations are acceptable. We may have, for example:

Dry Toast	Cinnamon toast
Buttered toast	French toast
Milk toast	Toast from special breads, such as:
Cream toast	Homemade bread
Cheese toast	Raisin bread
	Nut bread
	Whole wheat or graham bread

Suggestions on toast making:

1. The bread used for toast should be a day or more old.
2. Thin slices are daintier and are better liked than thick slices. They are also more crisp.
3. A hot oven is required for toast. If the bread is fresh a slow oven is best, because it will dry out the bread.
4. Brown the bread first, then butter it, if butter is to be used. Buttered toast may be placed in a warm oven for a few minutes.
5. Toast should be served hot. If it is stacked it becomes soggy. Good toast can be prepared at the table with an electric toaster.

Quick breads. From the cook's standpoint quick breads are spoken of as batters and doughs, or as flour mixtures.

Ingredients

Common to all:

Flour
Liquid
Salt
Leavening agent

Additional:

Fat (shortening)
Eggs
Substitute for some of the flour
Sweetening
Flavoring

Pastry flour, which is a soft flour and makes a tender product, should be used for quick breads.

The liquid in quick breads is usually water, milk, buttermilk, sour milk, or clabber. Eggs do not contribute to the liquid.

Fat is added to improve the texture and the flavor. If much fat is used it adds crispness to flour mixtures. Examples are pastry and cookies.

Eggs contribute to the texture and lightness, flavor, and richness. The leavening agent is used to produce a light texture.

Sugar, spices, and other substances are added to help the flavor and the texture.

Too much flour makes mixtures dry and tough. An excess of flour is often indicated by a cracking of the surface as the bread cooks. Too much fat makes a product heavy and crumbly.

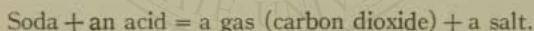
Leavens and leavening agents. Air, steam, and carbon dioxide are the leavens that lighten quick breads. Each of these is a gas that expands when heated.

Air is incorporated into a mixture by beating, and by beating eggs, especially egg whites, until they are light before adding them to the mixture. To some degree all quick breads are leavened by air, but in many instances we do not depend entirely on air. Sponge cakes are leavened by air.

When water is converted rapidly into steam the force of expansion is great. Have you ever noticed the miniature explosion that takes place when water boils over on a hot stove? When steam is produced in a batter it leavens the mixture. We depend upon steam to leaven popovers and cream puffs. They are hollow shells that look as though something had exploded inside them. When steam is the leavening agent a hot oven is required, and the door of the oven must not be opened until the mixture has puffed and cooked. When the oven door is opened before the popovers are done they fall, because the steam condenses before the batter has cooked sufficiently to hold its shape.

Carbon dioxide gas is produced by the action of any acid on soda.

All baking powders contain soda (sodium bicarbonate), but the acid may vary. Examine the labels of common baking powders to discover the three acids commonly used. Leavening by soda and sour milk is exactly the same chemical process as leavening by baking powder. The following equation illustrates the leavening action of soda and an acid:



General proportions for quick breads. *Flour:*¹ The recipes usually given for quick breads call for soft wheat or pastry flour. Substitutions for *one cup of pastry flour* may be made as follows:

$\frac{1}{8}$ cup of bread flour.

$\frac{3}{4}$ cup of coarse graham flour (before sifting).

$\frac{1}{8}$ cup of fine graham flour (before sifting).

These substitutions are based on equal weights as equivalents.

*Liquid:*¹ Milk is usually preferred for flour mixtures except pastry. Whole milk, skim milk, or properly diluted dried or

¹ United States Department of Agriculture. Farmers' Bulletin 1450 (1925) *Home Baking*.

evaporated milk may be used. Sour milk may be substituted for sweet milk (cup for cup) except in popovers.

Water is as a rule used in pastry except when a liquid fat is used. Water may be used in other quick breads with little change in the texture or flavor of the product, but the food value will be lessened.

If cream is used the quantity of shortening may be reduced.

Leavening agents: Two teaspoons of baking powder to one cup of flour is a good proportion if no eggs are used.¹

When eggs are used, reduce the baking powder by one half to one teaspoon for each egg. If eggs are omitted from a recipe, add one teaspoon of baking powder for each egg.

To change a recipe to sour milk and soda. Use one half teaspoon of soda with one cup of very sour milk or one cup of molasses.

One fourth teaspoon of soda is used with one cup of slightly sour milk or clabber.

One half teaspoon of soda equals two teaspoons of baking powder in leavening power.

Some recipes contain both soda and baking powder. Why? For example, consider a recipe calling for four teaspoons of baking powder and one cup of sweet milk. If sour milk is substituted one half teaspoon of soda is all of that ingredient that can be used. Why? One half teaspoon of soda equals only two teaspoons of baking powder. Since the recipe calls for four teaspoons of baking powder and only two have been replaced, it is necessary after changing this recipe to a sour-milk recipe, to add two teaspoons of baking powder in addition to the one half teaspoon of soda.

To change a soda and sour milk recipe to a baking powder and sweet milk one. Since one half teaspoon of soda equals two teaspoons of baking powder, it is evident that a sour-milk recipe may be changed to a sweet milk one by substituting four times as much baking powder for all the soda specified and replacing the sour milk with the same amount of sweet milk.

Shortening. Lard and similar fats and oils contain no water, but oleomargarine and butter contain some; a recipe, therefore, calls for slightly more butter or oleomargarine.

¹ Less baking powder may be used. See table, page 370, for minimum proportions.

Seven tablespoons of butter or oleomargarine = six tablespoons of lard and similar fats.

One half to one tablespoon of shortening is put with one cup of flour for quick breads. Cakes and pastry are richer in fat.

Salt. One fourth to one half teaspoon of salt is used ordinarily with one cup of flour or meal.

Method of mixing flour mixtures. (See Unit Six, The Cook Book.) Neatness and tidiness are necessary in working with flour mixtures. It is a good plan to work with a paper spread under all utensils. This makes cleaning up easy. Accuracy in measurements is essential. Useful utensils for making flour mixtures are a measuring cup, a bowl, a wooden spoon, and above all, a spatula for doughs.

Oven temperatures. We often hear people say that they have had "good luck" or "bad luck" with cooking. The guesswork is usually in the baking rather than in the mixing. The time consumed in baking, and the temperature are the important factors in successful baking. The oven position of the mixture during baking determines in some measure the quality of the final product. See problem 10 at the end of this chapter.

Modern gas and electric stoves are now equipped with a device for controlling the temperature of the oven. An oven thermometer may be used if the oven lacks an oven control. All types of stoves, including oil stoves, are available with oven thermometers. Separate oven thermometers are also available.

The food should be placed in the part of the oven where the heat is even. The best results are obtained when one knows exactly how hot the oven is and how long a food should be cooked at a given temperature. All of us cannot have heat controls for our ovens. If your oven is without one you can learn by practice how to judge an oven as slow, medium, hot, or very hot. Perhaps you have seen an experienced cook do this by thrusting her hand into the oven. You can soon learn to tell in this way, but at first you may have to use other tests.

Quick breads are usually done when they shrink from the side of the pan, or when the surface springs to the touch.

OVEN TEMPERATURES

	SLOW OVEN 250° to 350° F.	MODERATE OVEN 350° to 400° F.	HOT OVEN 400° to 450° F.	"QUICK" OR VERY HOT OVEN 450° to 550° F.
Flour mixture	Sponge cake Angelfood cake Egg leavened mixtures: omelets, meringues, soufflés Fruit cake	Bread Butter cakes: Layer and loaf Cookies Cream puffs Gingerbread Spoon bread Cinnamon toast	Muffins Popovers Rolls Toast	Biscuit Pastry Corn sticks
Test: Use dry flour spread thinly	Dry flour browns in 60 seconds	Dry flour browns in 30 seconds	Dry flour browns in 10 seconds	Dry flour browns in less than 10 seconds

Biscuits are done when they are light for their size and are evenly browned.

Food value of quick breads. The food value of a quick bread depends, of course, on the food value of its ingredients. The chief ingredient in any bread is flour. White flour is chiefly starch and protein. Bread is therefore a fuel food to begin with, but if made with milk or with milk and eggs, its food value is materially increased. See Table V in the Appendix for one-hundred-calorie portions of quick breads and their accompaniments.

Judging quick bread. The most important considerations in judging hot breads are their taste and texture. Texture includes the grain, lightness, tenderness, and moisture. General appearance is of importance and includes shape, size, and the quality of the crust.

Since any score is more or less arbitrary, the class can make out a score card for judging their own products.

Serving quick breads. Quick breads must be served freshly baked and piping hot. In the South, where they are used most, they are invariably served with butter and are buttered while hot. The melted butter flavors the entire muffin or biscuit.

The sweets most often served with toast are marmalade, jelly, and preserves. The sweets often served with hot breads, but not

recommended, are maple or cane sirup and honey. If these are used it should be only occasionally and in small quantities in order that they shall not replace better foods.

CLASS PROBLEMS AND EXPERIMENTS

1. Tests for acids and alkalis (bases):

Note the reaction of acids to litmus paper. Try sour milk, molasses, cream of tartar, lemon juice, vinegar, etc., with both red and blue litmus paper.

Note the reaction of alkaline substances to blue and red litmus paper. Make the test with soda, ammonia, lye, and a solution of wood ash.

Water is neutral. Note its action on both blue and red litmus paper.

Try some unknown substances with litmus. Are they neutral, acid, or basic? Give the reason for your statement.

2. Action of soda and acids:

(a) Dissolve a tablespoon of soda in a half cup of water. Add to different portions of this solution a little sour milk, cream of tartar, vinegar, lemon juice. What is the result? Note with both blue and red litmus that the solution can be made neutral by the addition of enough acid.

(b) Mix dry soda and dry cream of tartar. What is the reaction? Add water. Note any changes. Does heating have any effect? Try the same with a teaspoon of baking powder and note results.

Baking powder contains dry soda and an acid compound such as cream of tartar. Verify this statement from labels on the cans of baking powder. Can you tell why it is necessary to keep baking powder in a tight can?

(c) Demonstrate by the iodine test the presence of starch in baking powder. Do you recall from Chapter V that starch absorbs moisture? Starch is included in baking powder to absorb atmospheric moisture and prevent the mixture from slowly losing its gas.

3. Measurements. Measure one cup of flour before and after sifting. Is there any difference in the measurements?

4. Kinds of baking powder:

Assemble various kinds of baking powder. Read the labels and tabulate the ingredients. How do baking powders differ in respect to ingredients? What three types of baking powder are there?

There has been much discussion of the relative merits of different baking powders. One kind seems to be as little harmful as another.

Some powders give up their gas much more rapidly than others, and hence deteriorate more readily.

Compare the time of action of the three types of baking powders by adding a teaspoon of each kind to the same quantity of water (one half cup). Stir the three mixtures and note the gas escaping from each. Which type of powder reacts for the longest time?

The baking powder that reacts slowly has two advantages: (1) The leavening power is not lost readily if the bread mixture has to stand before being baked; (2) The powder does not so readily lose its strength in the can.

5. Oven temperatures:

Use an oven thermometer or an oven control to determine the temperature of the oven. At each of the following temperatures try two tests; (1) Thrust your hand, back up, into the oven. How long can you hold it there? (2) Spread thinly a tablespoon of flour on unglazed paper. Note the number of seconds required for browning the flour.

Record the results of these two tests for each of these temperatures:

250° to 350° F. slow oven 400° to 450° F. hot oven
350° to 400° F. moderate oven 450° to 550° F. very hot oven

From the averaged results of the class, which of the tests would you prefer to use if there is no oven thermometer?

6. Find or make score cards for various quick breads prepared in the class. Score all class products.
7. Change four sweet-milk and baking-powder recipes to sour-milk and soda recipes, and vice versa.
8. Change a recipe with butter in it to one with lard or some similar fat.
9. List for a week the bread that you eat for breakfast. Estimate its fuel value, including the butter, etc., eaten with it.
10. Experiment to see the effect on quick-bread products of the position of the breads in the oven while they are baking.
11. Study variations in quick-bread recipes; note especially muffins and biscuit. See Unit Six, The Cook Book.

QUESTIONS

1. Name quick breads in common use.
2. Give general rules for making toast.
3. List the common ingredients in quick breads and tell the effect of each on the product.
4. What leavening agents are responsible for making quick breads light? Illustrate.
5. What is the basis for the substitution of meal or other kinds of flour for pastry flour?
6. What liquids may be used in quick breads?

7. Explain how baking powder is made and discuss the relative merits of the three kinds of baking powder. (See Problem 4).
8. Why and how can a baking powder and sweet-milk recipe be changed to a soda and sour-milk recipe?
9. Does the addition or omission of eggs affect the amount of baking powder? How? Why?
10. What difference is there between using lard and using butter in a recipe? Explain.
11. State general rules for mixing batters. Doughs.
12. What temperature is meant by slow, moderate, hot, very hot oven? In what kind of an oven would you cook popovers? Muffins? Biscuit?
13. How can you tell when muffins are done? Biscuit?
14. What are the important points in scoring quick breads?

HOME PRACTICE

Home practice is more essential for making quick breads than for making any of the products that you have studied up to this time.

1. Make plain toast for breakfast several times.
2. Prepare a different kind of toast for breakfast on each of four days.
3. Make each of these quick breads at least three times for your family's breakfast or lunch:

Popovers	Biscuit
Griddle cakes or waffles	Muffins

Bring samples to class for discussion.

4. Make bran muffins, berry muffins, drop biscuits, spoon bread, for your family.
5. Prepare both sweet and sour-milk waffles or biscuit for your family. Which do they like best?
6. Plan and prepare a quick bread for one meal each day for a week without duplicating the product.

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CHAPTER VII

EGGS AND BACON

EGGS

How will you have your eggs? Is any question asked more frequently at breakfast? Eggs are almost universally a favorite main breakfast dish. People in the United States eat an average of four eggs per person per week.

Nature has given us conclusive evidence that eggs are useful for building body tissue such as bone, muscle, and blood. With no other food than that contained in an egg, the baby chick is developed — and so well developed that as soon as it is hatched it has sufficient strength to run about and scratch for its food.

Why are eggs valuable as food? Eggs are rich in protein, minerals, and vitamins, all of which substances are needed in the growth and repair of muscle, bone, and blood. Because of their value in the building and repairing of tissue, eggs should be included in dietaries, particularly those of growing boys and girls and of convalescents and undernourished persons.

COMPOSITION OF EGGS

	WATER	PROTEIN	FAT	CARBOHY- DRATES	MINERALS			VITAMINS			100 CALORIES	
					Per cent	Fe*	Ca*	P*	A	B		C
Whole egg	72-75	12-14	10-12	—	1.0	+++	++	+++	+++	++	—	1 ½ eggs
Egg white	86.2	12.3	.2	—	.6	—	+	—	—	?	—	6 or 7 egg whites
Egg yolks	49.5	15.7	33.3	—	1.1	+++	++	+++	+++	+	—	Less than 2 yolks

* Chemical Symbols: Fe (iron); Ca (Calcium); P (Phosphorus).

Composition of egg white and egg yolk. An examination of the above table will show that the greater part of the nutrients for which the egg is prized are in the yolk. All of the fat and practically all of the vitamins, phosphorus, calcium, and iron, are

in the yolk. The yolk is therefore the most valuable part of the egg for tissue building or for repair. The white of the egg is approximately one eighth protein and seven eighths water. The yolk of the egg is approximately one third fat, one sixth protein, and one half water.

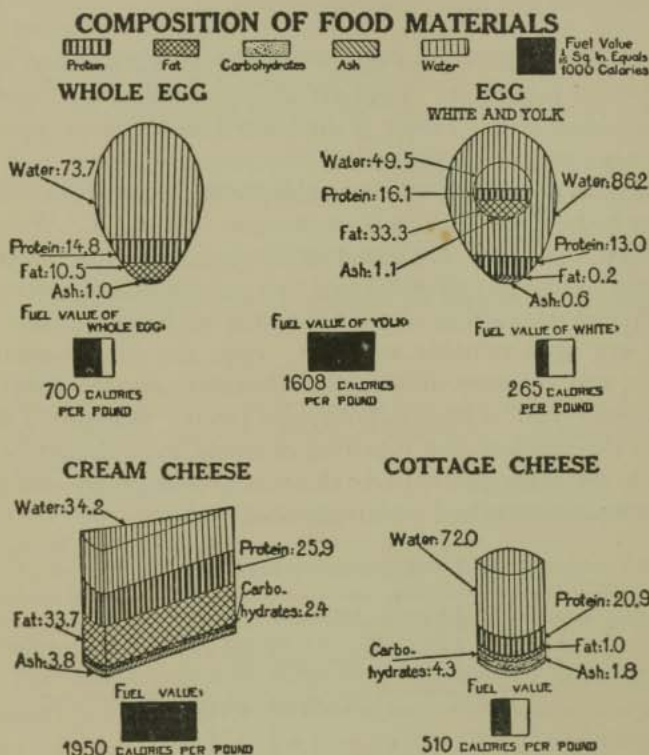


FIG. 13. COMPOSITION OF EGGS AND CHEESE

NUTRITIVE VALUE OF EGGS

Protein. Like the proteins of milk, the egg proteins are complete proteins. They support growth, and aid in body repair and maintenance. The protein in the white is *albumen*; that in the yolk is chiefly *vitellin*.

Minerals. Egg is not only rich in the minerals that are especially needed by the body — iron, phosphorus, and calcium — but these substances occur in egg yolk in a form that is very easily used by the body.

Fat. The fat of the egg yolk, like that of milk, is in emulsified form which is an advantage in digestion.

Vitamins. Egg yolk is an excellent source of vitamin A, and a good source of vitamin B. Egg yolk is also rich in vitamin D which is necessary to prevent rickets, a bone disease prevalent among young children. Some egg yolk eaten daily will prevent rickets.

Comparative values of milk and eggs as food. Compared with milk, an equal weight of egg yolk contains ten times as much vitamin A and twice as much vitamin B. Because we take much more milk than eggs, milk is just as good a source of these vitamins as are eggs.

Eggs resemble milk more nearly than does any other food. Like milk the protein and fat of eggs are easily digested. Egg proteins are like milk proteins in that they are complete, and the fat in each is emulsified.

Both milk and eggs contain calcium, iron, and phosphorus in especially usable form. Milk is a richer source of calcium than are eggs, but eggs are a richer source of iron. Milk and eggs are both rich in vitamin A, and are fairly rich in B. Neither is a good source of vitamin C. Both are good sources of D. The combination of iron and this antirachitic vitamin makes egg yolk one of the first foods to be added to milk in a child's diet. Unlike milk, eggs contain no carbohydrates. Eggs are more economical than meat, but on the average throughout the year are not so economical as milk.

Digestibility of eggs. Eggs are easily digested. The method of cooking them does not influence the completeness of digestibility, but it materially alters the length of time required. Soft-cooked eggs are digested in a shorter time than hard-cooked eggs. Hard-cooked eggs should be thoroughly masticated. Some people take a longer time to digest raw eggs than cooked eggs.

Tests for the freshness of eggs. 1. The shell of a fresh egg

is chalky and rough in appearance. Old eggs are smooth and shiny.

2. The white of a fresh egg is thick and viscous and the membrane surrounding the yolk is tough. Both of these become thinner with time, but the change does not in any way interfere with the food properties of the egg. For angel food cake and for omelet use perfectly fresh eggs. Why?

3. Candling is the commercial test for determining the freshness of eggs. When you hold your fingers before a lighted electric bulb you note that they appear transparent except for the bone, which appears as a shadow. Candling eggs is a similar process. The egg is placed at one end of a tube, at the other end of the tube a strong light is placed. Under the test fresh eggs appear transparent and have little or no air space; a stale egg is cloudy and has a large air space.

Care of eggs. Buy clean eggs. As soon as purchased, eggs should be put in the refrigerator or some other cool place. They will absorb odors; therefore they should not be placed near strong foods, such as onions. Egg yolks, if unbroken, may be covered with water and kept several days in the refrigerator. Egg whites will keep for several days in a covered glass if no water is added. Never wash eggs until ready to use them, as there is a natural coating that protects the pores to some degree.

Commercial storage of eggs. All protein food spoils easily. Eggs do not spoil as easily as milk, but like milk they must be kept clean and cool. They are produced most abundantly in the spring and summer. Cold-storage facilities have made these and other perishable foods available throughout the year. Eggs can be kept in cold storage with little resulting change in flavor. Those of poor quality are sometimes put into cold storage, and that fact has given cold-storage eggs a bad name. Broken eggs can be preserved by freezing or by drying them. Treated in this way they are marketed largely to commercial concerns and are not used for household purposes.

Home storage of eggs. Home storage of eggs is practical if clean, fresh — preferably infertile — eggs are available.

Bacteria enter the egg through the porous shell. Eggs may be

kept by preventing bacteria from entering the shell or by keeping them from growing after they enter. Cold storage prevents the growth of bacteria, as we learned in the study of milk. Sealing the pores of the shells of perfectly clean, fresh eggs will prevent the entrance of bacteria.

We can seal the pores of the shell by submerging the eggs in a solution of water glass, a sirup-like liquid which can be bought at a drug store. Mix one part of the water glass with nine parts of water which has been boiled and cooled. Put the solution in a stone crock and keep it covered to prevent evaporation. Place clean, freshly laid eggs in this solution. See that the eggs are well below the surface of the liquid. Keep them in a cool place. Eggs can be kept in this way for several months with little or no change in flavor. The method is satisfactory only when the eggs come from a reliable source.

Other ways of preserving eggs are as follows: in brine; greasing the shells with vaseline or lard; in sawdust; in lime water. These various methods are not so satisfactory as the use of water glass because in each of them the flavor of the egg is altered by the preservative used.

Egg cookery. Heat coagulates the protein of eggs, meat, and fish. The point at which albumen coagulates is below the boiling point of water. This property of eggs makes them useful, in cookery, as thickening agents. High temperatures toughen the coagulated protein of egg. It is better, therefore to cook eggs, also cheese and meat, slowly and at a low temperature.

Because eggs have the property of holding air when beaten, they are used to lighten mixtures. When egg is used to lighten a mixture, slow cooking is necessary.

Uses of eggs in cookery. In the household eggs are used variously:

1. As a valuable food.
2. As a thickening agent in such foods as custards, sauces, and fillings for pies.
3. As a leavening agent in omelets, soufflés, and sponge cake.
4. To improve flavor and texture in muffins, cakes, cookies, and other mixtures.
5. As a coating agent — as in preparing food for deep fat frying.

Ways of serving eggs for breakfast. Breakfast is the most acceptable meal for the "egg-a-day." The most familiar forms in which eggs appear at breakfast are: soft-boiled, hard-cooked, poached, scrambled, fried, shirred, baked, and coddled. An omelet is a delicacy for breakfast. There are two kinds, puffy or foamy omelet, and creamy or French omelet. For variations in omelets see recipes, pages 380-81. Hard-cooked eggs are varied by the use of white sauce; for example, creamed eggs, scalloped eggs, eggs à la goldenrod. Scrambled eggs with or without bacon, and baked eggs are breakfast favorites.

See the recipes, pages 378-82 for methods of preparation.

BACON

Bacon is regarded as a meat but it is principally fat. One tablespoon of bacon fat is one hundred calories. Four small slices of crisp, broiled bacon equal one hundred calories. Bacon is prized for its flavor. It adds zest to breakfast, which is made up of simple foods. Bacon is rather expensive, and therefore should be reserved for special occasions. There are usually between twenty and twenty-five slices in a pound. How much is added to the cost of a breakfast for six when two slices of bacon per person are added?

Other breakfast meats. In the chapter on meats (Unit Three, Chapter XVIII) it is stated that the dietary in most American families would be improved by reducing by one half the expenditure for meat. Breakfast is the easiest meal from which to omit meat. Occasionally it may be included in the breakfast menu. People who work long hours out of doors like meat for breakfast. The farm-house breakfast often includes sausage, ham, or steak.

EXPERIMENTS AND CLASS PROBLEMS

1. How many eggs in a pound? In some places eggs are sold by weight instead of by the dozen. Is it more accurate to measure eggs by pounds or by dozens?
2. Test eggs for freshness.
3. Demonstrate the method used commercially for testing eggs — by making a pasteboard roll and using an electric light or a flash light. Note the appearance of the white and the yolk, and the air space in various eggs

4. Examine a piece of eggshell under a lens. Dip it in water-glass solution and examine it again. What has happened?
5. Prepare eggs in various ways. See recipes, pages 378-82.
6. Study other cook books for ways of preparing eggs. See how many kinds of omelets you can find. How are they similar? How unlike?

QUESTIONS

1. Why is egg yolk one of the first foods to be added to the diet of young children?
2. Compare the composition of the white and that of the yolk.
3. Discuss the food value of eggs.
4. How do eggs compare with milk as a food?
5. Explain the statement, "Egg proteins are complete proteins."
6. How can you tell whether or not eggs are fresh?
7. Explain candling.
8. Why do eggs spoil?
9. Explain how water-glass solution keeps eggs; how cold storage does.
10. At what temperature shall we cook eggs? Why?
11. What is coagulation?
12. Suggest egg dishes for breakfast for two weeks, without exact repetition in the method of preparation.
13. What are four uses of eggs in cookery?
14. What is the underlying principle in egg cookery?

HOME PRACTICE

1. If you are not already expert at separating egg whites and yolks, practice it when there is need for it at home.
2. Prepare eggs for breakfast several times, in each of three ways that your family likes best.
3. Prepare eggs in three unusual ways for your family breakfast, as for example, eggs à la goldenrod, scalloped eggs, French omelet, puffy omelet.

Note: Do not try too large an omelet at first. An omelet of two or three eggs is large enough to attempt, if you are unskilled.

4. Try preparing several things at once for breakfast. For example, eggs, toast, bacon.

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CHAPTER VIII

PREPARATION AND SERVING OF THE BREAKFAST

EVEN though breakfast is the simplest meal of the day, the first time that you assume the full responsibility for preparing and serving the family breakfast you will discover that it takes both thought and skill to have everything ready within a reasonable time, done to a turn, and served to a queen's taste, with the cook a smiling, gracious, and unflurried hostess. And yet, that should be the aim of each of you!



FIG. 14. BREAKFAST

<i>Menu</i>	<i>Flat silver required for each place</i>
Fruits	Orange spoon (or teaspoon)
Hot Cereal and Cream	Dessert spoon
Eggs Hot Rolls	Eggspoon (or teaspoon), knife and fork
Cocoa or Coffee	Teaspoon and individual butter knife
	Courtesy, R. Wallace and Sons Manufacturing Co.

How can it be done? At first it will seem like managing a three-ring circus, but a little practice will work wonders. The job requires both skill and managerial ability. Since you cannot acquire these to a marked degree in the school kitchen, you must use your own home for practice. If you have been following the

home-practice suggestions at the end of each chapter you have already acquired skill in the preparation of various breakfast dishes.

Let us consider the procedure in planning, preparing, and serving breakfasts.

Planning the menu for breakfast. The menus for the entire day should be planned together. One meal may be poorly balanced, yet it may fit into a well balanced dietary for the day. Since, up to this point, we have not covered certain important foods, a fuller discussion of menu planning is found later in the book. See luncheons and dinners, Chapters XVI and XXII.

Breakfast should ordinarily include the following:

1. Water, preferably before breakfast, two glasses.
2. Fruit, for good health and to stimulate the appetite.
3. Calories, one fourth of the daily requirement.
4. Tissue-building foods — complete proteins, calcium, phosphorus, and iron.
5. Cellulose or roughage.
6. Vitamins.

Variety is the keynote of successful meal planning, but breakfast requires, perhaps, less variety than the other meals. We should not repeat the same menu, or the same food in the same form, too frequently. We produce variety in a meal by choosing our foods in one menu from different groups; by having contrasts in color, flavor, texture; and by avoiding repetition of the same food even in a different form.

The most important questions to consider in planning breakfast menus are: Who is to eat the meals? What do they need? How much do they need? What do they like? What can they afford? The foregoing chapters will help you to answer these questions for any group.

Order of courses for breakfast. In arranging the courses for breakfast, fruit is usually served first because it stimulates the appetite. The cereal is second, because a mildly flavored cereal is better relished before such strong flavors as bacon, coffee, and sweets. Most foods served for breakfast are simple and rather quickly digested. A note of warning against sugar-laden cereal, and the over-rich combination of hot cakes, waffles, butter and

64 PREPARING AND SERVING BREAKFAST

sirup is not amiss. Simple combinations of a few well-cooked foods are satisfactory and sensible.

Marketing. In purchasing food supplies the needs of the entire day must be considered. A few suggestions for buying the supplies that are needed most frequently in preparing breakfast are:

Purchase:

Butter, eggs, bacon, weekly.

Milk and cream, daily.

Berries and perishable fruits, daily; other fruits, weekly or semiweekly.

Flour, sugar, by bag or barrel.

Cereals, dried fruits, by package (semi-perishable).

Coffee, in tin cans, 1-pound size convenient.

Tea, in tin cans, $\frac{1}{4}$ to $\frac{1}{2}$ pound size convenient.

Baking powder, in tin cans, $\frac{1}{2}$ to 1 pound size.

Cocoa in cans, $\frac{1}{2}$ to 1-pound. If used in large quantities larger sizes are cheaper.

Jelly or marmalade, best if made at home.

Graham flour or corn meal in small sacks (spoils more easily than white flour).

Table salt, in packages.

For other suggestions on marketing see Chapter XXIV.

Planning the working schedule. Even the most skillful cook plans her working schedule. To be sure she plans it in her mind rather than on paper, but she has a plan nevertheless. The inexperienced cook should have a brief written plan. Each dish cannot be finished before another is begun. The preparation of a meal is made up of separate jobs just as an orchestra is made up of separate instruments, and these jobs must fit together just as the various instruments play together. Now and then there may be a solo part in orchestra music, but for the most part there is a harmonious blending of the various instruments. Just as one instrument out of tune or off key may spoil an orchestra selection, so burned biscuit, or cold, fallen omelet is disastrous to the pleasing effect of the whole breakfast.

Decide upon the menu and assemble the supplies first, then

make out your working schedule. Your written plan must take note of the following points:

1. What utensils and equipment are needed? Do you have them or can you improvise them? If the dishes selected require the same equipment at the same time, the menus must be changed. However, the same equipment may often be used more than once for the same meal.
2. What can be done ahead of time? This question is more pertinent for other meals than for breakfast. Can the fruit be prepared ahead of time and left in the refrigerator? Why not set the table or arrange the flowers the evening before, if you are cooking breakfast for the very first time? Could the cereal be cooked, or partly cooked, the night before? Should the fruit be placed in the refrigerator the night before?
3. How long does it take to prepare and cook each dish? Which dishes require the longest time?
4. When should you light the oven?
5. Which dishes must be served the moment they are prepared? Which may be kept for a little while? For example, the toast may be kept in the warming oven, but muffins are better if served as soon as done.
6. Note the proper order of serving, and plan accordingly. For example, the fruit and cereal must be ready when breakfast is served, but to be palatable soft-cooked eggs must be served as soon as prepared. It is better, therefore, to have the family wait for soft-cooked eggs or omelet than to have these preparations wait for them. Why?
7. How can you keep your work table and sink tidy? Plan to use few utensils, and, if possible, to keep them washed as they are used.

Labor-saving devices are particularly appreciated as aids to getting breakfast. Those in most general use are the percolator, the electric toaster, the double boiler, and the fireless cooker. In what way is the double boiler a convenience?

After having thought through all these points, make an outline of the jobs you will do in preparing your breakfast menu, and then schedule your time. Try out this schedule. After preparing the

66 PREPARING AND SERVING BREAKFAST

meal according to it, criticize the plan. How would you change the schedule if you were doing the same thing again? It is by using our experiences that we learn to manage skillfully.

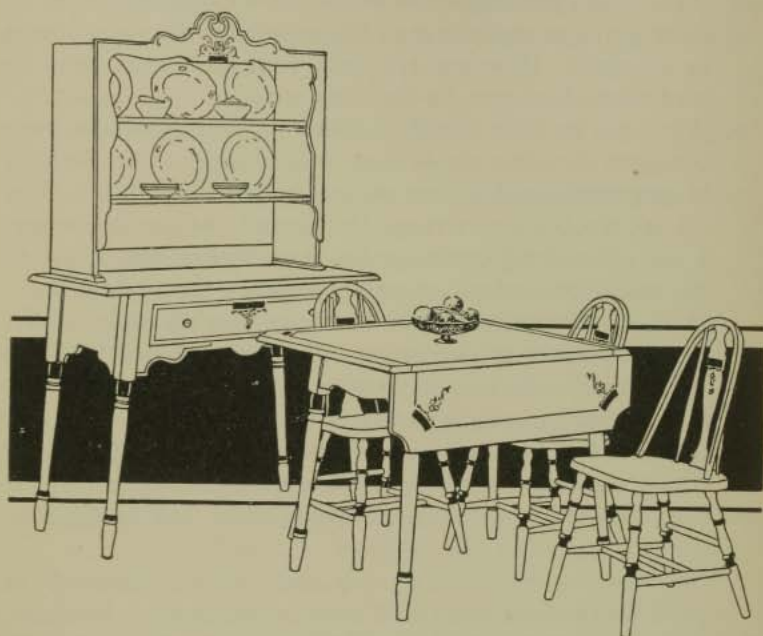


FIG. 15. FURNITURE FOR THE BREAKFAST ROOM
Courtesy, Hoosier Manufacturing Company

Serving the breakfast. For a discussion of the breakfast room or dining-room and its furnishings, see Chapter XXVI, *Where Shall We Eat?*

Breakfast can and should be the most intimate family meal. Each member of the family should help by being on time, attired for the day. If it is not convenient for the family to eat breakfast together, the meal may be a cafeteria affair, with each person serving himself and, when finished, stacking his dishes for washing so that they will be convenient.

Because there is much in common between laying the table for the three meals of the day and serving these meals, this subject

is treated as a whole and you are referred for details to Chapter XXVIII, Table Service. Simplicity and a daintily laid table have an irresistible charm. The family table, especially the breakfast table, is not a place for display.

The food must be neither undercooked nor overcooked. Hot food must be hot; and cold food, cold. Courtesy and good manners at the table are essential to the enjoyment of any meal.

Breakfast is the meal at which we have fewest guests. It is a very satisfactory meal for entertaining intimate friends, informally. Can you picture the pleasures of an Easter breakfast party, or of a picnic breakfast in the spring or summer, or of breakfast on the porch in warm weather? An informal breakfast is a charming form of hospitality.

CLASS PROBLEMS

1. Review all the chapters on breakfasts.
2. Plan four breakfast menus for various seasons.
3. Score these breakfast menus for energy factors, tissue building factors, regulatory factors, growth and health factors. Use plus and minus signs: a triple plus sign to indicate a great abundance of a factor, a double plus for a significant amount, a single plus for an average amount, and a minus sign to indicate its absence.
4. Find out the cost of the breakfasts you have planned. How can you reduce this cost by altering the menus?
5. Plan a week's menu for an imaginary family, and show how these meals meet the specific needs of its members.
6. Plan a week's breakfast menus for your family. Show how these meals meet the specific needs of the various members.
7. Plan a working schedule and the utensils for the preparation of the following breakfast menus:

No. 1.

Grapefruit
Oatmeal and Cream
Poached Egg on Toast
Coffee and Milk

No. 2.

Prunes
Shredded Wheat Biscuit, Top Milk
Omelet Popovers
Cocoa

No. 3.

Orange Juice
Cream of Wheat, Whole Milk
Broiled Bacon Soft Cooked Eggs
Toast Marmalade
Hot Chocolate

68 PREPARING AND SERVING BREAKFAST

8. Estimate the money value, at current market prices, of these breakfasts for a given family. Score the breakfasts as balanced meals. Show how the cost may be materially reduced without decreasing the nutritive value of the meals.
9. Plan a working schedule and the utensils for one of the breakfasts planned in problem 6, and have a class discussion of the plans.
10. Obtain plans or pictures of breakfast nooks or rooms.
11. Visit stores to see breakfast-room furniture and suitable linens, china, and silver.
12. Have a mock breakfast at school.
13. Singly, and in groups, prepare and serve simple breakfasts as class projects.
14. Arrange an invalid's breakfast tray.

HOME PROJECTS

You will notice that the home work at the end of each chapter preceding this has been designated as Home Practice Work. We are now ready for a larger piece of home work. This is designated as Home Project Work.

What is the difference between home practice and home project work? Home practice consists of repeating at home what you have done at school, or something very similar to what you have done at school. It has for its aim the development of skill and is chiefly a "doing" job.

A home project is a more important piece of work than home practice work and differs from it in that it involves not only skill but managerial ability. A project is not merely a doing job, but, in addition, a studying, planning, and managing job. A successful home project is preceded by, and is dependent upon, the acquiring of skill through home practice work. Home practice is but a part of a home project.

The object of home project work is to make you a skillful home maker through the use of your own home as a laboratory, with your teacher and your mother as guides and counselors. You should choose something to do at which you are not already expert. It should be something that you want to do, that needs doing in your home, and that is related to your school work.

The following ways are suggested for using class time for home project work:

Plans should be made at school (menus, market orders, utensils, working schedules, cost computation).

Plans discussed at school.

Discussion of results.

Readings and reference work.

Writing of results and reports.

Individual conference on home work at school during laboratory time.

Samples of baking can be brought to school and discussed.

Classes may be dismissed for work at home, or the class time for home economics may be given for preparation of other work in exchange for home time for project work.

QUESTIONS

1. Review the questions at the end of Chapters I to VII.
2. Why is home project work necessary?
3. What is the difference between home practice and home project work? Illustrate.
4. What brief rules can you give for planning a breakfast menu?
5. State general rules for purchasing breakfast supplies and give reasons for each.
6. Why is a working plan necessary in preparing a meal?
7. What portions should be included in a working plan for preparing breakfasts or other meals?
8. In what ways have you modified your breakfast habits since studying foods? Should you make any further modifications? Why?
9. Should your family eat a heavy, light, or moderate breakfast? Why? Illustrate each type of breakfast.

SUGGESTED HOME PROJECTS RELATED TO BREAKFAST LESSONS

1. Plan, prepare, serve (and clean up after) breakfast for a week or two at home. One breakfast will not be enough, because the object of your project work is to acquire skill and managerial ability. This requires a series of breakfasts. In each case you should try to shorten the process of meal preparation and at the same time improve the quality of the cooking and the suitability of the menu.
2. Plan and prepare a child's breakfast for several weeks.
3. Plan, prepare, and serve an invalid's breakfast tray for several weeks.
4. Establish correct eating habits and table manners for yourself, or train a younger child in them.
5. Do the family marketing and keep accounts for a month.
6. Improve family breakfast menus both in nutritive value and in economy.
7. Plan, prepare, and serve a breakfast party or picnic.

A home project that is worthy of school credit must have three written parts:

1. The project plan.

This should be prepared at school with the help of your teacher and with the use of the school library.

Contents of project plan:

A statement of your goal.

70 PREPARING AND SERVING BREAKFAST

A description of the food needs of your family and a statement of the relation of this project to their needs.

An outline of what you are going to do and how you propose to do it; as for example, your menus, market orders, and supply list, and your working schedule.

Note: Both before and after your plan is approved at school it is necessary to have your mother's advice and approval, and to enlist her help.

2. The project record.

This is a diary of your work from day to day.

Contents of the project record:

Date.

Jobs done.

References read or persons consulted.

Methods used.

Results; opinions of results (both yours and those of members of your family).

The time spent.

3. The project report.

This should be a story of your home project work. You may tell what you have gained in knowledge, in skill, and in ability. Your conclusions as to the reasons for your success or failure and statements as to how you would improve your project if you were to undertake it again should be included in the story or history. Kodak pictures or pictures from magazines that illustrate your project will be interesting.

A story of an interesting home project makes an acceptable theme for an English class.

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UNIT TWO LUNCHEON OR SUPPER

CHAPTER IX

WHAT SHALL WE HAVE FOR LUNCHEON OR SUPPER?

THE number of meals per day is a matter of custom. If you will make inquiries of travelers in other lands, you will learn that eating habits in different countries of the world vary.

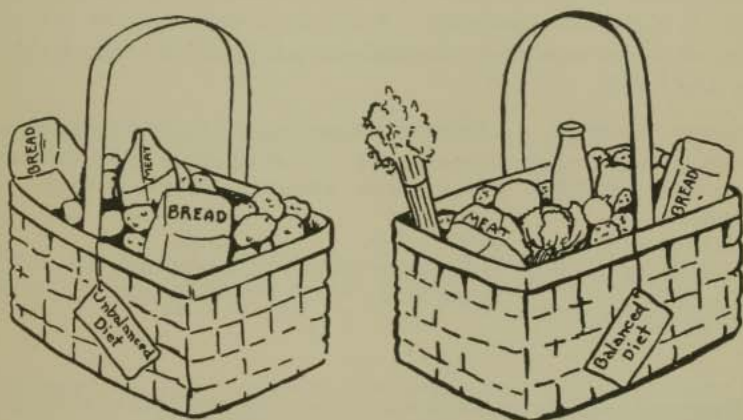


FIG. 16. SICKNESS OR HEALTH
Which do you purchase through your food?

Our three meals are breakfast, luncheon, and dinner; or breakfast, dinner, and supper. We eat one light meal (breakfast), one moderate meal (lunch, luncheon, or supper), and one heavy meal (dinner). It is the moderate meal that we have under discussion here, whether that meal is eaten at noon or at night. In cities the members of the family usually eat the noon meal "in town" or at school. This meal is light or moderate, and often hurried —

in fact, a "lunch." Even in small towns and rural districts the school children often eat a lunch at school. Thus noon is the more favored time for the moderate meal of the day. Little children, however, should always have their heavy meal at noonday.

Some factors in planning luncheon and supper. There is much more variety in luncheon menus than in breakfast menus. The same factors influence what we eat at each meal: age, sex, occupation, state of health, habit, and season.

The characteristic luncheon dishes are: soups, especially cream soups; vegetables; salads; breads; sandwiches; beverages; a main hot dish such as cheese, egg, or combination meat and vegetable dishes; and fruits or other desserts.

A luncheon menu containing all or most of these dishes would be termed a *heavy* luncheon. A luncheon consisting of several of them is a *medium* luncheon. A luncheon consisting of two or three of these items in simple combinations is called a *light* luncheon or a lunch.

HEAVY LUNCHEON	MEDIUM LUNCHEON	LIGHT LUNCHEON
Cream of tomato soup	Cheese soufflé	Lettuce and tomato
Meat loaf with vegetables	Lettuce with French dressing	salad — French dressing
Head lettuce and Thousand Island dressing	Rolls	A roll
Rolls	Milk, tea or coffee	Tea or milk
Milk or coffee	Prune whip	Baked custard
Pie		

Seasonal specials for luncheon. One of the delights of a change in season is the welcome variety that it brings in menus. With the first cold weather you are pleased to find for luncheon a bowl of savory soup, or a casserole of steaming scalloped oysters, delicately browned, but what could be less tempting in July? Spring has its delights in an array of fresh vegetables, and we think with pleasure of the tinkle of ice in our glasses in summer. The greatest contrast is between midwinter and midsummer menus. The following table serves to illustrate the striking differences in what we like for luncheon or supper in hot and in cold weather.

DISHES	COLD WEATHER	HOT WEATHER
Soup	All kinds, especially cream soups	
Vegetables	Potatoes, cauliflower, canned vegetables, cooked onions, cabbage, rice, dried vegetables, celery, carrots, greens, winter squash. Vegetables prepared with sauces.	Spinach, summer squash, corn, asparagus, new peas, string beans, radishes, tomatoes, cucumbers, shallots, new potatoes, okra. Vegetables served simply.
Salads	Not very prominent, used as a side dish for the main course, as slaw	As main dish; all kinds, chiefly fruit, vegetable, or egg
Breads	Hot rolls	Hot rolls or crackers with cold dishes.
Sandwiches	Toasted or hot sandwiches	All kinds
Beverages	Hot chocolate, cocoa, or for adults coffee, tea	Iced drinks of all kinds, especially fruit juices, ginger ale, cold milk, iced tea
Main hot dish	Fish and oysters, meat, cheese, eggs, sausage, gumbo, stews, chowder	Often lacking. Perhaps a meat and vegetable salad, cold meats, soufflé (cheese)
Desserts	Pie, cake, dried fruit, fruit roll, puddings, ice cream	Ices, berries, cantaloupe, fresh fruits; cherries, plums, peaches, pears
Total calories	(maximum)	(minimum)

Relation of luncheon to other meals of the day. Because a well-balanced dietary is necessary for health, menus should be planned first to meet body needs, and second to please the eye and the palate. The three meals of the day must be considered together.

Daily food requirements. From the tables found on page 223, you can estimate the calories needed daily by yourself and your family. It was suggested that one fourth of the daily calorie requirement be supplied by breakfast. Luncheon may well supply one third of the total number of calories and dinner the remainder. Some persons eat approximately the same amount for each meal.

Each meal may be balanced by having some food from each group. If, however, the three meals are planned together, fewer foods are necessary in any one meal, because a single meal may supply one body need abundantly and that need may be ignored in the other meals of the day.

Luncheon hints. Luncheon is frequently a meal of individual choice and hence of individual responsibility. No matter how well the housewife may plan for the health of her family, every person should know how to choose food wisely, because most of us eat away from home sometimes and all of us choose, to some extent, what we eat at home.

Luncheon is the meal that interrupts the day's work. It is often a hurried meal; hence it should be simple and easily digested. Even when the family eat luncheon at home, it should be remembered that the housewife has a full working day, and the noon meal should be easily prepared and simply served in order to conserve her time and energy.

The secret of economy and variety is the use of food in season and the serving of a few well-cooked dishes at each meal.

Luncheon is an informal meal, and for that reason it is a meal at which we often entertain our friends. Because of its informality a large number of people may be entertained easily at a "buffet luncheon." A formal luncheon is a heavy meal because of the number of courses served. It is really a dinner, but is served at noon instead of in the evening.

CLASS PROBLEMS

1. What foods frequently used for luncheon or supper may be counted on to supply protein? Calcium? Iron? Phosphorus? Vitamins? Fuel? See Tables in Appendix.
2. Keep a record of what you eat for lunch for one week. Score it

for calories, vitamins, and minerals. (Use plus and minus signs as in scoring breakfast menus. See page 67). What part of your calorie requirement do you eat at lunch?

3. Compute the number of calories needed by your family for one day. How many calories should you eat in a day?
4. Start keeping a weight chart for each member of the class. Weigh each week and record the weight. Try to have each member of the class normal in weight by the end of the term. (Note: If any member is materially under weight or over weight, a physical examination should be made to determine physical factors that contribute to this condition which may be remedied.)
5. From the list of foods for luncheon, and from your knowledge of food composition, formulate rules for a member of your class who needs to gain in weight; for one who needs to lose in weight.
6. Procure menus for the noon meal from several eating places in your town. Suggested places: the grill room or the coffee shop in a hotel; a tea room; a dairy lunch; a restaurant; a school cafeteria. From these menus make out a list of typical luncheon dishes.
7. If you will observe what thin people and fat people eat you will see why they are thin or fat, as the case may be. Two people were in line at a cafeteria — one, a man much overweight, the other, an underweight woman. Their trays contained the following dishes:

Man's tray

Broiled steak
Baked potato
Gravy
Three slices of bread
2 pats of butter
Buttermilk
Mince pie and whipped cream

Woman's tray

White fish
Stewed tomatoes
Coffee (no cream or sugar)
1 roll (no butter)

Observe how people select food. Do you find any proof that people need to learn food values?

8. Plan a light, a moderate, and a heavy luncheon for winter, spring, and summer.
9. Read current periodicals for suggestions for luncheon dishes, or menus.
10. In class discuss menus for buffet luncheons.
11. In class discuss menus for informal and formal luncheons.
12. Point out in any luncheon menu the different foodstuffs represented. Suggest changes that would increase: (1) iron; (2) calcium; (3) vitamins.
13. Suggest several one-dish luncheon or supper menus.

QUESTIONS

1. What is the difference between luncheon and supper?
2. Name the most characteristic luncheon or supper dishes.
3. Distinguish between a light, a moderate, and a heavy luncheon.
4. Show how the seasons affect luncheon or supper menus.
5. What is the best method of planning meals — by the day or by the meal? State your reasons.
6. Why should every one have a knowledge of food values?
7. What body requirements must be met in the day's food supply?
8. What luncheon foods are the fuel foods? The protective and regulatory foods? The building foods?
9. Why should luncheon be a simple meal?
10. To what type of entertaining is luncheon adapted?
11. How may we procure variety and economy in our menus?
12. What differences, if any, should there be between luncheons for children and for adults? Why?

HOME PRACTICE

1. For three days keep a record of what you eat for breakfast, luncheon, and dinner. What portion of your total calories do you eat at each meal?
2. Learn to eat two vegetables which you do not now eat.
3. On Saturdays help at home with the noon dishwashing.

REFERENCES

Current magazines for luncheon menu suggestions.

Good Proportions in the Diet. United States Department of Agriculture
Farmers' Bulletin 1313 (1923).

CHAPTER X

VEGETABLES FOR LUNCHEON

Eat more vegetables. It is a good rule to make vegetables the main dish for one meal daily. Vegetables are used for both luncheon and dinner, but they are more prominent in the luncheon menu. Why is it that we should eat at least two vegetables daily? Should some vegetables have preference over others? Let us see.

How vegetables help keep us well. Vegetables are similar to fruit in that they are good health insurance.

1. Vegetables are valuable as laxatives. All vegetables contain cellulose or woody fiber to which their laxative quality is chiefly due.
2. Vegetables are important sources of the minerals in which the diet is most likely to be deficient, as iron, phosphorus, and calcium. Iron is abundant in such green leaves as spinach, dandelions, turnips or beet tops, mustard, and other "greens." Beans and peas, also, are rich in iron.
3. Vegetables are important sources of vitamins A, B, and C.

Vitamin A, a growth promoting substance, is found especially in tomatoes and in the green, leafy vegetables. The thinner and greener the leaf the richer the content of vitamin A. Head lettuce is not as rich in the A vitamin as is the unbleached lettuce, and the same is true of cabbage and celery. Other green vegetables contain a good supply of vitamin A. It occurs, for example, in string beans, new peas, carrots, sweet potatoes, yellow squash, yellow corn.

Vitamin B, the protective substance which prevents beri beri, is fairly evenly distributed in all kinds of vegetables. Vitamin B is important in our daily diet because it aids normal nutrition, stimulates appetite, and assists in growth.

Vitamin C, the scurvy preventive, is present in some vegetables. This vitamin is found in the active growing parts of plants. Thus

it occurs in fresh green leaves — spinach, lettuce, and cabbage for example; in growing shoots — asparagus; in juicy stems — celery; and in growing bulbs, roots and fruits, such as young onions, young carrots, and tomatoes.

This vitamin is not found in seeds, or in vegetables that are stored. Vitamin C is destroyed by continued cooking, therefore those vegetables that are eaten raw are most important as a source of C. Cabbage (raw), tomatoes, and fresh young onions are the richest sources of vitamin C.

Table showing vitamin content of vegetables. See Appendix, Table VI.

CLASSIFICATION OF VEGETABLES

1. Classification according to composition.

Green vegetables. This group includes all the succulent or juicy vegetables, such as tomatoes, asparagus, cabbage, lettuce, and others. Green vegetables contain a high percentage of water, minerals, and vitamins, but little or no starch or protein.

Starchy vegetables. These vegetables contain an important quantity of starch or protein or both. To this group belong beans, peas, potatoes, corn, and rice.

One green and one starchy vegetable make a good selection in planning menus. Why?

2. Classification according to flavor.

Mild vegetables include carrots, lettuce, potatoes, beans, celery.

Strong vegetables include cabbage, onions, green peppers, and cauliflower.

This grouping of vegetables is important in cooking. The flavor of vegetables is due chiefly to volatile oils which pass off in the steam or dissolve in the water. If it is desirable to modify the flavor of a vegetable, cook it, therefore, in an uncovered vessel, and change the water, if necessary, during the process of cooking.

3. Classification according to form in which marketed. Vegetables are also classified as *fresh*, *dried*, or *canned* vegetables.

Fresh vegetables are better sources of vitamins, especially of vitamin C, than are dried or canned vegetables (except tomatoes).

Dried and canned vegetables are equivalent to fresh vegetables

as sources of minerals, cellulose, and protein. Some dried vegetables, such as peas and beans, are cheap sources of protein and fuel.

Some vegetables deserve special notice. Vegetables as a group have much in common, but there are some individuals in the group that should be specially emphasized.

Spinach is our richest source of vegetable iron. It also contains all three of the vitamins, being equal to butter and to egg yolk as a source of vitamin A. Other green-leaf vegetables, such as mustard greens and broccoli, are similar to spinach in food value.

Tomatoes are rich in all three of the vitamins. They rank with orange and lemon juice as a source of vitamin C, and are outstanding in that they retain this vitamin when cooked or canned.

Cabbage is fairly rich in all three of the vitamins and contains abundant minerals. Raw cabbage is our most abundant vegetable source of vitamin C, but cooked cabbage contains materially less. Cabbage deserves further attention because of its cheapness and its availability throughout the year. The outer green leaves are preferable to the inner white ones. Why?

Carrots are a cheap source of minerals and of vitamins A and B. Fresh young carrots are also a good source of C.

White or Irish potatoes, because they are eaten in such a large quantity are a good source of vitamins B and C, and of calcium, phosphorus, and iron. They do not contain much vitamin A. Potatoes should not be used to the exclusion of other vegetables.

Lettuce, like cabbage, is valuable for all three of the vitamins, and for minerals, especially iron.

Energy value of vegetables. The One-Hundred-Calorie Portion Table in the Appendix (Table V) shows that vegetables do not yield a high return in calories. Potatoes, dried beans, and peas are an exception. For persons who desire to reduce, or who do not wish to gain further, the low fuel value of vegetables is important. Vegetables are "filling," and they satisfy the appetite without piling up calories if they are served without much cream, butter, or other fat.

We may summarize the importance of vegetables in the diet by a quotation from Dr. Sherman: "If we take account of the fact

that we must purchase phosphorus, iron, at least three kinds of vitamins, as well as protein and energy in our food, we see that money spent for fruits and vegetables yields fully its proportionate return of nutritive value, as we now understand it, if not in calories and protein."¹



FIG. 17. USING THE GARDEN'S YIELD

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Buying and caring for vegetables. Vegetables that are in season are superior in quality and are more economical than those that are out of season. Select young, fresh vegetables for the sake of their flavor and vitamin C content. In many vegetables the freshness may be judged by the leaves: if the leaves are wilted the product is not very fresh. Flabby or wrinkled vegetables are wilted, fresh vegetables are crisp, young vegetables are tender.

Select sound material. Corn should be well filled out. Specks or spots on vegetables indicate inferiority. Soundness in lettuce,

¹ From H. C. Sherman: *Food Products* (Revised ed.), p. 415. Reprinted by permission of The Macmillan Company, publishers.

cabbage, and cauliflower, can be judged by their appearance, firmness, and weight.

Avoid overripe tomatoes. If tomatoes are to be bought in quantity it is best to buy them underripe, except those for the current day's supply. Wrap underripe tomatoes in paper and keep them in a dark, cool place. Ripen them as they are needed by placing them in the light.

If storage facilities are available, a few vegetables may be bought in quantity. Potatoes (both sweet and Irish), onions, and Hubbard squash keep well if stored in a dry, cool place. It is necessary to pick over vegetables in storage frequently, discarding any that are unsound.

Dried vegetables may be bought in bulk, and are easily kept in tin cans or glass jars.

In purchasing canned vegetables it is important to read the labels. Artificial coloring, the addition of preservatives, and the net weight of the contents must be marked on the label. Avoid the brands that have artificial coloring or preservatives. These substances may or may not be harmful, but they indicate an inferior grade of vegetable.

Choose vegetables that are displayed and handled under sanitary conditions.

It is often possible to buy vegetables direct from the producer. Good roads and cars make combination pleasure and foraging trips possible.

Vegetables should be washed before they are used. A brush is helpful. It is easy to freshen wilted vegetables by placing them in cold water for a short time, but if they stand long in water they lose flavor. After radishes, celery, lettuce, cucumbers, and water cress have been washed they should be wrapped in dry cheesecloth or placed in a covered tin can, and placed directly on the ice. Many vegetables have flavors which are absorbed readily by milk and butter, but a few mild vegetables, such as tomatoes and summer squash, may be kept in the refrigerator. A well-ventilated cooling closet, which may consist of a screened box in the kitchen or pantry window, makes an ideal place for keeping vegetables.

Vegetables do not keep well in a hot, dry climate. In such a locality a daily trip to the market is advisable.

Tough portions of vegetables may be used for stews or for soups.

What hot vegetable dishes shall we have for luncheon?

Soups offer an opportunity for including vegetables in the luncheon menu. They are easy to prepare, cheap, well liked, easily varied, digestible, suitable for all the members of the family, and are especially acceptable in winter. There are two kinds of vegetable soups — cream and stock.

If vegetables are to be used as the main dish at luncheon, it is desirable to “dress” them up a bit, leaving the more simply prepared vegetables for dinner. We shall find *creamed, stuffed, baked, scalloped, fried, and au gratin vegetables* acceptable at luncheon.

Tempting vegetable dishes for luncheon:

Stuffed baked eggplant, peppers, squash, tomatoes.

Scalloped corn, cabbage, eggplant, or asparagus.

Sweet potato with nuts and marshmallows.

Potato, bean, or pea soufflé.

Cauliflower or potatoes au gratin.

Corn pudding.

Peas in timbale cases or bread cases.

Creamed asparagus on toast.

Baked candied sweet potatoes or Hubbard squash.

Fried corn, okra, or potatoes.

Fritters — corn, okra.

Broiled tomatoes on toast.

If ingenuity is exercised in the preparation of vegetables, they can be made so tempting and served in such a variety of ways that people will like them. Frequently certain vegetables are unpopular because they are prepared in uninteresting or unpalatable ways. Vegetable cookery in the average family offers much room for improvement.

VEGETABLE COOKERY

Underlying Principles

- I. The vitamins and minerals for which we chiefly value vegetables are soluble in water. Vegetables should be boiled in as small a quantity of water as possible and the

COMPOSITION OF FOOD MATERIALS

Protein



Fat



Carbohydrates



Ash



Water



Fuel Value
in 1000 Calories

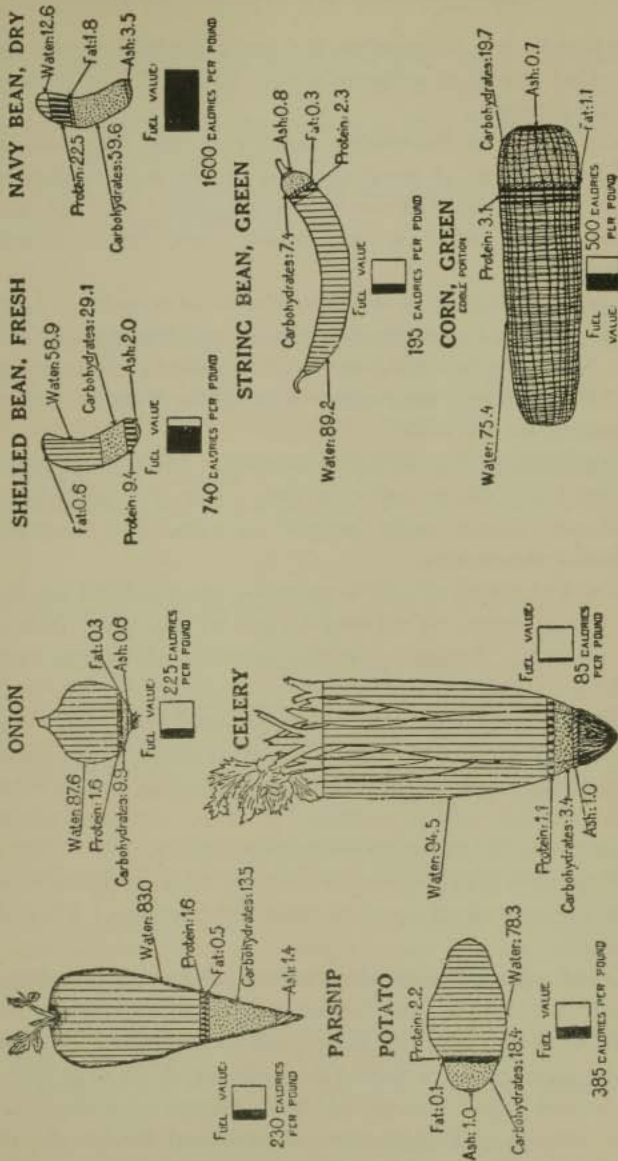


FIG. 18. COMPOSITION OF VEGETABLES

water saved, if suitable, for use in soups. They should be boiled whole or in large pieces to avoid loss of the soluble substances.

2. Vitamin C is destroyed rapidly in the presence of alkali. The practice of putting soda in the water when cooking vegetables should therefore be avoided. If you wish to keep the green color in vegetables, cook them in uncovered vessels.
3. Cook vegetables in as short a time as possible. Long cooking renders them less nourishing and less palatable.
Steaming is a good method of cooking mild vegetables.
For boiling, vegetables should be dropped into rapidly boiling salted water.
4. Vegetables need careful seasoning. All of them require salt. One teaspoon to one quart of water is a good proportion. Butter, cream, milk, pepper, paprika, and cayenne are all useful seasonings.
5. The flavors of strong vegetables are modified by doing the cooking in uncovered vessels, and by changing the water now and then. Steaming is not suitable for strong vegetables. Why?
6. Directions often call for parboiling vegetables as a preliminary step. By this is meant cooking them beforehand, until they are partially tender, in boiling salted water.
7. Vegetables which contain a large amount of water — potatoes, for example — may be baked.
8. Prepare vegetables for cooking by washing them thoroughly and removing all spots or unsound portions. Pare thinly, if at all.
9. Dried vegetables require soaking. After soaking they should be cooked in boiling water in the ordinary way. They require longer cooking than fresh vegetables. A fireless or a pressure cooker is useful for cooking dried vegetables.
10. Canned vegetables should be removed from the can as soon as opened. They have a milder and fresher flavor if not heated in the water in which they have been canned.
11. Bread crumbs are a great help in preparing vegetable dishes.

Left-over bread may be toasted, or dried out in the warming oven, then rolled for crumbs and stored in glass jars. Scalloped and stuffed vegetables are very little trouble if the bread crumbs are on hand.

12. For recipes for vegetable soups, see pages 383-84; for other vegetable dishes, pages 387-95.

CLASS PROBLEMS

1. Review chapter on Fruits and discuss the similarity of fruits and vegetables in their food value and their place in the diet.
2. Keep for the entire school year the list of vegetables available in the local market. The following outline is suggested:

MONTH	VEGETABLES AVAILABLE	IN SEASON (local market)	OUT OF SEASON (shipped in)	PRICE

Is there any relation between price and season?

3. Visit the market and study the buying of vegetables.
4. Visit grocery stores and study the labels on canned vegetables.
5. Make a comparison of the price and quality of various vegetables in the following places: markets, groceries, cash-carry stores, vegetable wagons, near-by farms, curb markets, or in any other places dealing in vegetables.
6. Let each member of the class make an effort to find out some vegetable that is eaten in other countries. The Chinese eat young clover as greens.
7. Exhibit one-hundred-calorie portions of available vegetables.
8. Let each member of the class keep a record of the food served her family for a week. Estimate the cost. Does your family spend as much for fruits and vegetables as for meat?
9. Estimate the calories in one serving of vegetable dishes prepared in the class. See Table V, and Table VI, in the Appendix.
10. Invite a dentist and a doctor to talk to the class on the reasons for eating vegetables.
11. Prepare vegetables for luncheon. See recipes, pages 387-95.
 1. Make soups
 - (a) Stock soups with vegetables
 - (b) Creamed soups of all kinds

- II. Prepare vegetables as the main hot dish for luncheon. Suggestion:
1. Boiled vegetables.
 2. Baked stuffed vegetables.
 3. Vegetables au gratin and scalloped.
 4. Fried vegetables, fritters. Lesson on deep fat frying.
 5. Vegetables with sauces: cream, Maitre d'Hôtel butter, Mock Hollandaise, bread cases, timbale cases.
 6. Miscellaneous — left-over vegetables —
 Corn pudding Sweet potatoes with marsh-
 Candied sweet potatoes. mallows, nuts, etc.
12. Students may demonstrate to the class a vegetable prepared in a special way that is a favorite at home. (This must be practiced at home.)
13. Study magazines for suggestions for vegetable dishes.

QUESTIONS

- ✓ 1. Justify the statement that vegetables are good health insurance.
- ✓ 2. Why are vegetables laxative?
3. Discuss the presence of minerals in vegetables. Name several vegetables that are especially rich in iron.
4. Discuss the occurrence of vitamins A, B, and C in vegetables.
5. Compare cooked and raw vegetables in nutritive value. Contrast dried, canned, and fresh vegetables.
- ✓ 6. State why it is best to eat one raw vegetable each day.
- ✓ 7. How can the flavor of vegetables be modified in cooking? Apply this to cooking onions.
8. Point out the nutritive value of the following vegetables: spinach, tomato, carrots, cabbage, Irish potatoes, lettuce.
9. Do vegetables yield a high energy return? Do you consider vegetables luxuries? Give your reasons.
- ✓ 10. What points would you bear in mind in buying green vegetables?
11. Give the steps in making cream vegetable soups.
12. Plan vegetables for the main hot dish for a series of seven luncheons. Explain the preparation of each dish.
13. State the underlying principles of vegetable cookery.

HOME PRACTICE

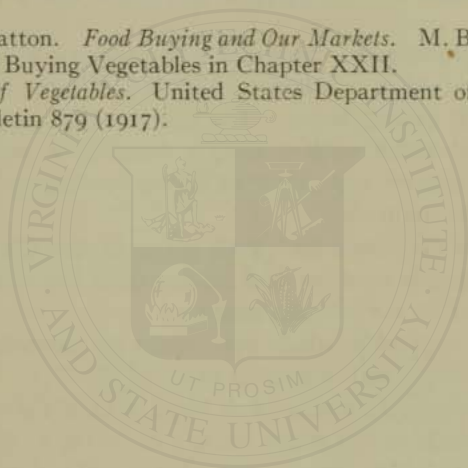
1. Purchase the vegetables for your family for one or two weeks.
2. Learn to eat at least two vegetables which you do not now eat.
3. List the vegetables that you eat each day for a week. Have you obtained a daily supply of vitamin C?
4. Plan the vegetables for your family's meals for one week.
5. Learn some particularly interesting or palatable vegetable dish from

your mother, or some neighbor, or perhaps your grandmother. Practice preparing this at home, and when you are expert, demonstrate the dish to your classmates at school.

6. Prepare at home the various vegetable dishes that you have learned to make at school.
7. Prepare at least three different vegetable soups at home.

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- Rose, M. S. *Everyday Foods in War Time*. The Macmillan Company, Chapter V.
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CHAPTER XI

SALADS FOR LUNCHEONS AND SUPPERS

SALADS appeal to the housewife who is planning and preparing meals, because no item in the menu offers more variety, or more satisfactorily rewards one's efforts. Salads add to the menu a freshness, an attractive color note, and a pleasant acid flavor.

Salads for luncheon. So great is the variety in salads that we may serve one salad as a light side dish at dinner and another as the main dish for luncheon. The dinner salad should always be light; a salad green with a simple dressing is preferable. At luncheon or supper, especially in spring or summer, the salad is frequently the main dish.

Food value of salads and their place in the diet. The food value of a salad is no more and no less than the sum total of the food values of its various ingredients.

Fruit and vegetable salads may make an important contribution to the mineral and vitamin content of the diet. The fact that raw fruits and vegetables are well liked in salads gives the opportunity to include in the menu foods rich in the C vitamin.

Starchy vegetables, meats, nuts, cheese and rich salad dressings give us salads of high fuel value. Salads are not usually rich in protein, but meat, fish, poultry, egg, and cheese salads are exceptions.

Because of the cellulose, acids, and fats which they contain salads are laxative.

In recounting the virtues of salads, their economical quality should not be forgotten. They may be both time and money savers. Choice left-over vegetables, fruits, and meats may be used in salads. It is a convenience to have the ingredients for a salad prepared in advance and only the task of combining them left for the time of serving.

Salads are often rich combinations of food. For growing children or for adults with weak or impaired digestion, the vegetable or fruit salads with little dressing are preferable. Very small children should receive their raw, leafy vegetables in sandwiches without dressing. Sandwiches are simpler combinations than salad and without the highly flavored salad dressing, are more likely to be thoroughly chewed, and are easier for small children to eat. Sandwiches made of raw, shredded, tender cabbage or lettuce and brown bread are suitable.

SALAD MATERIALS

1. *Salad foundation:*

Vegetables
 cooked
 raw
 Fruits
 cooked
 raw
 dried
 canned

Meat
 all kinds

Fish
 tuna fish
 salmon
 crabs
 shrimp
 sardines

Nuts
 Cheese
 Gelatin
 Poultry

2. *Salad greens:*

Lettuce
 Cabbage
 Celery

Chicory
 Endive
 Romain

Water cress
 Parsley
 Any other greens
 in season

3. *Salad dressings:*

French
 Whipped cream

Mayonnaise
 Cooked or boiled

Thousand Island
 Spanish
 Peanut butter
 Cheese

4. *Garnishes:*

Lettuce
 Parsley
 Hard-cooked eggs
 Olives
 Radishes
 Nuts

Diced carrots, beets,
 tomatoes, apples
 with skins
 Green pepper
 Tomato
 Pimento

5. *Accompaniments:*

Breadstuffs	Beverages (hot or iced)	Miscellaneous
bread sticks	tea	cheese balls
rolls	coffee	(cooked, raw)
toasted crackers	milk	celery
toast	fruit juices	radishes
Swedish wafers	chocolate	olives
cheese straws	cocoa	nuts
hot biscuit		plain
muffins		salted
sandwiches		potato chips
(small)		

Menu suggestions. The dessert that is to follow a salad should be rather carefully chosen. With a fruit salad we may have a starchy dessert. For example: grapefruit salad, cheese straws, tea (for adults), chocolate pudding. A fish salad calls for a light, tart dessert. Lemon ice or some other fruit ice is relished after shrimp salad. After a light vegetable salad, such as head-lettuce salad with bread sticks, a rich dessert may be served. For example: butterscotch pie.

Follow a rich meat salad with a light dessert in some such combination as chicken salad, hot rolls, fresh cherries.

The kind of dessert to be used with a vegetable salad will vary. If potato salad (starchy) is served, a light dessert of fruit (gelatin or sherbet), is acceptable. If the salad is of green vegetables, the dessert may be richer — perhaps a carbohydrate plus fruit, such as strawberry short cake.

The food value of the ingredients in salads and salad accompaniments, with the exception of that of nuts and salad dressings, is discussed in various chapters throughout this text.

Nuts as food. Nuts, often regarded as a relish or an accessory, are by composition and food value really a staple food.

There is some variation in the composition of nuts, but in general they are rich in protein and in fat. Nuts are comparable to meats in the amount and the kind of protein that they contain. They are deficient in calcium and in vitamins A and C, but they are good sources of the B vitamin. Because of their high fat content they are a rich food. Their energy content is indicated

COMPOSITION OF FOOD MATERIALS

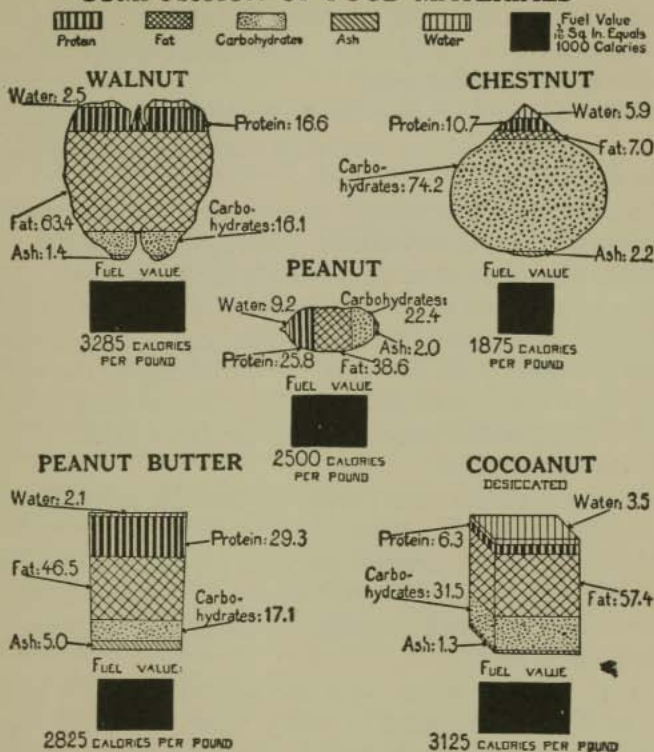


FIG. 19. COMPOSITION OF NUTS

by the small size of one-hundred-calorie portions of various nuts. If you will estimate the cost of one hundred calories in the form of nuts, you will find that nuts are an economical source of fuel.

One-hundred-calorie portions of nuts. See Appendix, Table V.

Preparation of salads. Salads are like the little girl with the curl in the middle of her forehead in that when they are good they are very, very good, but when they are bad they are horrid. How can we make sure of having good salads?

1. The lettuce, or other green used, must be clean, crisp, tender, and fresh.

2. Cooked vegetables are usually cut in small pieces of uniform size and shape; raw vegetables, such as cabbage or lettuce, are shredded; raw carrots are grated. Surplus fat and gristle should be removed from cooked meat.

3. Before assembling the salad all the materials should be drained. Watery fruits or vegetables cause the salad dressing to become watery.

4. All salad ingredients should be prepared in advance and kept cold. Salads should be served cold. The combining of the various ingredients should be done immediately before serving. This is necessary at any time if the best results are to be had, but it is essential in some cases because fruits cause mayonnaise to separate. Lemon juice prevents the darkening of the cut surfaces of apples and bananas. English walnuts turn dark and develop a disagreeable taste in the presence of acids. Lettuce wilts in contact with oil.

5. Silver or stainless steel knives are best for preparing fruits or vegetables for salads. Why?

6. Meat, vegetables, and fish prepared for salads are improved in flavor by "marinating." To "marinate," allow the cut materials to stand in French dressing; the dressing is drained off before the salad is made.

7. Garlic or onion flavor adds an indefinable touch to some salads, such as potato salad or celery salad. The cut edge of garlic may be used to rub the bowl in which the salad is prepared. Vinegar in which small pieces of garlic are kept gives an excellent flavor when used in preparing mayonnaise or French dressing. A mild onion flavor for the salad dressing can be obtained by scraping the cut surface of an onion with a knife. Chopped raw onion or garlic should not be put in salad, because it is objectionable to many people.

8. A simple edible garnish is most attractive. Custom no longer demands that the garnish be left. Eat your lettuce leaf or other green and do not waste the rare vitamin C.

9. Salads make their appeal through quality rather than quantity. Serve small to medium sized portions, compactly arranged. The lettuce should never cover the plate or hang over the edge.

In serving, rather plain china is to be preferred, for salads add a decided color note of their own to the table, and ornate china would detract from the charm of the food.

Salad dressings. An acid and seasonings are ingredients of all salad dressings. The acid is usually lemon juice or vinegar. Lime juice is also good.

Cooked dressing contains milk, starch, egg, and butter or cream plus seasonings. Variations in cooked dressing are made by the addition of thick sour cream, whipped cream, or peanut butter. This type of dressing is used on any salad, but especially on acid fruits, such as orange or grapefruit.

French dressing is the most easily prepared and the simplest oil dressing. It is a well blended mixture of oil and vinegar, seasoned more or less highly, and may be used on any salad. It is especially suitable for vegetable salads, such as slaw, lettuce, or cress. It is also used frequently on acid fruits. Almost any seasoning may be added to French dressing.

Mayonnaise is an emulsion of oil in egg yolk (or whole egg), seasoned with an acid — usually lemon juice — salt and pepper (cayenne and paprika). Though used on all kinds of salads, mayonnaise is preferred on fish, meat, and egg salads. It is a rich dressing and is used more frequently at luncheon and on special occasions than at dinner. Why?

Of the numerous variations in mayonnaise, the most favored is Thousand Island dressing, which is mayonnaise with finely chopped olives, sweet pickle, pimento and sometimes onion or cucumber.

The fat of the oil used in salad dressing furnishes its chief food value, since in one serving of dressing the quantity of egg or milk would be so small as to be of almost negligible food value. In a whipped cream dressing the value consists not only in its fat but in the amount of vitamin A that it offers. From one to two tablespoons of salad dressing may be considered a one-hundred-calorie portion. See Table V of the Appendix.

Accompaniments for salads. At dinner, salad is an accompaniment to the meat course, but at luncheon and at parties where it is a course in itself, salad constitutes the main dish and is served with a variety of tempting accessories.

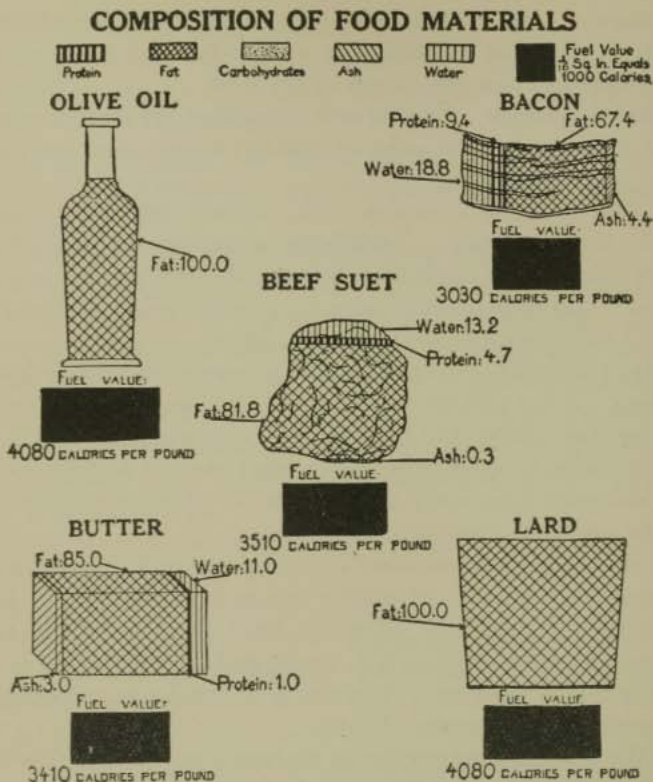


FIG. 20. COMPOSITION OF FOODS CONTAINING MUCH FAT

1. The most usual salad accompaniment is a crisp or hot bread. Sandwiches should be small and dainty and the filling should present a contrast to the salad. Variety in sandwiches is produced by the filling, the kind of bread used, and by using toasted and fresh bread. Cheese straws or cheese balls are delicious with some salads, especially those of mild flavor.

2. Season has much to do with the choice of beverages that accompany salads. If the salad is not very rich, cocoa or chocolate with whipped cream may be relished. Children should drink water or milk.

3. There are many other miscellaneous accessories that may be served with a salad course. Suggestions are salted nuts, olives, potato chips.

CLASS PROBLEMS

1. Suggested salad lessons:

Lesson 1. Orange salad, French dressing,
Hot Biscuit. Tea.

Lesson 2. Head Lettuce, Peanut-butter dressing,
Swedish wafers. Chocolate.

Lesson 3. A meat salad, Mayonnaise,
Toasted crackers. Lemonade.

Lesson 4. A fruit salad day.

Each two members of the class may prepare a different fruit salad. These recipes may be collected by the class or by the teacher.

Score the salads prepared. Plan accompaniments for them.

Lesson 5. A vegetable salad day.

Proceed as for Lesson 4.

Lesson 6. A meat or meat-substitute salad day.

What salad foundations would be included here?

Proceed as for Lesson 4.

Lesson 7. Serve a buffet luncheon consisting of a salad course.

2. Make a class collection of salad suggestions. Let each member of the class describe or demonstrate a salad. Illustrations are desirable.
3. Study carefully the suggested combinations given under Problem 1. Are these good or can you improve them? State your reasons.
4. Collect attractive pictures of salads. Colored advertisements in many magazines make good material. Mount them on white cardboard approximately six by nine inches in size. These cards will serve several purposes: (a) they will give suggestions for serving; (b) they furnish room on the back of each card to score the salad illustrated with marks to indicate in various colors, the different elements contained: yellow plus marks for vitamin A, blue for vitamin B, and green for vitamin C; and colored circles to register the presence of minerals, as, for example, red for iron, orange for phosphorus, and purple for calcium.
5. Estimate the calories in one serving of various salads prepared in class.
6. Plan ten "hot-weather specials," with salads as the main course, for luncheon. Introduce as much variety as possible and give your reasons for each choice.

96 SALADS FOR LUNCHEONS AND SUPPERS

7. Measure one-hundred-calorie portions of salad materials, dressings, and accompaniments.
8. Prove the statement that nuts are economical sources of energy.

QUESTIONS

1. Why is a salad a satisfactory dish from the standpoint of the housewife?
2. Name the four parts of a salad and list some of the various materials used under each name.
3. Classify salads according to their food value and their place in the diet.
4. Choose a beverage, an accompaniment, and a dessert to complete a luncheon with each of the following salads, and state your reasons for such choice:

Shrimp	Grapefruit
Egg	Apple, nut, and date
Lettuce and tomato	Head lettuce, Thousand
Chicken	Island dressing

5. Should nuts be considered a food accessory or a staple article of diet? Why?
6. Describe the proper care of salad plants.
7. What suggestions can you give for making salads attractive?
8. Name the different types of salad dressings and tell when each is appropriate. What can you say of their food value?
9. What is meant by salad accompaniments? Suggest appropriate accompaniments for the following:

Fruit salad served on a picnic	Tuna fish salad
Fruit salad served as the main course at luncheon	Head lettuce salad
Fruit salad served at a tea	Stuffed tomato salad
	Vegetable (mixed) salad
	Nut and olive salad

HOME PRACTICE

1. Study your family dietary and see if it needs improving by the addition of fruits and vegetables. Answer this question by keeping a record of the menus for a week and analyzing them. State your reasons for your conclusions.
2. Prepare attractive salads for six or eight people from suitable leftovers.
3. Practice the making of salad dressings at home.
4. Make salad accompaniments for your family.

5. Prepare a salad course for refreshments for a group of your mother's friends or of your own.
6. Purchase salad plants for two weeks.
7. Plan and prepare, several times, seasonable luncheons or suppers for your family, with salad as the main course. Introduce as much variety as possible. Calculate the cost and the calories.

REFERENCES

Current magazines.
Any good cookbook.



CHAPTER XII

BREADS FOR LUNCHEON AND SUPPER

Shall we make or buy our bread? Are you familiar with the bustle, the nutty fragrance pervading the house, and the tempting array of bread, rolls, cakes, and pastries incident to baking day? Baking day is not the household institution it was, for bread baking is an industry that modern machinery has partially taken from the household.

Probably half the yeast bread consumed in our country is a manufactured article. Although this bread is generally a good product, home-made bread is still a favorite; and every housewife can obtain variety in her menus at small expense by the use of rolls or bread made at home. The fact that such breads are home-made is no guarantee of excellence, but the ability to make good yeast bread is a matter of pride with housewives.

Let us answer the question of whether we shall make or buy bread by saying that we shall do both. Home-made bread is usually made with milk and is more nutritious, but this fact loses its significance in a mixed diet. Home-made bread keeps better than baker's bread, but this is not a great advantage if a good bakery is convenient.

Flour for bread-making. In order to make good yeast bread, an elastic dough is necessary. Wheat flour is almost universally used for bread because it possesses this quality. The elasticity of wheat flour is due to gluten, a tough elastic substance produced by the mixture of the wheat proteins (gliadin and glutenin) with water. You have only to make a dough of flour and water to see the characteristics of gluten.

Rye bread is the second most common bread. Various other flours are used in bread making — potato, for example — but wheat flour is the basis for the bread, only a small portion of the substitute flour being used.

Kinds of wheat flour. Wheat flour may vary either according

to the kind of wheat used or according to the part of the grain used.

1. *Kinds of flour due to variation in wheat.* Soft wheat produces a flour relatively rich in starch and poor in gluten. This flour is termed pastry flour and is preferred for baking-powder mixtures.

Hard wheat produces a flour relatively rich in gluten and poor in starch. This flour is called bread flour and is preferred for mixtures that are leavened with yeast.

The baker buys bread flour for his yeast mixtures. Some housewives keep both bread and pastry flour, but it is much more usual to buy only a general purpose flour for household uses. Most of the flour sold for household purposes is a blend made from hard and soft wheat. Good yeast bread and good baking-powder products can be made from the same flour.

2. *Kinds of flour determined by the part of the grain used.* Graham flour, whole-wheat flour, white flour, and wheat bran are variations produced in the milling process. The parts of the wheat grain vary in composition: (a) the bran contains chiefly cellulose and mineral matter; (b) the aleurone cells, a layer just inside the bran, contain minerals, especially phosphorus and iron, and vitamin B; (c) the endosperm, by weight about 82 per cent of the grain, consists chiefly of starch and protein (gluten); (d) the germ contains fats and minerals.

BREADS SUITABLE FOR LUNCHEON OR SUPPER

Yeast Breads

White bread
Brown bread
Rye bread
Raisin or nut bread
Parker House rolls
Clover-leaf rolls
Bread sticks
Cinnamon rolls
Swedish tea ring
Hot cross buns
Coffee cake
Doughnuts
All fancy breads and rolls

Quick Breads

Boston brown bread
Nut bread
Gingerbread
Cornmeal muffins
Corn sticks
Spoon bread
Spanish buns
Roxbury cakes
Doughnuts
Biscuit { plain
 { graham
Muffins { plain
 { graham

White flour, or "patent" flour, is made from the endosperm. The removal of the other parts of the grain improves the keeping qualities of the flour but lowers the nutritive value, as practically all of the minerals, cellulose, and vitamin B are removed. Graham and whole-wheat flour are sometimes made from the entire grain, with the exception of the tough outer coat. From much whole-wheat flour, however, the germ has been removed so that the keeping qualities will be improved.

Ingredients for yeast breads. The usual ingredients in yeast breads are flour, liquid, yeast, sugar, fat, and salt. Other ingredients are added for variety.

Flour. Flour means white flour unless otherwise specified. Patent flour makes the lightest bread. Products from corn, oats, barley, buckwheat, rice, potatoes, and soy beans may be substituted by weight for part of the wheat flour. Not more than one fourth to one third of the total flour should be a substitute flour.

Liquid. Water or milk or both may be used. For home baking milk is preferred, because it improves the flavor and the keeping qualities of the bread.

Yeast. Yeast may be bought as compressed yeast or as dried yeast. Fresh compressed yeast has a creamy color and a characteristic odor suggestive of apples. It should be moist and should break easily, with a clean break. Dried yeast must be soaked in cold or lukewarm water in which some sugar has been dissolved. The appearance of gas bubbles will indicate the vitality of the yeast.

Salt somewhat retards the growth of yeast. The changes produced in dough by yeast are as follows: From carbohydrate (sugar and starch) in solution, yeast produces alcohol and carbon dioxide gas. The gas bubbles are held in the dough by the elastic gluten. The heat of cooking vaporizes the alcohol, hardens the gluten so that the bread remains porous, and kills the yeast plants.

Score card for yeast breads.¹ The points that are most important in yeast breads in addition to food value are lightness,

¹ Farmers' Bulletin 1450, *Home Baking*, United States Department of Agriculture.

good flavor and color, texture, and keeping qualities. The accompanying score card may be helpful as a means of showing how bread can be judged.

	<i>Points</i>
General appearance	10
Shape, roundness of "dome"	
Smoothness, no cracks, bulges, lumps or the like	
Color of crust, golden brown	
Lightness	10
Crust	10
Thickness	
Quality, crispness, and tenderness	
Crumb	
Color, light cream color	5
Texture	25
No streaks or extreme closeness of grain	
Size and uniformity of cells, thinness of cell walls (grain)	
Elasticity, softness, and springiness	
Flavor, taste and odor	30
Sweet, nutty flavor with no "off" taste	
Keeping qualities	<u>10</u>
	100

Some housewives prepare a liquid yeast by keeping a piece of dough from one baking to the next. This is called a "starter." A good recipe for liquid yeast and for bread made from it may be found in *Home Baking*. See references at the end of this chapter.

Sugar. Because yeast plants use sugar more readily than they do flour, the addition of sugar hastens the rising of the sponge or dough. Molasses or syrup may be substituted for sugar, particularly in brown bread.

Fat. Any kind of cooking fat is useful for shortening in bread. Fat makes baked products tender and may add to the flavor.

Salt. Salt is added for flavor.

Yeast as leavening agent. Yeast is composed of tiny cell-like plants easily seen with a microscope. The change produced in food materials by the growth of yeast is called fermentation.

Bubbles of the carbon dioxide gas which leavens the bread are produced in this process.

Conditions may be favorable or unfavorable for the growth of yeast. Yeast needs food, moisture, and a favorable temperature for growth. Sugars and starches with moisture furnish its food. The best temperature for yeast growth is 80° to 85° F. (slightly above room temperature).

Procedure in making yeast bread. See page 410.

Quick breads for luncheon or supper. Review Chapter VI, "Quick Breads for Breakfast." The same principles apply in making all quick breads. Most of the quick breads acceptable for breakfast are used for luncheon, and in addition there are many others. Breads that have the addition of nuts, cinnamon, raisins, sugar, and molasses are acceptable for luncheon. Recipes, pages 369-377.

Place of bread in the diet. Though white bread is of value principally for its fuel, it is also important for protein. White bread, unless made with milk, is a poor source of minerals and vitamins. Why? Whole-wheat bread is valuable for its laxative property, which is due in part to the fat of the germ, in part to the phosphorus compounds, and in part to the cellulose. It is a good source of iron and phosphorus and of vitamin B. Vitamins A and C are usually lacking in grain products.

White bread is perhaps more completely digested than brown bread. Bread should not replace eggs, milk, fruits, or vegetables, but a generous use of bread with milk is to be encouraged in the interest of economy and good diet. Simple suppers of milk and bread are excellent for small children. If the diet is very limited, whole grain bread is to be preferred. Why? Hot breads should be used sparingly. Crusty ones are to be preferred.

Breads — one-hundred-calorie portions. See Appendix, Table V.

Uses of left-over bread. Left-over bread is of use to the housewife in preparing scalloped dishes, au gratin dishes, stuffed vegetables, dressing for poultry and fish, meat loaf, and puddings. Bread should never be wasted.

CLASS PROBLEMS

1. Study the milling process from material procured by writing to some large milling industry, such as Washburn-Crosby, for charts, samples of products, and booklets giving the story of milling flour.
2. If there is a flour mill in your locality, make arrangements, if possible, to see the mill in operation.
3. After the class has made bread and understands the process, visit a local bakery.
4. Examine yeast plants under the microscope. Mix a compressed yeast cake with water in which there is a little sugar or molasses. Examine a small drop of this liquid under the microscope. A drop of dilute iodine added to the solution will aid in distinguishing the yeast cells from starch granules. The starch will turn dark blue. The yeast cells will remain transparent, the nucleus of the cell being stained yellow by the iodine.
5. *A study of yeast plants.*
 - (a) *Hanging drop.* Mix a piece of yeast cake with water and add a little sugar. When the mixture foams place a drop on a cover glass by means of a wire loop. Invert the cover glass over a slide with a depression in order to prevent evaporation. Place under a microscope and watch the plants budding. Select a certain plant to watch and make drawings every 10 to 15 minutes.
 - (b) *Make slides of compressed and of dried yeast* and compare them for purity.
 - (c) *Usability of foodstuffs for yeast.* Prepare test tubes as follows:
 - a. Flour, water, $\frac{1}{8}$ yeast cake.
 - b. Cornstarch, water, $\frac{1}{8}$ yeast cake.
 - c. Sugar, water, $\frac{1}{8}$ yeast cake.
 - d. Molasses, water, $\frac{1}{8}$ yeast cake.
 - e. Salt, water, $\frac{1}{8}$ yeast cake.
 - f. Oil, water, $\frac{1}{8}$ yeast cake.

Draw conclusions as to which foods yeast can use by the appearance of bubbles of carbon dioxide gas in the liquid.

- (d) *Effect of temperature on yeast.*

1 cup water (control).

1 cup water, 2 T. molasses, 1 yeast cake — room temperature.

1 cup water, 2 T. molasses, 1 yeast cake — freezing.

1 cup water, 2 T. molasses, 1 yeast cake — boiling.

Exactly fill a tumbler with each mixture. Carefully invert it in a soup plate without spilling the contents. Practice, first,

by inverting the glass filled with water. This is to be the "control" test. If the yeast grows, gas will develop. It will collect in the top of the tumbler, pushing the liquid out into the bowl. Note the results, and draw conclusions as to the effect of temperature on yeast.

6. Weigh or measure one-hundred-calorie portions of bread. Calculate the cost of these portions and compare it with the cost of one-hundred-calorie portions of other products.
7. Make various yeast breads in the laboratory. Score the products in class. Bread lessons may be combined with other lessons — those on salads, vegetables, or school lunch, for example.

Suggested yeast breads for class lessons. (See Recipes.)

White loaf bread	Nut bread
Parker House rolls	Raised bread
Bread sticks	Cinnamon rolls
Graham bread	Raised doughnuts

Note: Demonstrate a bread mixer if possible. Let the class discuss whether or not it is a labor-saving device.

8. Prepare quick breads for luncheon.

Suggested quick breads for class lessons. (See Recipes.)

Graham biscuit	Spoon bread
Graham muffins	Cornmeal muffins
Boston brown bread (steamed)	Corn sticks
Nut bread	Gingerbread

QUESTIONS

1. Shall we make or buy our bread? Give reasons.
2. Why is wheat flour almost universally used for bread-making?
3. Explain the difference between bread and pastry flour.
4. Explain the difference between graham and patent flour.
5. Name the ingredients used in yeast bread; and discuss each.
6. What is yeast? What conditions are favorable to its growth? Point out the existence of these conditions in bread-making.
7. Outline one method of making bread. Describe the procedure and the reasons for each step.
8. Explain what is meant by fermentation.
9. Review the questions at the end of Chapter VI, Unit One.
10. Discuss the food value of bread. How many calories in an average serving of common breads?

HOME PROJECTS AND HOME PRACTICE

Both home projects and home practice are necessary if you are to become a good bread maker. You will remember that home practice means doing the same thing at home that you have done at school, for the purpose of acquiring skill. If a management problem enters, the task is a project. Making bread at home in family-sized quantity is a task which develops both skill and managerial ability.

1. Practice at home, making rolls for luncheon or supper.
2. After you have had success with rolls several times, try making bread.
3. If your family use home-made bread, begin by assisting in the process of making it. Practice kneading especially.
4. Prepare some variations of yeast bread, such as nut bread, raisin bread, brown bread, or cinnamon rolls.
5. Prepare various quick breads for luncheon or supper.
6. Care for the bread, including left-over bread, in your home.
7. Suggested home project.
 - (a) Supply your family for two weeks with bread, planning to produce as much variety as possible in the meals by your selection. This project should include the buying of bread, the making of both quick breads and yeast breads, the care of bread, and the preparation of "left-over" bread for use as bread crumbs.
 - (b) Supply for two weeks the bread for school lunches. Make as great a variety as possible in the lunch by varying the bread.

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- Vulte and Vanderbilt. *Food Industries*. The Chemical Publishing Company. Chapters IV, V, VII.
- Home Baking*, Farmers' Bulletin 1450. United States Department of Agriculture (1923).
- Monographs from manufacturers of various kinds of yeast, and baking powder.

CHAPTER XIII

THE SCHOOL LUNCH

Is the school lunch important? From the standpoint of health, the school lunch is no more important than any other meal, but it is more difficult to provide the right foods for this meal and to serve it in a wholesome setting.

Many school boys and girls eat the noon meal at school. Hence it is their responsibility to choose foods wisely. Proof that all boys and girls do not rise to this responsibility is found in the numerous little shops which sometimes profit at the expense of the pupils' physical fitness.

What would you think of a man who set out for an automobile ride without providing gasoline and oil, or who, on his way, failed to dodge nails or glass in plain sight in the road? He sounds too stupid to be real, and yet boys and girls do worse than that to their own machinery when they buy such things as lollypops, soft drinks, candy, pie, pickles, and doughnuts instead of milk, vegetable soups, fruits, and other simple foods which they need for growing, for going, and for keeping fit. No machinery is as delicate as the human mechanism, and yet none is so much abused.

KEEP YOUR OWN MACHINERY FIT

You know the model of your car,
You know just what its powers are,
You treat it with a deal of care,
Nor tax it more than it will bear.
But for self — that's different,
Your mechanism may be bent,
Your carburetor gone to grass,
Your engine just a rusty mass.

Your wheels may wobble and your cogs,
Be handed over to the dogs;
And you skip and skid and slide
Without a thought of things inside.

What fools, indeed, we mortals are
To lavish care upon a car
With ne'er a bit of time to see
About our own machinery!

JOHN KENDRICK BANGS
Courtesy of Harper and Brothers

SCHOOL-LUNCH WISDOM

1. Eat a good breakfast before you come to school. Breakfast and lunch in one meal (br-unch) is an outrage against the good health of school boys and girls. Be sure you are not guilty of this.

2. Do not give valuable space to foods that will not serve your purpose. Many of them are harmless in moderation and in the right place, but your body will not accept them as substitutes for its needs even though your appetite does.

For example, tea or coffee takes room that should be reserved for milk; or a lollypop, if eaten first, may destroy all appetite for a bowl of vegetable soup. Do not fool yourself. Others tried this way of eating when they were young, but their dietary sins found them out, and now they are living on restricted diets.

3. Choose simple, easily digested foods.

4. Take time to enjoy your meal and to masticate it thoroughly. Do not gulp down your food in order to run out and play. Play is good, but rest is also good — especially after eating.

5. Check your daily calorie requirement and see that for lunch you eat one third or more of the calories required for the day.

The average boy or girl from twelve to sixteen years of age needs between 750 and 1200 calories for luncheon.

6. Eat your lunch in as pleasant surroundings as possible. Be sociable and enjoy your friends at lunch time. In the school lunchroom never forget to be courteous. A well-mannered person is more easily told by her behavior in the school lunchroom than by her behavior when she is remembering her "company man-

ners." In fact, a well-mannered person does not have special company manners.

7. Use the best knowledge you have in selecting foods at all times, but remember that at the school lunch hour the responsibility is entirely yours.

8. Remember to drink water at school. Of the total daily requirements, four glasses should be drunk between meals.

9. Cleanliness is important at all times. Food served at school should be clean and served under sanitary conditions. The school lunchroom should be screened. Take care that flies do not contaminate your lunch. Wash your hands before eating.

10. Practice economy. Economy means getting the most for your money. Are you getting the most in body needs and in good health for the money and time that you spend on the lunch hour at school?

11. A light lunch after school is desirable for hungry boys and girls, particularly if the school lunch has been a box lunch. Milk, bread and butter, and fresh fruits are acceptable.

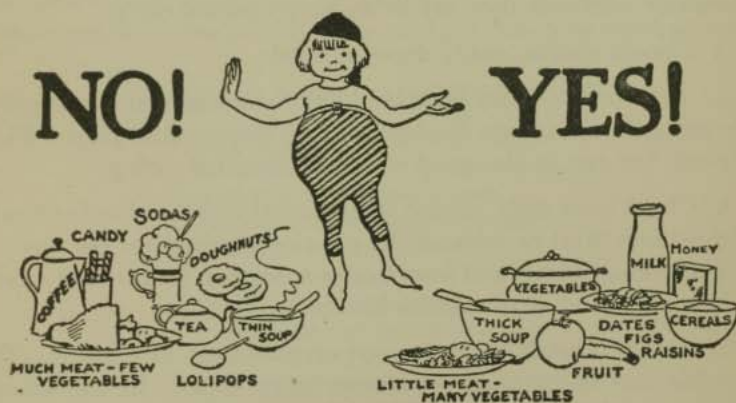


FIG. 21. SCHOOL LUNCH WISDOM

Highly seasoned foods are usually preferred by children, but simpler foods are much more wholesome.

WHAT FOODS DO SCHOOL BOYS AND GIRLS NEED FOR LUNCH?

750 to 1200 calories so selected as to provide growing bodies with:

Such needs are supplied by these foods commonly used for school lunch:

*Building foods**Proteins:*

MILK
Eggs
Cheese
Meat
Fish
Nuts

Minerals:

MILK
Eggs
Whole wheat bread
Fruits
Vegetables

*Energy foods**Carbohydrates:*

Bread (sandwiches)
Sweet sandwich fillings, jelly, marmalade, dried fruits
Gingerbread
Cookies, Cakes
Candy (milk chocolate)

Fats:

MILK
Butter
Eggs
Cheese
Nuts

*Regulatory and protective foods**Minerals:*

MILK
Eggs
Whole wheat bread
Vegetables
Fruits

Cellulose:

Fruits
Vegetables
Whole grain breads

Vitamins:

MILK (A, B)
Butter (A)
Eggs (A, B, D)
Whole wheat bread (B)
Cheese (A, B)
Green leafy vegetables (A, B, C)
Nearly all vegetables (B)
All fruits (B)
Raw vegetables (C)
Raw fruits (C)

Water:

Water
Beverages

See number 8 in the Class Problems for menus.

The school cafeteria. A well-managed school cafeteria affords the following advantages:

1. The food is hot and is therefore more tempting than a cold lunch.

2. The cafeteria is a convenience and allows adequate time for lunch.

3. It may be a place of relaxation and good fellowship.

4. The opportunity is afforded for useful education in good manners and in the wise selection of food.

5. The school cafeteria may make possible the supplying of needed food that is lacking in the home meals. Milk and vegetables are examples.

6. The school cafeteria is an economical place to eat. Usually when you buy prepared food you have to pay for food, service, equipment, rent, and management. The school cafeteria, however, charges you only for food and simple service; the other items are included by the school board in the school budget.

The lunch brought from home. The basket lunch has some obvious handicaps:

1. It is troublesome to carry a lunch box or basket to and from school.

2. The preparation of the lunch usually adds to the work at a time when it is already heavy.

3. Variety is necessarily limited in a school lunch because of the trouble in carrying the food and because much food is not good when prepared and packed four or five hours before it is eaten.

4. Throughout much of the school year the weather is cold, when cold food is not tempting.

5. It is difficult to provide needed foods in a box lunch.

Suggestions for pleasing school lunches. Do not try to have many kinds of food in one lunch. Including too many foods in one lunch makes it difficult to have variety from day to day.

Sandwiches:

1. Sandwiches are easy to carry, easy to prepare, and are well liked — hence they are staple articles for the school lunch box.

2. Use good bread. It is best to have sandwich bread a day or more old. That kind can be bought at some bakeries for half price.

3. Secure variety in sandwiches by varying the size and shape; by varying the kind of bread; by varying the filling.

4. Sandwich fillings should be seasoned mildly. Suitable fillings are:

Shredded lettuce or cabbage with salad dressing (brown bread).

Chopped celery and mayonnaise.

Chopped egg.

Chopped nuts or nut paste.

Chopped meat (when meat is eaten it is better to eat it in the middle of the day than at night, hence it is permissible in the lunch).

Cheese — especially cottage cheese.

Dried fruits — made into a paste by chopping and softening with milk or by steaming. Nuts may be added.

A little crisp bacon broken up in salad dressing (finely chopped lettuce or cabbage may be added).

Jelly or marmalade.

5. Plan the school lunch. It is undesirable to pack the lunch from left-overs at the breakfast table. Why?

Fruits and vegetables: Without a fruit, preferably a juicy one, the lunch would be monotonous. An orange, apple, or ripe banana is easy to carry. Cooked fruit may be carried in a covered jelly glass or in a small screw-top jar. A tomato is a good substitute for an orange. Why?

Chopped raw vegetables — lettuce or cabbage, for example — are not to be overlooked, because they are important in supplying vitamin C.

Sweets. Cookies are made to order for the school lunch. They have one advantage over sandwiches — they can be made in some quantity and kept for several days. A cookie jar filled weekly is a great aid from day to day in preparing the school lunch.

Other simple sweets which may be used are cake — preferably sponge cake or drop cakes — gingerbread, wafers, zwiebach, dried fruits, baked custard, and one or two pieces of candy — for eating last.

Beverage. Water is likely to be the beverage used when the lunch is brought from home. The water supply must be clean, and care must be taken to use individual drinking cups. It is a good idea to know how to make a paper drinking cup.

In the lunch prepared at home it is difficult to provide milk; moreover, there is not always a cool place at school in which to keep it. Thermos bottles are used, but they require care in cleaning and transporting. Milk should be very cold when put into a thermos bottle.

Packing the lunch box. The secrets of satisfactory packing are to keep all flavors separate and to prevent the food's being mashed. Put in a surprise now and then, such as a stuffed egg or a salad.

Wax paper, paraffin cups or cartons, glass jars or glasses with closely fitting lids insure the separation of flavors. Sandwiches, cookies, and in fact each article of food, should be wrapped separately in wax paper. Heavy things should be placed at the bottom, and the container should be carried in the same position in which it is packed. This last is easy if there is a handle. Paper napkins and drinking cups should be included. An extra paper napkin for spreading the lunch on the desk will prove convenient.

Cleanliness and daintiness are essential. The lunch box or basket itself, and any glass containers used, should be scalded and sunned frequently. That will keep them clean and sweet.

The lunch box supplemented at school. Many schools which have no cafeteria or lunchroom, supplement the lunch brought from home with milk or one hot dish or both. This requires little equipment. If a school has a home economics department no additional equipment is needed. Occasionally the home economics classes prepare a hot dish as a supplement to the school lunch.

The most satisfactory and suitable dishes to use in supplementing a lunch brought from home are:

MILK	Meat and vegetable stews
Creamed vegetable soups	Cocoa
Vegetables	Custard

Much valuable information on this type of school lunch is available in bulletin form. If this is the way of solving the school lunch problem in your school, the home economics girls can procure practical help from the bulletins listed at the end of this chapter.

CLASS PROBLEMS

1. Keep a record of what each one of you eats at *noon* on school days for five days. Also keep a record of the other two meals.
 - (a) What proportion of the total number of calories required do you eat at school?
 - (b) Is your noon meal well chosen when considered with the other meals eaten in the day? Give reasons for your opinion.
 - (c) Write a theme on the topic: "My School Lunch as It Is and As It Should Be."

2. Using the classroom weight chart divide the class into three groups: (a) those of about normal weight; (b) those who are 10 per cent or more under weight; (c) those who are 10 per cent or more over weight.

As a class discuss: (1) the food habits which should be the same for these three groups; (2) what special precautions during the school day can the class recommend to the underweights who are never as hungry as they should be; (3) to the overweights who are always too hungry for their own good. Is hunger a reliable guide in eating? Give reasons for and against.

3. In your school should the home-economics girls assume any responsibility for the school lunch? In order to answer this make a study of the situation. For example:

- (a) If your school is a small one and there are elementary grades in the same building, it will be easy to acquaint yourself with the school lunch practices of the group by observing the lunches these children eat. Discuss these observations in the light of the school lunch needs of the group. Determine whether any responsibility for improvement of the situation rests with the home economics girls as a group through a class project or as individuals through home projects. Make practical plans for discharging this responsibility.

- (b) If there is a school lunch room or cafeteria at your school make a study of the situation.

- (1) What is offered for lunch? Is it suitable? Make suggestions for improvement. Would it be advisable to appoint a committee to cooperate with the lunch-room manager? In what ways?

- (2) Do the boys and girls select their food wisely? Make note of what a considerable number of students' trays contain.

Would it be a help for the home economics class to conduct an educational campaign in the lunch room?

Suggestions — Count the calories per serving for foods offered, and place them on the board with prices.

Make posters showing good lunches.

THE SCHOOL LUNCH

Illustrate some of the "school-lunch wisdom" with posters.

Can you tell the difference between a home economics girl and one who has no knowledge of foods by contrasting their cafeteria trays? Should there be a difference?

Would it be effective to show trays containing wisely selected combinations of food from the offerings of the school cafeteria?

4. If no lunch room is available, work out a plan for supplementing the cold lunch with milk and one hot dish. Put this plan into operation for a time to see whether it is practical.
5. A very effective educational campaign has been tried in some schools. Complete plans for the experiment are available from a bulletin entitled, *An Animal Feeding Experiment Showing the Effect of Deficient Diet on Growth*, from the Division of Extension, University of Texas, Austin, Texas. White rats are used. White rats can probably be obtained from such sources as the Agricultural College Experiment Station, or Extension Service, and from college departments of home economics.
Procure this bulletin and use it as a reference.
6. Demonstrate the packing of school lunches prepared at home.
7. Can you eat more economically at school and improve your diet? Prove your statement.
8. Check the following suggested lunches for the food materials needed by the body:
 - (a) *School cafeteria:*
 - (1) Cream of tomato soup, crackers; rolls; fruit; plain cake.
 - (2) Meat and vegetable stew; bread and butter; sweet chocolate.
 - (3) Lettuce sandwiches; milk, bread and butter; cookies
 - (4) Creamed eggs on toast; boiled onions; cup custard.
 - (b) *Lunch boxes:*
 - (1) Jelly sandwich, oatmeal cookies, an orange.
 - (2) Egg sandwich, apple, cookies.
 - (3) Cabbage and brown bread sandwiches, baked custard, a tomato.
 - (4) Date and raisin sandwiches, a tomato, stuffed egg.
 - (5) Jelly sandwich, cookies, candy.
 - (6) Cheese sandwich, stuffed egg, baked custard.
9. Prepare various kinds of sandwiches.

- | | | | | | |
|----------------|---|----------------------------------|------------|---|------------------------------------|
| (a) Variations | { | white
graham
nut
raisin | (c) Sweets | { | dried fruits
jelly
marmalade |
| | } | in bread | | } | |

(b) Vegetable	{ cabbage lettuce celery tomato	(d) Meat or meat substitute	{ egg cheese meat poultry nut
---------------	--	--------------------------------	---

10. Prepare simple cookies. Suggestions:
 Oatmeal cookies Hermits Gingerbread
 Tea cakes Date squares Jelly roll
11. For two weeks plan a box lunch, with no supplementary dish to be provided at school, which will give variety and will be suitable to the needs of a fourteen-year-old boy; a fourteen-year-old girl.
12. For two weeks plan the school lunch for the same individuals with the lunch from home supplemented at school by milk or one hot dish.

QUESTIONS

1. Why do we need to give special attention to the noon meal of school boys and girls?
2. Point out the relationship that exists between breakfast and the school lunch. Do you approve of "br-unch"? Do you practice it?
3. What valid objections can you give to allowing concessions for selling such things as soft drinks, candies, coffee, pickles, and similar supplies in the school building or on the school grounds?
4. Of what foods should the daily meals of school children consist? Give your reasons.
5. What foods do you need in a school lunch? What proportion of the calories should the lunch supply?
6. How would you group the following foods in the order of their importance in a school lunch? Give your reasons. Candies, fruit, bread, butter, milk, meat, vegetables, nuts, cake and cookies, pie and other pastry, soups, soft drinks, salted nuts, popcorn, ice cream.
7. What are the advantages of a good school cafeteria?
8. What are the handicaps that must be considered in bringing acceptable and suitable lunches to school? Give suggestions for coping with these difficulties.
9. What suggestions can you make for supplementing the lunch brought from home by serving food at school? Assume that there is no school lunchroom, but a home economics department.
10. Write a short discussion of the school lunch problem as you see it in your school with recommendations for improvements.
11. Assume that some one at home is preparing your school lunch under your direction. Give general and specific directions for avoiding monotony in sandwiches; for packing the lunch.
12. Discuss the importance of drinking water at school.

HOME PROJECTS AND HOME PRACTICE

1. Plan, prepare, and pack your lunch for a month.
2. Plan, prepare, and pack the lunch for a younger child. Count the calories and the cost, and score for protective foods.
3. Record for one week what you eat at lunch in the school cafeteria, choosing what you usually eat without any special emphasis on the choice. Record the cost. Estimate the calories. Score for growth and protective foods.
4. Record for one week what you eat at lunch in the school cafeteria. Consciously choose your lunch to illustrate your knowledge of foods and costs. Record the cost; estimate the calories. Score these lunches for growth and protective foods.
Have you improved in meeting your responsibility for your health?
5. Plan and make the sandwiches for your lunch for a month with special emphasis on variety.
6. Make cookies at home several times for your school lunch.
7. In the school cafeteria taste unfamiliar dishes and try to learn to like some of them.

REFERENCES

- Fisher, K. A. *The Lunch Hour at School*, Health Education No. 7, Department of the Interior, Bureau of Education, Washington, D.C. (1920).
Other sources from which bulletins and circulars are available are:
Bureau of Home Economics, United States Department of Agriculture, Washington, D.C.
The State Agricultural College in your State — Extension Service.
Children's Bureau, Department of Labor, Washington, D.C.
Child Health Association, 370 Seventh Avenue, New York City.

CHAPTER XIV

THE MAIN HOT DISH FOR LUNCHEON OR SUPPER

Variety in the main hot dish. By main hot dish we mean any of those savory dishes, made of combinations of foods and more or less dressed up, that are served for supper or luncheon. The term as used in this chapter does not include soups.

If variety is the spice of life, the hot dish is the spice of this meal, for the variety is limited only by the available food materials, by cooking processes, and by the ingenuity of the cook.

1. *Variety made possible by the food materials.* In hot dishes the following food materials may be used as foundation: eggs, meat, fish, oysters and other shell fish, poultry, cheese, nuts, vegetables of all kinds, macaroni, spaghetti, or rice.

2. *Variety made possible by method of cooking.* Baking, stewing or boiling, frying, creaming, miscellaneous processes.

The main hot dish for luncheon offers an inviting opportunity to the ingenious cook. Try it. Some of the best-liked combinations for the hot dish serve to illustrate the variety that is possible.

Soufflés	Oyster stew
Casserole or ramekin dishes	Meat and vegetable stews
Au gratin dishes	Croquettes
Stuffed vegetables	Fritters
Scalloped dishes	Meat turnovers
Creamed vegetables	Seasonings and sauces:
on toast	Curried dishes
in timbale cases	Brown sauce
in bread cases	Pimento
Gumbo	Mushroom sauce
Chowder	Hollandaise sauce

Food value of hot dishes. The main dish for luncheon may vary in food value all the way from supplying an entire meal in one dish to a single article of food, supplying adequately only one or two food principles. The tendency is toward food combinations. The combination is usually very evident and the food value can easily be determined from the ingredients.

Many of the materials used in the main hot dish have been discussed in previous chapters, but a few important articles of food have not yet been included. Chapters on meat, fish, and poultry follow in the dinner unit. In the luncheon menu these protein foods usually appear as left-overs.

Omitting meat, fish, and poultry for later consideration, we may discuss here: cheese, macaroni and spaghetti, and shellfish.

CHEESE

1. Production. Cheese is a staple article of diet, and is one of the oldest prepared foods known. Cheese making in America has become an important industry. Much of the finest flavored and most expensive cheese is imported from Europe.

2. Kinds of cheese. The kinds of cheese are too numerous to mention, but a few of the more widely used varieties are:

<i>Hard cheese</i>	<i>Soft cheese</i>
American (Cheddar, domestic)	Cottage or cream cheese (domestic)
Edam (Dutch)	Brie (French)
Emmental (Swiss)	Camembert (French)
Roquefort (French)	Limburger (German)
Parmesan (Italian)	Neufchatel (French)
Cheshire (English)	
Stilton (English)	

Swiss and Edam are perhaps the best liked of the foreign cheese products.

3. Composition and food value. Cheese may be said to be slightly more than one third water, slightly more than one third fat, and slightly less than one third protein, with a high proportion of minerals.

The protein of cheese is the protein of milk, partially digested, and is a complete protein. The fat is milk fat, little changed except that it is less finely divided and hence not so quickly digested. The mineral content varies somewhat according to the amount of salt added. Cheese is always relatively high in calcium and phosphorus and there is also some iron present. Cheese is a good source of vitamin A.

Cheese is a concentrated and economical food. A one-inch cube yields approximately one hundred calories. It should be regarded as a staple article of diet rather than as an accessory to pie, or as a last course after a heavy meal, or for eating between meals. It is these practices and the further fact that cheese by itself is not easily masticated, which have led to the belief that the product is hard to digest.

Cheese cookery. It is important to know that cheese is easily overcooked either by long cooking or at high temperatures. Overcooked cheese is lumpy, stringy, and tough.

MACARONI AND SPAGHETTI

Macaroni, spaghetti, vermicelli, and noodles are made from hard wheat. These products contain a rather high per cent of protein (ten to thirteen per cent) but are chiefly carbohydrate (seventy-five per cent). They may be considered as breadstuffs. When they are baked with cheese and milk a very economical and nutritious dish is the result.

SHELLFISH

The shellfish used for food are oysters, clams, scallops, lobsters, crabs, shrimp, and crawfish.

1. **Oysters** are economically the most important shellfish and are the most widely used for food. They are found in the shallow water on the Atlantic and Gulf coasts.

The shallow water near the mouth of a river is likely to be contaminated by sewage, with the result that the oyster beds are polluted. Typhoid fever and intestinal disturbances have been traced to oysters. Even though the Federal Government has tried to prevent the pollution of streams, it is not certain that raw oysters are ever an entirely safe food. Oysters are considered in season from September to May. They are more plump at this time than at any other. Although the typhoid germ is killed at a relatively low temperature, oysters are so slightly cooked that cooking is not always a protection.

2. **Composition and food value.** See Appendix, Table V, for one-hundred-calorie portions of shellfish.

Because the chief food value of shellfish is in the protein contained by them, they are comparable to meat and are interchangeable with meat in the diet.

Sea food is thought to contain some small amount of iodine. Shellfish are an unusual animal food because they contain carbohydrate. This is in the form of glycogen (animal starch) and is responsible for the sweet taste.

3. Buying shellfish. Oysters can be shipped fresh better than other shellfish. They are removed from the shell and shipped on ice in double sealed cans. Canned oysters are also available. Small oysters (blue points) are best for cocktails and stews; large oysters are preferred for frying. The best oysters are creamy in color and plump.

Whether shellfish are economical or not depends upon the locality and the season. Crabs, shrimp, and lobster are plentiful in the summer and are cheaper then. Oysters are cheaper and more plentiful in winter. Except on the coast, shellfish cannot be considered an economical food.

4. Preparation. Because shellfish have a decided flavor, one tires of them easily. When fresh from the water, they are at their best. Tourists to coast resorts enjoy the sea food. One of their most popular choices for food is a "shore dinner," a dinner offering several varieties of fish and shellfish.

Oysters are liked best raw, broiled, baked on the half shell, scalloped, stewed, and fried. Crabs and lobsters are most often served in salad, but they are also served hot with various sauces — creamed, or à la Newburg. Crabs are also stuffed, or "deviled." Shrimps are served creamed, fried with tartar sauce, or as creole shrimp, which is a shrimp dish with tomato sauce.

METHODS OF PREPARING THE MAIN HOT DISH

1. Left-overs. Many of the most palatable and attractive luncheon dishes are made of "left-overs." An economical housewife will take care of all left-over food and will serve it to her family in a form as acceptable, if not more acceptable, than when it first appeared on the table.

Uses of left-overs. In using left-overs change the form, texture,

flavor, and appearance as much as possible. Left-over roast beef, for example, may make excellent Italian hash without arousing suspicion that it is the same meat. Avoid using left-over material for the following meal.

Uses for left-over meats: loaf, meat pie, croquettes, turnovers, creamed meat on toast, baked hash, stuffed vegetables, and sandwiches.



FIG. 22. STALE BREAD, MADE USE OF IN THE HOT DISH FOR LUNCHEON, OFFERS ALL SORTS OF POSSIBILITIES IN THE SERVING OF CREAMED DISHES

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Uses for left-over breads: au gratin dishes, scalloped dishes, crumbs for frying, toast, bread cases, puddings, etc.

Uses for left-over vegetables: fritters, soufflés, salads, au gratin and scalloped dishes.

2. **Soufflés.** A soufflé is a baked dish similar to omelet in that it is made light by the use of stiffly beaten egg whites. Cheese, fish flakes, asparagus, cooked vegetables, and some fruits can be made into soufflés.

There are two kinds of soufflés: (1) those that use white sauce as a foundation: all dry materials such as meat, fish, cheese, or rice are combined with white sauce; (2) vegetables such as corn, potato, squash, or fruit are used without white sauce. Fruit soufflé is usually called a whip.

3. **Casserole or baked dishes.** These are too numerous to list, but some interesting ones are:

Meat turnovers — ground cooked meat baked in a turnover made of biscuit dough rolled thin. Served with brown sauce.

Italian hash — chopped cooked meat, macaroni, cheese, tomato or brown sauce.

Meat and tomato pie — cooked ground meat, boiled potatoes, tomatoes, mushrooms (perhaps), bread crumbs.

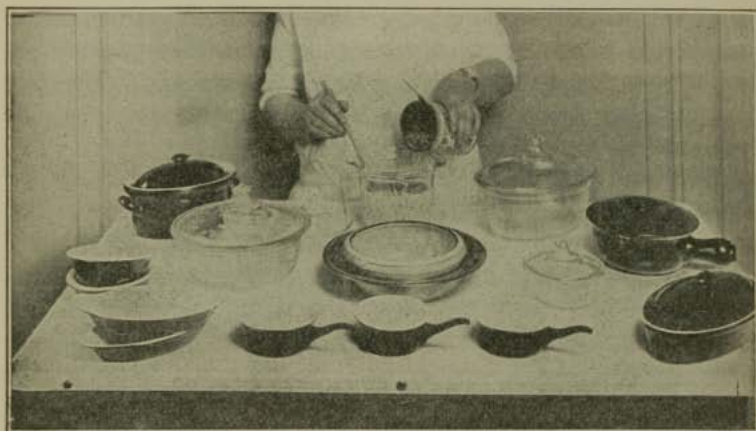


FIG. 23. JUST A FEW OF WHAT MAY BE USED WHEN A RECIPE CALLS FOR "CASSEROLE" OR "BAKING DISH"

Copyright, The Curtis Publishing Company. Courtesy, *The Ladies' Home Journal*.

4. **Au gratin dishes.** A cooked food, usually a vegetable, may be prepared with white sauce, covered with buttered crumbs or cheese, or both, and browned in the oven. Au gratin dishes may be prepared several hours before use and cooked just before serving. Cauliflower or potatoes are favorite au gratin dishes.

5. **Omelets.** Omelets are popular hot dishes for luncheon. An omelet is really an egg soufflé. Omelets suitable for luncheon are cheese, parsley, ham, or Spanish omelet.

6. **Creamed dishes.** Creamed dishes consist of vegetables, meat, or fish heated in a white sauce. They may be varied by the addition of pimento, green pepper, onion, celery, or parsley. Creamed foods may be served on toast, in timbale cases, or in bread cases.

7. **Stuffed vegetables.** Tomatoes, green peppers, potatoes,

eggplant, and summer squash, are the most practical vegetables for stuffing. The stuffing may consist of the vegetable pulp or ground meat, or both, mixed with bread crumbs and liquid and seasoned to taste.

8. Chowders and gumbos. Chowders and gumbos are highly seasoned mixtures of fish or chicken cooked for a long time with various vegetables, especially tomatoes and okra.

9. Croquettes. Croquettes of meat, fish, fowl, usually consist of the cooked ground meat, seasoned well and held together by a thick white sauce. Croquettes of potato or rice may be mixed with raw egg yolk instead of with white sauce. Croquettes are fried in deep fat. For rules for deep-fat frying see page 406.

Digestibility of fried foods. It is well known that fried foods are difficult to digest. This is true because fat digests very slowly. Children and persons with impaired digestion should avoid fried foods. It is not wise for any one to make a practice of eating fried food, but there is no denying that when properly prepared it is very tempting.

CLASS PROBLEMS

1. General review. Because the main hot dish may contain almost any food material that has been already studied, a general review of the previous chapters is not out of place.
2. Score the following hot dishes with a view to seeing how nearly they constitute a complete meal in one dish. Tell what you would use to supplement them.

Italian hash	Meat turnovers
Macaroni and cheese	Chicken à la King
Stuffed tomatoes	Spanish omelet
Oyster stew	Cauliflower au gratin

3. From government bulletins or other sources study the process of making cheese.
4. Find out the kinds of cheese and the price of each in your local market. If possible examine and taste the different varieties.
5. Prove the statement that cheese is a concentrated and economical food by comparing the amount and cost of one-hundred-calorie portions of cheese with one-hundred-calorie portions of other foods.
6. As the various hot dishes are prepared in class, estimate the food value of the recipes, the cost, and the number of servings. List the

124 HOT LUNCHEON OR SUPPER DISHES

cost and calories of one serving. Score each dish with signs (plus and minus) for minerals and vitamins.

7. Plan and prepare various cheese dishes for luncheon.
8. Prepare vegetable, meat, and cheese soufflés and omelets.
9. Prepare fried foods:

<p>Croquettes:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Meat</td> <td>Potato</td> </tr> <tr> <td>Chicken</td> <td>Rice</td> </tr> <tr> <td>Fish</td> <td>Cheese</td> </tr> </table>	Meat	Potato	Chicken	Rice	Fish	Cheese	<p>Fritters:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Corn</td> <td>Apple</td> </tr> <tr> <td>Okra</td> <td>Banana</td> </tr> </table>	Corn	Apple	Okra	Banana
Meat	Potato										
Chicken	Rice										
Fish	Cheese										
Corn	Apple										
Okra	Banana										

10. Prepare shellfish if available:

<p>Oysters:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Creamed</td> <td>Scalloped</td> </tr> <tr> <td>Fried</td> <td>Raw</td> </tr> <tr> <td>Stewed</td> <td>Oyster loaf</td> </tr> </table>	Creamed	Scalloped	Fried	Raw	Stewed	Oyster loaf	<p>Shrimp:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Creole</td> <td>Fried with tartar sauce</td> </tr> <tr> <td>Crabs or lobster</td> <td></td> </tr> </table>	Creole	Fried with tartar sauce	Crabs or lobster	
Creamed	Scalloped										
Fried	Raw										
Stewed	Oyster loaf										
Creole	Fried with tartar sauce										
Crabs or lobster											

11. Prepare creamed dishes:

<p>Kinds:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Meat</td> <td>Vegetables</td> </tr> <tr> <td>Fowl</td> <td>Eggs</td> </tr> <tr> <td>Fish</td> <td>Sweetbreads</td> </tr> </table>	Meat	Vegetables	Fowl	Eggs	Fish	Sweetbreads	<p>Serve:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">On toast</td> <td>In timbale cases</td> </tr> <tr> <td>In bread cases</td> <td></td> </tr> </table>	On toast	In timbale cases	In bread cases	
Meat	Vegetables										
Fowl	Eggs										
Fish	Sweetbreads										
On toast	In timbale cases										
In bread cases											

12. Prepare various baked dishes:

Casserole: Italian hash; meat and vegetable pie.
 Au gratin: potatoes; cauliflower.
 Scalloped: corn; cabbage.
 Loaves: meat; salmon.
 Stuffed vegetables: peppers; tomatoes; egg plant; squash.
 Macaroni with cheese or tomatoes.

13. Prepare stews: meat and vegetable; gumbo; chowder.
14. Given any hot dish for luncheon, discuss the advisability of completing the meal by the addition of a soup; a salad; a bread; a beverage; a dessert.
15. Emphasize throughout the problems 7-12, the possibilities for using left-over food materials.

QUESTIONS

1. Review the questions at the end of previous chapters, especially those on vegetables, milk, bread, eggs.
2. What is meant by a meal in one dish? Name several such dishes, showing the extent to which each may be considered a meal.
3. How may variety be procured in the hot dish for luncheon or supper? Illustrate.

4. Explain your method of arriving at the food value of such dishes as: creamed fish on toast; macaroni and cheese; meat and vegetable pie.
5. Is cheese a good article of diet for staple use? Give reasons for your statement.
6. Is the common impression that cheese is indigestible correct? Discuss.
7. Is there any danger in eating oysters? Explain.
8. Discuss the composition and food value of shellfish.
9. Tell how to make and bake a soufflé.
10. Explain the making of croquettes.
11. Discuss the advisability of fried foods in the family menu.
12. Give rules for deep fat frying.

HOME PRACTICE

1. Assume the responsibility for care of all left-over food in your home.
2. Plan and prepare left-overs in ways that your family like. Introduce new ways for their approval.
3. Prepare in family quantity the various hot dishes which you learned at school. Suggestions:

Soufflés	Oysters
Casserole dishes	Creamed dishes
Baked stuffed vegetables	Macaroni
Spanish omelet	Cheese dishes

4. Plan meatless luncheon menus for a week.

HOME PROJECT

For a month care for and use the left-over food in your home, planning and preparing such dishes as your family will enjoy.

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CHAPTER XV

LUNCHEON OR SUPPER DESSERTS

Choosing a dessert. There is no real line of demarcation between luncheon and dinner desserts. The choice of a dessert for luncheon does not preclude the appropriateness of that same dessert for dinner on some other day. Since luncheon is usually a lighter meal than dinner, a heavier dessert is more permissible at the former meal. In this text most of the richer desserts are included in the luncheon sweets and the lighter ones in the dinner sweets. This division is made chiefly for convenience.

That "sweet tooth." The ice-cream parlors, soda fountains, candy shops, and pastry shops bear testimony to the universal love of sweets. American people average more than one hundred pounds of sugar per person annually!

The greatest difficulty about this taste for sweets is that constant vigilance is needed to keep it from playing havoc with looks and with health. The danger is not so much in liking sweets as in overindulging this appetite.

SUGAR

1. Where is sugar produced? Sugar is the basis for practically all desserts. Though honey is the most ancient sweet, sugar dates back to olden times. India and China were the first countries to produce sugar. It is produced commercially both from sugar cane and from sugar beets. The most important cane-sugar producers are India, Cuba, Java, and the United States (including Hawaii and the Philippines). Beet sugar is produced in Germany, Austria, France, the United States, and Russia.

2. Sugar manufacture. Space does not permit a detailed account in this book of the manufacture of the various foods. Food industries are absorbingly interesting and instructive. It is suggested that the class investigate the production and manufacture of cane and beet sugar historically and as conducted at the present time.

COMPOSITION OF FOOD MATERIALS

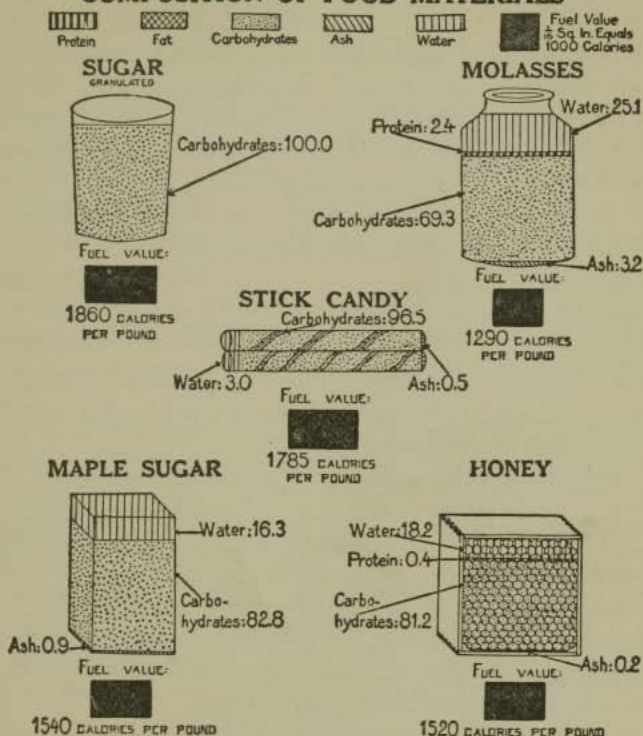


FIG. 24. COMPOSITION OF SUGARS AND SWEETS

Sugar and other products. To the chemist there are six sugars instead of one, and each has a name. Cane and beet sugar are chemically the same sugar, called sucrose. See the list of the carbohydrate family, page 42. White sugar is ninety-nine per cent pure. Brown sugar contains some molasses; hence it is richer in minerals and is less concentrated than white sugar.

Molasses is a by-product of the sugar industry. Cane molasses is edible, but beet molasses is not. Molasses contains, besides sugar, a high concentration of minerals, being rich in both calcium and iron.

Sirup is made by evaporating the juice of the cane, and is a first product. It is sold as "ribbon-cane sirup."

Maple sugar and maple sirup are prized for their flavor. These products are rare and consequently high in price.

The food value of sugar and other sweets. Sugar is a pure product, free from adulterations and cheap in price. It owes its food value entirely to one element — carbohydrate; it contains no minerals and no vitamins. Hence it is an extremely one-sided article of food, serving only to supply energy.

Two tablespoons of sugar furnish one hundred calories.

One hundred calories of other sweets:

Molasses, 1½ tablespoons	Candy, .7 oz. (1 or 2 pieces)
Honey, 1 tablespoon	Jelly, 2 tablespoons
Sirup, 1½ tablespoons	Preserves, 2 to 3 tablespoons

Place of sugar in the diet. The average dietary could be improved by reducing the sugar perhaps as much as one half. What are the reasons for this statement?

(1) Sugar blunts the appetite for more needed foods.

(2) Sugar is irritating to the mucous membrane of the stomach. This irritation is lessened if sugar is taken in small quantities, diluted with other foods. Because sugar undiluted is irritating, concentrated sweets should not be eaten between meals. Not only is sugar itself irritating, but it ferments easily in the stomach. The gas formed produces physical discomfort, and the products of fermentation irritate the digestive tract.

(3) Because sugar is well liked it is easily eaten in excess. Each pound of surplus body weight means surplus calories. It is much easier to do without the surplus calories than it is to reduce the surplus weight. Sweets add calories rapidly.

It must not be concluded from this discussion that sugars and sweets are unwholesome. It is the excess that is unwholesome. What is excessive for one person may not be excessive for others. Sedentary people are almost sure to suffer from impaired digestion if they eat sugar in excess. Since sugar can only furnish energy, only those are justified in using a generous supply who expend a large amount of energy — as for example, very energetic boys and persons at hard physical labor. In such cases sweets are an advantage because they make it possible to take food in fairly concentrated form. Hence — he who would eat pie should work.

DESSERT DISCRETION

1. The wholesomeness of sweets depends on the energy needed and on the quantity and concentration of the sweets that are eaten.

2. Sweets should be diluted. Thus sugar in a drink is preferable to a piece of candy. Sugar is still more wholesome if combined with other ingredients, as in cookies, and is even better as a part of a meal.

3. Sweets should be eaten last in order not to dull the appetite for more useful foods.

4. Simple sweets are to be preferred to rich combinations. When rich combinations are served to adults, there should be a simpler dessert for the children. Richness is due to both fat and sugar.

5. A very rich dessert cannot be justified after a heavy meal. It may occasionally assume the proportion of the main dish if it is used with a wise combination of foods. For example, apple pie, a glass of milk, and a slice of cheese may at times constitute a satisfactory lunch for an adult.

6. Sweets should not be eaten between meals. They irritate the stomach and take the place of more needed foods.

7. Overweight people should beware of desserts containing much fat or sugar; they must be stingy with the calories. A good rule to adopt is little or *no* sweets.

8. Thin people may eat desserts provided they do not upset their digestions with too much sugar or fat.

9. The most desirable desserts for general use are those that combine a high food value with digestibility, such as custards, fruits, milk desserts, cornstarch puddings, cereal or bread puddings.

10. When pies are served, those with the crust cooked separately and with a minimum amount of crust are preferable.

11. If candy is eaten it should be eaten at the end of a meal in lieu of dessert. It should be plain candy of pure ingredients.

12. Brown sugar is less concentrated than white sugar, hence more desirable.

PREPARATION OF DESSERTS FOR LUNCHEON

Sponge cakes. Sponge cakes contain no butter or other fat; the egg furnishes the liquid, though a tablespoon of water or milk is sometimes added. The leavening agent is air beaten into the egg whites. Sponge cakes are of two types — yellow and white. The yellow sponge cake is the plain sponge cake and is made with both the whites and the yolks of the eggs. White sponge cake is called angel food cake. Jelly roll and chocolate roll are variations of sponge cake. For the method of making and baking sponge cakes see page 440.

Cookies. See Chapter XIII, The School Lunch. See recipes, page 442.

FRUIT DESSERTS

1. **Fruit whips.** (Recipes, page 452.) There are two types of fruit whips: (1) cooked, (2) uncooked. The pulp of almost any fruit may be used. Cooked prunes, dried apricots or peaches, applesauce, or fresh bananas are the fruits most commonly used. Cooked fruit whips are in reality fruit soufflés and are served either hot or cold. Uncooked fruit whips are served cold.

2. **Baked fruits.** (Recipe, page 358.) Apples, bananas, and pears are baked and served hot or cold.

3. **Fruit roll.** (Recipe, page 453.) Any kind of cooked dried fruit or uncooked fresh fruit may be used. The roll may be baked or steamed. Fruit rolls may be served in their own juice or with hard sauce. Apple dumplings are really fruit rolls. They are a delicious dessert and are subject to many variations, as with brown sugar, with raisins, with nuts. They may be served with their own sirup, hard sauce, or whipped cream.

4. **Shortcakes.** (Recipes, page 453.) A shortcake is a fresh fruit, sweetened and sometimes crushed, served between layers of cake, pastry, or rich biscuit dough with whipped cream topping it off. Shortcakes are rich and should be served only with a light meal. Almost any fresh fruit is good for the purpose.

Puddings. (Recipes, page 449.) Puddings are made of egg, sugar, and milk to which are added various dry ingredients such as nuts, dried fruits, bread crumbs, rice, flour, and some other

materials. They are mixed either as custards, or as cakes, depending on the ingredients. Puddings are either steamed or baked. No general rules are possible because of the wide variety.

Pastry. (Recipes, page 445.) Pastry is rich and should be used sparingly. Pies may be eaten with little inconvenience by active people. Children should not be given pie at all, but some of the filling may be baked separately in custard cups for them. Good pastry is crisp and flaky. Those pies are preferable which have the crust cooked separately. Filling for pies may be highly nutritious. A piece of pie and a glass of milk may furnish all of the food needed for a meal.

Custards. Custards are made of milk, are sweetened and flavored variously, and are thickened with egg or with egg and a starchy substance — cornstarch, flour, tapioca, or rice. They are among the simplest and best desserts from the standpoint of digestion and nutrition. Custard desserts may be enjoyed by all members of the family.

Fruit. Fruit should be used frequently as the luncheon dessert, especially in summer. See Chapter II, for a discussion of the value of fruits in the diet. Fresh fruit is the favored dessert in many foreign countries.

CLASS PROBLEMS

1. Discuss the question of desserts in the diet for various members of the class.
2. Plan luncheons that might be followed by a heavy dessert, a moderate dessert, and a light dessert, suggesting the dessert in each case and stating the reason that it is considered.
3. Imagine a family as follows: father, overweight, engaged in a sedentary occupation; mother, normal weight, does housework; sixteen-year-old daughter, with a fickle appetite and inclined to be underweight; fourteen-year-old boy, normal weight, very active. Discuss dessert habits for this family.
4. Observe the people who eat sweets generously. Are they underweight or overweight?
5. Ask a doctor and a dentist to talk to the class on the subject of eating sweets.
6. Look up the manufacture and production of cane and beet sugar in an encyclopedia and other reference books. Contrast the two industries.

7. Prove to yourself that sugar is irritating to the mucous membrane of the digestive tract by holding a piece of hard candy in one place in your mouth until it dissolves.
8. Compute the calories and the cost per serving of all desserts prepared in the laboratory. Score the desserts with plus and minus signs for minerals and vitamins.
9. Exhibit one-hundred-calorie portions of various sweets.
10. Review chapters on eggs, milk, fruits, cereals.
11. Make a collection of colored pictures, mounted on white cards, to illustrate attractive desserts.
12. Prepare sponge cake, angel food cake, jelly roll. (Recipes, page 440.)
13. Prepare cooked fruit desserts:

Prune whip	Peach or berry roll
Apple dumpling	Shortcakes
14. Prepare puddings and sauces. (Recipes, pages 449, 398.)

Plum	Chocolate bread
Cornstarch	Rice
15. Make pastry and pies. (Recipes, page 445.)
16. Prepare custards. (Recipes, page 451.)

Boiled	Caramel	Tapioca
Baked	Chocolate	Junket

QUESTIONS

1. Suggested review. In connection with desserts a review of several chapters is suggested. See questions for chapters on eggs, milk, fruits, cereals.
2. Point out the relation of the dessert to the rest of the meal. Why is the dessert served last?
3. In a cafeteria where should the desserts be exhibited? Is this always the practice?
4. Discuss the practices that prevail in your school in the matter of eating sweets.
5. Why is it advisable to use discretion in eating sweets?
6. What are the sugar-producing countries? Outline the steps in making cane sugar. Beet sugar.
7. Why would most dietaries be improved by reducing the amount of sugar?
8. What advice would you give the average person on the subject of desserts? The thin person? The overweight person? Give reasons.
9. Shall we eat candy? Discuss.
10. Explain the combining and baking of sponge cake.
11. How do you make and bake a fruit whip? Explain.

12. Describe the preparation of two other cooked fruit desserts.
13. Everybody likes pies. Can you suggest how we may enjoy this pleasure with the least penalty?

HOME PRACTICE

1. Try to reduce the amount of sweets that you eat, substituting for them, if you need the calories, other and better foods.
2. If you are overweight, try omitting desserts from your meals, and reduce any other excess of sweets.
3. Try to omit the eating of all sweets between meals.
4. Make a one-crust pie (the crust baked separately) to show your family how good one-crust pies are. Applesauce pie is suggested for the first experiment. Next try a chocolate or lemon-filling pie with meringue.
5. Bake a sponge cake at home. If successful try an angel food cake. If not successful, try plain sponge cake again, after discussing with your teacher the probable cause of your failure.
6. Bake various fruit desserts at home.
7. Make custards for your family luncheon or supper.
8. Prepare chocolate bread pudding and several other puddings at home.
9. Plan the sweets for your family meals for one week.

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CHAPTER XVI

PREPARING AND SERVING THE LUNCHEON OR SUPPER

Planning the luncheon or supper. Because of the endless variety that invites the housewife in planning menus for luncheon or supper, this is the meal that should balance the day's meals. Any lack in breakfast or dinner in meeting the daily food requirements can be made up, with a little thought, at luncheon or supper. The three meals of the day should be planned together. The principles in planning meals are the same for all three meals. A summary of suggestions on meal planning follows.

1. Meals should be so planned as to meet the daily needs of the body for: water; calories (energy units best furnished by fat and carbohydrates); tissue-building materials (protein and also minerals, especially iron, phosphorus, and calcium); protective substances (vitamins A, B, and C, and probably others); and some cellulose and other naturally laxative substances such as acids in fruits, phosphorus compounds in whole cereals, and easily digested food fats.

2. There should be a pleasing variety in the menu. What the family eat is controlled in large measure by appetite, and so a consistent effort should be made to please them with the proper food attractively served and in pleasing combinations.

3. Expense is an important item in most family budgets. Expense bears no relation to nutritive value, but it does bear a relation to variety. It is the rare food that is expensive. The key to economy is feeding the family simple meals that are simply prepared.

4. Use foods that are in season. If we use out-of-season foods we not only pay a higher price but make variety more difficult to procure. Why?

5. Do not pamper appetites. Children whose appetites are pampered are tyrants. This practice should never be begun.

The food furnished should be simple, wholesome, and well cooked. Food habits are established early in life. It is important to teach children to like a wide variety of foods, but the foods should be those that are easily available at moderate expense and can be simply prepared. A middle course must be steered between the appetite that wants only one kind of food — as in the case of the boy who said that he took oysters only once in his life, and sirup with them then — and the pampered, over-indulged palate that demands rare foods from the ends of the earth — the proverbial humming birds' tongues, for example.

6. Disguise left-overs — avoid warmed-over food for supper. Make a new dish from left-overs, and make it even more attractive than the food was when first served.

Labor-saving in preparing luncheon or supper. The greatest of labor-saving devices in housekeeping is thoughtful planning. In general the same rules apply in planning the working schedule that were given in Unit One, Chapter VIII, Preparing and Serving the Breakfast. Additional suggestions are:

1. The menu should include as few dishes as possible. The meal in one dish is favored. How much less trouble it is to serve baked macaroni and cheese than it is to provide separate dishes to furnish the necessary amount of protein, fat, and carbohydrate! Head lettuce and a glass of milk would complete such a meal. Why?

2. Dishes which can be prepared ahead of time are a great convenience. If the work is planned and systematized most of the preparation for luncheon can be made at the time the kitchen work is being done after breakfast; supper may be prepared during the preparation of dinner.

3. Much labor is saved if, in planning the meals, the needs of the entire family are considered; then there will be little need of preparing special dishes. Where adaptations are necessary they can be made with little effort if they have been planned ahead of time. The most frequent adaptations in the ordinary family are called for by the differences in food for adults and for children. The following suggestions serve to illustrate how adaptations can be made with no special purchases or extra labor.

FOODS ESPECIALLY DESIRABLE FOR ADULTS AND CHILDREN	ADAPTATIONS	
	ADULT	CHILDREN
Milk	Hot breads	Stale bread
Eggs	Scalloped or au gratin vegetables	Buttered vegetables
Soups	Tea or coffee	Milk
Bread and other cereal food	Stuffed tomato	Stewed tomato
Vegetables, simply prepared	Salads, rich dressings	Sandwich of shredded lettuce or cabbage
Leafy vegetables	Banana salad	Baked banana
Sandwiches	Apple dumplings	Baked apple
Simple desserts as cookies, sponge cake, gelatin	Pie	Stewed fruit or custard
Fruit	Shortcake	Berries
	Peach cobbler	Stewed peaches
	Croquettes	Creamed meat

4. As suggested in connection with breakfast, the utensils to be used should be planned so that the same utensil is not wanted for two purposes at the same time.

Plan to use the oven for more than one thing at a time. Custard and potatoes may be baked at the same time even though potatoes require a moderate oven and custard must have a slow oven. The potatoes may be put on the top rack and the custard set below in a pan of water. Mention other examples.

Types of luncheons. Between the luncheon in one dish and the formal luncheon there is as wide a difference as there is between overalls and a dress suit. The occasion determines the nature of each. The daily luncheon consists of a minimum number of courses, but a formal luncheon is more or less elaborate.

A course consists of a combination of the foods usually served together, as for example; salad, crackers, and a beverage. It is unnecessary to give all the possible combinations of courses. Some typical examples will illustrate.

LIGHT LUNCHEONS

- A main course (hot dish) or
- A soup course
- A salad or a dessert course

MODERATE LUNCHEONS

- Soup course
- Main course (hot dish) or
- A salad course
- A salad or a dessert course

FORMAL LUNCHEONS

- Soup course or fruit course, or both
- A main course
- A salad course
- A dessert course
- Coffee — nuts — mints

Order of courses. The customary order of courses is not a mere accident. A warm soup or an acid fruit, such as grapefruit, is served first because it is an appetizer. An appetizer not only helps to insure a relish for the rest of the meal, but it stimulates the flow of the gastric juice, thus preparing the stomach for the reception of food.

The meat or meat substitute, with vegetables, is the main course and deserves prominence because it furnishes a greater variety of the foods needed by the body than do the other courses.

A salad course follows the main course for two reasons. The succulence of the dish, and the fact that it is cold, make it a pleasing contrast to the main course. Salads, like soups, are appetizing and serve to stimulate the appetite for the remainder of the meal.

As stated in a former chapter, sweets dull the appetite. At the end of a meal this can do no harm. Most of us like to wind up on sweets, and so the dessert course comes at the end of the meal.

For a formal luncheon or dinner, a small cup of coffee is frequently served after the dessert. The French call this *demi-tasse*, which means half-cup, or *café noir*, which means black coffee. It is a small portion usually served without cream or sugar. The flavor of coffee at the end of a heavy meal is relished because it removes the sweet taste of the dessert. The coffee at the last also gives the excuse for lingering at the table in pleasant conversation.

It should be remembered that the formal meal with its sequence of courses is a tax on the digestive system. It should never be indulged in by children and only at intervals by adults. When there are many courses the portions served should be small, and in order to enjoy all the courses, one should eat sparingly of each.

Marketing. Most of the staples used for luncheon or supper also occur in the breakfast menu. Review marketing suggestions in Unit One, Chapter VIII. See also Chapter XXIV.

An emergency or reserve shelf is a good device for every household. This shelf will probably be called on frequently for luncheon or supper supplies. Every good manager plans for the unexpected. The pantry should contain at all times food materials for such emergencies as unexpected company; the grocery-man's failure to send the right supplies or to send them on time;

unexpected absence of the cook or the housewife; illness in the family, when the housewife's time is taken up; the dairyman's failure to bring milk, or a need for more milk than was ordered; when the housewife forgets to plan ahead or to order supplies, and other occasions. See class problems.

Serving the luncheon or supper. For full information on table service, see Chapter XXVIII, Table Service. The English, or compromise, service is used as a rule for luncheon or supper. Luncheon cloths and small napkins are suitable for this meal. Ornate china, such as patterns for breakfast sets, may be used at luncheon. Plain dishes are always correct and make the food attractive.

The family luncheon. The family luncheon may be a simple meal of two courses. Since the average family does not have a maid, the first course, including the beverage, may be on the table when the meal begins. It is important that the meal be served promptly if school children or employed members of the family eat at home at noon.

A tea wagon or a serving table is a convenience. The salad or the dessert course may be placed on the tea wagon; its lower tray is convenient for holding used dishes.

The formal luncheon. Luncheon is a favorite feminine form of entertainment. The table for a formal luncheon is usually laid with doilies. More or less elaborate table decorations are employed, and color schemes are usually carried out. Candles are much used on the luncheon table, for there is added charm "when the lights are low." The menu for a formal luncheon is similar to that of a dinner, and the service used is formal service, Russian style.

Supper. The evening meal is the meal of most leisure and social interest. The home supper should be simple, especially if there are children in the family. Supper is delightfully informal. In summer a supper may be served on the porch. Occasionally every family picnics for supper. In winter, if the family is small, a tea wagon, an electric grill and toaster, and an open fire make the evening meal a cozy contrast to a raw winter night.

At breakfast there is a rush for school or work, and sometimes



FIG. 25. THE BARE TABLE WITH RUNNERS IS OFTEN USED FOR A FORMAL LUNCHEON

Courtesy, McCall's Magazine

all the members of the family do not breakfast at the same hour. At lunch the day's work is interrupted for a hurried meal; often each member of the family eats in a different place. Not so with the evening meal. This is the time of the day when members of the family see one another. The setting for this meal should be pleasing, and the food should be wholesomely selected and prepared, and attractively served. The most important consideration, however, is not the food but the family. Supper offers the chief opportunity of the day for family intercourse. Save the most interesting occurrence in your day to relate to the others at the evening meal. Remember that the others, too, have something to tell, and give them the opportunity to tell it. Make the evening meal, whether it is supper or dinner, an occasion of good food, good humor, good manners, and good companionship.

The buffet supper. Sometimes one wishes to entertain guests for supper. The buffet supper offers a way of serving a large group at a minimum of effort, without maid service.

One autumn afternoon a family party of seven ranging from

grandmother and grandfather to the youngest child, motored to a country home to have supper with friends. In the living room a log fire crackled cheerfully in the large fireplace. There was no flurry or effort; the hostess was smiling and serene and stayed in the living room with her guests. The children played a while on the floor. Toys were in abundance, but the center of attraction for them was the fifteen-months-old toddler, their host.

After the two families had visited together a while, and the travelers had rested from their long drive, supper was announced by the hostess, who had left the group ten minutes before. The dining-room table was a picture. Four gleaming candles made the affair a party, and the children voiced immediate approval. A small table in the corner of the room was set for them. The food provided for them — we shall let you imagine that — was just what children should eat, and the table looked very festive. They began their meal with no thought of what the grown-ups were having.

At one end of the large table there was a platter with salad arranged on lettuce leaves in individual servings. At the other end of the table a platter edged with parsley bore a baked country ham — sugar-cured of course — with a golden-brown crust dotted with cloves. If the other dishes that so bountifully filled the table were recorded here your mouth would water. As the guests entered they passed the host who stood and carved the ham, serving it on large plates from a stack in front of him. Each guest received a plate from him and then moved around the table, serving himself from the other dishes which he passed as he went. The hostess placed a serving of salad on each plate. Each guest took the necessary silver, a napkin, and a glass of water and proceeded to the group of comfortable chairs about the cheery living-room fire. The hostess followed them and brewed tea at a tea table. A chair arm, a piano bench, or a small table proved convenient for holding glass or teacup. The food had been so selected that no knife would be needed; even the ham was so tender that it could be readily cut with a fork.

The children could be watched through the door, but they entertained themselves. They returned to the living room when

the sweets were passed. Each of the little visitors was allowed to pass the sweets and nuts to the grown-ups. Their mother suggested that they might each eat two pieces of candy. They carefully selected pieces of generous size and made sure they had their favorite kinds.

Then they settled to quiet play in the center of the circle, and the adults lingered over the teacups and the sweets. The men of the party collected the dishes and returned them to the dining room. The baby was made ready for bed, and we think, though we can't prove it, that the kiss he threw to each guest was pink and white. On the way home one of the little girls expressed the sentiment of the entire family: "Mother, isn't living fine and don't we have a good time!"

Don't you wish you could have been there? Why not try the plan at your own home?

CLASS PROBLEMS

1. Plan three luncheons of each type — light, moderate, and formal. Describe the family which is to eat each meal and state the season for which it is planned. How would you modify these menus for use at supper instead of luncheon? Emphasize variety at moderate cost.
2. Check each meal that you have planned in problem 1, for occurrence of the various food needs of the body, following the procedure suggested below. See Table VI, Appendix.

MENU	PROTEIN	FAT	CARBO- HYDRATE	PHOSPHORUS	CALCIUM	IRON	VITAMIN			LAXATIVE SUBSTANCES
							A	B	C	
Cold sliced roast	+++	+	-	+	-	+	-	-	-	-
Au gratin potatoes (cheese, milk, crumbs).	+	+	++	+	+++	+	+	++	+	++
Sliced tomatoes Mayonnaise	-	-	-	+	+	+	++	++	+++	+++
Cinnamon toast (buttered)	+	+	+++	-	-	-	+	-	-	+
Milk	+++	++	++	++	+++	+	+++	++	-	-

Note: The plus signs designate the presence of the substance in relatively important quantities. A minus sign means that the substance is lacking for practical purposes. Mayonnaise contains egg yolk, for example, and would therefore contain some protein, vitamins, and ash, but one serving of mayonnaise would contain such a small amount of these that it could not be depended upon to aid materially in meeting the body-food requirements.

3. Study the following luncheon menus and point out the contrast, or the lack of contrast, that makes each one pleasing or monotonous.

(a) Cream of Celery Soup	Toasted Bread Sticks
	Orange and Date Salad
	Hot Rolls
(b) Cheese Soufflé	Milk or Iced Tea
Baked Potato	Berry Muffins
(c) Chicken Croquettes	Chocolate with Whipped Cream
Baked Tomato Stuffed with Rice	Hot Biscuit
	Milk
	Strawberries and Cream
(d) Cream of Tomato Soup	Bread
Creamed Chicken on Toast	Scalloped Potatoes
Baked Custard	Milk
(e) Fried Oysters	Toast
Fried Eggplant	Banana Fritters
(f) Vegetable Salad	Bran Muffins
	Cheese Rolls
Lemon Ice	Nut Wafers

- As a class, plan four luncheons that meet the needs of the class. Divide your number into groups, and allow each group to plan the working schedule, the market order, and the serving of the luncheons. Have class discussion of the plans.
- Have each group prepare and serve the luncheons as planned. Discuss the results.
- Have the groups exchange menus, and see if the second group can improve on the plan of the first by preparing the same meal as well or better, in less time.
- Estimate the calories per person in the luncheons prepared in problems 4 and 5. What part of your own daily food requirements have you eaten in each of these meals?
- Plan a menu for luncheon and make out the working schedule so that the housewife may have the morning uninterrupted for sewing until within a half hour of the time for serving luncheon to her family, which consists of four children and her husband, who does desk work.
- Plan a supper that this same housewife mentioned in problem 8 could serve to her family. Assume that she has been to town and must

- serve the supper shortly after her return without having time to change to a house dress. The family prefer a hot dish for supper.
10. Plan an emergency shelf for your family. After class discussion of this problem, a trip to the grocery store by each member of the class would be interesting. Procure prices. Discuss plans made by various members of the class.
 11. Plan, prepare, and serve in class time a buffet luncheon to the boys in the class, or to some other group at school.
 12. Let each student plan a menu suitable for the buffet supper party described on pages 139-141.

QUESTIONS

1. Review the questions at the end of each chapter in the luncheon unit, Chapters IX to XVI.
2. Give some general suggestions for planning luncheon menus.
3. Show various ways in which the work of preparing luncheons may be lightened.
4. What courses are served for luncheon or supper? Show the differences between light, moderate, and formal luncheons.
5. What reasons can you give for the order of these courses?
6. What are some of the advantages in providing an emergency shelf?
7. Describe the serving of a family luncheon or supper without a maid.

HOME PROJECTS

Luncheon or supper projects have no doubt already suggested themselves to you.

1. Think how monotonous it must be for the housewife never to have a surprise at mealtime. She delights the family with surprises in the menus, but she always knows the menu herself. Since you are in school it will not be very convenient for you to cook the noon meal, but if the evening meal at your home is supper, why not plan, prepare, and serve the family supper for two weeks? If you have a cook you can plan the menus and do the marketing for luncheon, and you can help prepare such dishes as salads or desserts.
2. Entertain a group of your friends at an informal luncheon which you plan, prepare, and serve.
3. Plan and prepare a Sunday night buffet supper for your family.
4. Add to the pleasure of meal time in your home by your own good humor, good manners, and interest in other members of your family.
5. Plan and prepare four luncheons, keeping a record of them. After an interval repeat these menus, planning improvements in your working schedule and in the preparation of the food.
6. Plan and purchase the articles for an emergency shelf in your pantry.

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- Rose, M. S. *Feeding the Family*. The Macmillan Company. Chapter XII.
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UNIT THREE

DINNER

CHAPTER XVII

WHAT SHALL WE HAVE FOR DINNER?

DINNER is more of a family event than the other meals, more leisurely and dignified. It is usually the main meal of the day, and its menu is likely to be heavier than that of the other meals.

Planning the three meals of the day. The heartiness of dinner, as well as the kind of food selected, depends on the other meals of the day. The inexperienced manager plans each meal as a unit; this procedure necessitates balancing each meal. The experienced manager plans the meals for the day, or even for the week, as a unit. It makes no difference which meal is planned first; all three of the meals of the day must be considered together.

All the members of the family must be considered in each day's plans, for what the family needs is the sum of what the individuals need, and this in turn is determined chiefly by weight, age, activity, and state of health. Perhaps the easiest way to plan the day's meals is to consider breakfast first, because the menu for breakfast varies little from day to day, and dinner next. The luncheon menu can be so planned as to supply the deficiencies in the other two meals.

It is not hard to plan an occasional dinner; the difficulty lies in planning a good dinner for every day. Planning the dietary to meet the body needs with easily digested foods is not very difficult. It is the art of combining these foods into well-liked menus which is the difficult task for the housewife. Dinner menus, particularly, should please the group.

Menus that please and why. In all the foregoing chapters we have emphasized the food value of various articles of food, and their place in the diet. When every day's food is planned in ac-

cordance with the food needs of the body, the meal problem has only begun to be solved. It is possible to work out one day's or one week's dietary to perfection, but what happens if the family does not like it, or grows tired of it? Pleasing the family day in and day out is more of a problem than balancing the dietary.

What are the tricks of the trade by which simple, well-balanced meals can be made attractive? Variety in menus is necessary, but how can this elusive variety be obtained? Herein lies much of the art in cookery.

1. Food should be well cooked. Poorly cooked food is universally disliked.

2. We appreciate foods largely for their flavor. Each food should be prepared in such a way as to capitalize its flavor if that flavor is well liked, or to modify it if it is objectionable. To illustrate: no cook can improve the flavor of a good cantaloupe, so why waste time scooping it out in little balls and changing its flavor in a cocktail or a salad? Onions are too strong for many people; here it is worth the cook's time and trouble to modify the flavor through parboiling and scalloping with toasted, buttered bread crumbs.

3. Serve a few foods at a time. When one eats at a hotel only now and then, he is delighted with the long menu. For the occasional visitor, choosing from his bill of fare is a pastime, but the multiplicity of dishes is the very thing that tires the person who habitually eats at the hotel. He must order from the same long menu each day, and what was variety the first day has soon become monotony.

4. Surprises are enjoyed. Do not have a certain menu or a certain dish regularly on any one day. Although it is poor economy to use foods out of season, watch the markets and surprise your family with seasonal foods at the first of the season. You can recall how you relish the first appearance of oysters in the fall; or the first fresh asparagus in the early spring.

5. In introducing a new food, prepare it in a familiar and well-liked way. Introduce only one strange food, or one new dish, at a time.

6. Do not have two foods prepared the same way at the same

meal. Rice croquettes and chicken croquettes do not please if served together. Imagine the monotony of fried oysters, fried egg plant, and banana fritters in the same menu!

7. Contrast is one of the most useful devices for producing menus that please. Many contrasting combinations of foods are so well liked that they are acceptable universally. Examples are: crisp crackers or croutons served with soup, bread and butter.

Some of the contrasts in food that please are:

Soft and solid textures	Hot and cold temperatures
Mild and strong flavor	Definite and indefinite shape
Sweet and acid flavor	Small sizes and larger sizes
Mild and tart flavor	Colorful and colorless food

Contrasts in methods of cooking, such as scalloping and boiling.

Utilizing the contrasts in food that are given above, list familiar examples of pleasing combinations of foods. For example, soup followed by a salad course with hot rolls and iced chocolate is a contrast in several ways.

8. Do not serve the same food, except such staples as bread or milk, twice in the same day.

9. Do not plan too many courses for a family dinner. The same courses for successive days become monotonous. Soup served every day, even with daily variation in kind, grows tiresome.

The dinner menu. Dinner is served in courses. The heartiness of any one course is inversely proportioned to the number of courses served. It is obvious that a diner can manage six or eight courses only if none of the courses is very rich, and if he eats lightly of each one. Dishes for the dinner menu are not so "dressed up" or so rich as those that are used for luncheon, when the entire meal may consist of one or two dishes.

Courses follow in a well-established sequence that is so arranged as to give the appetizing foods first and those that dull the appetite last. Contrast between the courses is needed to make the dinner menu pleasing.

Types of dinner menus. Dinner is the meal at which we most frequently entertain our friends. There is a wide variety in the

148 WHAT SHALL WE HAVE FOR DINNER?

number of courses and in the type of food that is served. In very formal dinners each food with its accompaniments may constitute a course. The family dinner may consist of two or three courses.

<i>Family Dinner</i>	<i>"Company" Dinner</i>	<i>Formal Dinner</i>
Soup or cocktail	Cocktail	Cocktail
Main course: Meat	Soup	Soup
Vegetables	Meat course	Entree or fish
Salad	Salad course	Meat
Bread	Dessert	Salad
Dessert	Coffee (with main course or dessert)	Dessert
		Coffee, cheese, crackers
		Mints and nuts

Menu for a family dinner

Chicken Consommé with Rice	Crackers	Radishes
Broiled Steak		
Baked Potato	Hard Rolls and Butter	
Head Lettuce with French Dressing	Coffee, Cream and Sugar	
Orange Charlotte		

Menu for a "company" dinner

Bouillon	Grapefruit	Olives
	Crackers	
Leg of Lamb with Mint Sauce		
Stuffed Potato	Buttered Peas	
	Hard Rolls, Butter	
Lettuce with Thousand Island Dressing	Swedish Wafers	
Frozen Apricots	Sponge Drops	
Coffee (with the dessert or main course)		

A formal dinner menu

	Oyster Cocktail	
Chicken Consommé	Crackers	Olives
Broiled Trout	Julienne Potatoes	
	Roast Turkey	
Dressing	Cranberry Sauce	
Buttered Cauliflower	Peas in Timbale Cases	
	Cucumber and Lettuce Salad	
Frozen Custard	Rolled Wafers	
	Coffee (Demi-tasse)	
Roquefort Cheese	Water Crackers	
Mints	Salted Nuts	

The formal dinner is served at home only in families that have many servants since it requires expert service. The plan is followed for banquets and for the formal entertaining which is usually left to larger groups than the family and is best carried out by the expert staff of a hotel or a club.

The selection of dinner foods. The cocktail is usually of shell-fish with a highly seasoned sauce. Fruit cocktail, if acid, may be served. This course is intended as an appetizer; hence sweet fruits are not acceptable. Why?

Soup for dinner should have little fuel value. A clear soup, bouillon or consommé, is used as an appetizer. Crackers, olives, pickles, or radishes may accompany either soup or cocktail. It is not usual to serve both soup and cocktail in the same home dinner.

The main course at dinner consists of meat, fish, poultry, or game accompanied by one or two vegetables. Potatoes are the best liked vegetable, and are served daily in many parts of the country. In some localities, however, rice is preferred to potatoes. The second vegetable should be a watery or succulent variety.

Plain bread and butter is served, as a general rule, in a home dinner. Hard rolls, called dinner rolls, are well liked. Butter is not served at a formal dinner.

A salad instead of the second vegetable may be served with the meat. A green salad, such as slaw, lettuce, watercress, or Swiss chard, with French dressing, is preferable. Heavy salads are not used at dinner.

The choice of the dessert depends on the rest of the dinner as to both flavor and heaviness. This course, like the salad, should be light. Fruit ices are acceptable. Sometimes merely fresh fruit is served. That is the only dessert used in Mexico and is also familiar in Southern Europe. Rich desserts are distinctly American and are more widely used for luncheon than for dinner. A light dessert, offered in small servings, is acceptable and makes a pleasing contrast in the menu.

Coffee is served with the main course, or with the dessert, or after dinner. In a formal dinner it is always served last.

Roquefort, Camembert or cream cheese, with hard crackers, is

frequently served as the last course. A highly flavored cheese stimulates the digestive juices and is an aid to good digestion.

A comparison of luncheon and dinner menus. There is no hard-and-fast line between the dinner and the luncheon. Many dishes are interchangeable in these menus.

It is a wise provision, both from the standpoint of nutrition and economy, to serve meat only once a day. The dinner menu is usually the best place for it.

The two menus may contain the same number of calories, though frequently the dinner menu contains slightly more than one third the total number of calories required and the luncheon about one third, with the breakfast furnishing less than one third (about one fourth).

Vegetables, salads, and desserts are lighter and more simply prepared for dinner than for luncheon. Luncheon is usually made up of a few dishes, hence they may be rich. Dinner comprises three or more courses, and so each dish must be simple.

CLASS PROBLEMS

1. Review Chapter I, Unit One, What Shall We Have for Breakfast, and Chapter IX, Unit Two, What Shall We Have for Luncheon or Supper?
2. Hotel menu cards are in two forms. The full dinner card is in reality a catalogue of the foods that may be served for dinner. It is usually spoken of as an à la carte menu. The table d'hôte menu is a menu constructed by the hotel steward and recommended to you as a suggestion for a pleasing meal in which only a little is left to your own choice.

On pages 152-53 is a full dinner card from a good hotel. Study this card and discuss the types of food used for dinner menus.

3. List all the strange foods and French terms on the hotel dinner card. You can look up the strange foods in a dictionary or an encyclopedia, or ask a grocer or hotel steward about them. A French dictionary will give the meanings of the French terms.
4. From the hotel menu card pages 152-153 select a light, a moderate, and a heavy dinner. Use these menus as a basis for Problem 5. Note the price of each. The small figure at the right of each item is the price.
5. Each member of the class should score the menus selected by her, for a balanced meal. Use plus and minus signs. Score also for pleasing contrasts.
6. The following is a table d'hôte meal from the same hotel as the card

WHAT SHALL WE HAVE FOR DINNER? 151

on pages 152 and 153. Compare the price with that of the heavy meal you selected from the general card. Compare the convenience. Is this a well-balanced meal? Is it a pleasing meal? Why?

Table d'Hôte Dinner. (One Dollar Fifty.)

Fresh Shrimp Cocktail
 Sweet Relish Stuffed Mangoes
 Deviled Crab, Tartar Sauce
 or
 Young Vegetables au Vermicelli
 Choice of
 Broiled Veal Chops on Toast
 Boiled Little Calf Tongue
 Vegetarian Dinner with Poached Egg
 Roast Corn Fed Pork Pan Gravy and Apple sauce
 Minute Potatoes Fried Egg Plant
 Apple and Celery Salad au Mayonnaise
 Banana Soufflé Pudding Fruit Sauce
 or
 Butterscotch Pie
 French Rolls Hot Biscuits
 Coffee Tea or Milk
 Same dinner served with sirloin steak — \$2.00

7. How should an overweight person order his dinner from the card given in Problem 2? An underweight person? Explain. Order dinner for a child four years of age.

QUESTIONS

1. What are the courses usually served for a home dinner?
2. What courses may be added to make this a "company" dinner?
3. What are the courses usually served for a formal dinner?
4. Explain why the three meals of the day should be planned with reference to one another.
5. What suggestions can you give for making menus pleasing?
6. Explain the reasons for the sequence of the courses for a dinner.
7. Compare luncheon and dinner menus and dishes such as soups, main dish, vegetables, salads, desserts.
8. What is meant by a table d'hôte meal? What advantages and disadvantages does it have, in your estimation? What are the disadvantages and advantages of the à la carte menu?

DINNER

Hors d'Œuvres

Hors d'Œuvres 75
Stuffed Celery with Roquefort Cheese 50
Hearts of Celery 30
India Relish 20
Pâté de Foie Gras 1.00
Queen Olives 20
Sweet Mixed Pickles 15
Salted Almonds 20
Ripe Olives 20

French Boneless Sardines 60
Radishes 15
Assorted Olives 25
Caviar 75

Shellfish

Oyster Cocktail 35
Deviled Crabs, Tartar Sauce, with Saratoga Chips (1) 35; (2) 65
Iced Lake Shrimp 60
Shrimp Cocktail 40
Broiled Lobster 1.75; half 90

Crab Flake Cocktail 50
Iced Gulf Shrimp au Mayonnaise 60

Soups

Onion Soup au Gratin 40
Consomme Frappé cup, 20
Shrimp Gumbo 35
Tomato Bouillon, cup, 15

Cream of Tomato 25

Fish

Bouillabaisse or French Fish Stew 1.00
Broiled Red Fish Steak 75
Baked White Fish au Gratin 60
Grilled Gulf Trout 75
Fish caught at 4 A.M. are served here the same day
Broiled Spanish Mackerel 75
Tenderloin of Trout 65
Creamed Fresh Crab Meat 90

Specialties

Crab Meat Salad Mexicaine 60
Virginia Ham Steak, Hot Biscuits 1.00
Crab Meat à la Newburg in Chafing Dish 1.25
Planked Steak (for 3) 4.50
Oysters en Brochette 75
Planked White Fish, Chef's Special 1.00
Tenderloin Steak en Casserole (for 2) 3.00
Sirloin Steak (Chicago Meat) 1.50
Individual Planked Steak 1.50
Planked Spring Chicken ½ — 1.25 Whole 2.00
Chicken à la King in Chafing Dish 1.25
Planked Steak (for 2) 3.00
Southern Hoe Cake 15
Baked Oysters in Shell ½ doz. 50 — 1 doz. 75

We recommend and know you will be pleased with the above dishes

Entrees

Spaghetti with Imported Italian Mushroom Sauce and Cheese 70
One Lettè with Oysters 65
Vol au Vent of Sweetbreads with Mushrooms 75
Breaded Veal Cutlet 75
Squab Chicken Grille, Mushrooms ½ 1.00
Turkey Wings with Giblets, Curry and Rice 75
Braised Pork Chop with Sauerkraut 70

Roasts

Prime Rib Roast 75 Baked Ham, sugar cured 50

Lamb, Mint Jelly 75

Pork Apple sauce 75 Turkey, American Dressing 1.00

Vegetables

Macaroni au Gratin 30
Beets in Butter 20

Stewed Tomatoes 20
French Peas 35

String Beans 20
Spinach with Egg 25

Special Stuffed 25
Corn au Gratin 45

Potatoes

Fried Sweet 20 Special 20
Hash Brown 20 Candied Sweet 20

French Fried or Sauté 15
Lyonnaise 20

Au Gratin 25

Sweet Potatoes, Imperial 25
Special Baked Idaho 20
Hashed in Cream 15

Salads

Head of Lettuce 30
Stuffed Tomato with Chicken Salad 40

Lettuce and Tomato 35
Dressings: Roquefort, 25 1000 Island 10

Lettuce and Grape Fruit 40
Sliced Tomatoes 30

Hearts of Palm 60
Combination Salad 30

Desserts and Ices

Banana Split 35
Macarons 15
Fruit Parfait 30

All Pies 15
Assorted Cakes 15

Meringue Glacé, 25
Lady Fingers 15
Rainbow Parfait 40

Baked Alaska 50
Charlotte Russe 30
Pie à la Mode 30

Peach Melba 35
Layer Cake 15
Ice Cream or Sherbet 20

Cheese

Imported Gruyere 30
MacLaren's Imperial 30

Edam 25
Swiss 35

Imported Roquefort 40
American 20

Neufchatel 30

Camembert 30

Fruits and Preserves

Orange or Grape Fruit Marmalade 20
Strawberry, Blackberry and Cherry Preserves 20
Preserved Figs in Cream 40

Bar le Duc Jelly 40
Orange Juice 20 Orange Sliced 20
Strained Honey 20

Baked Apple and Cream 20
Grape Fruit Half (15)
Sliced Bananas and Cream 20

Orange (r) 10

Coffee, Tea, etc.

Half and Half 15
Small Pot Tea 15
Chocolate or Cocoa 15

Iced Tea 10
Pure Cream per glass 25
Iced Coffee 10

Coffee 10
Buttermilk 10

HOME PRACTICE

For one week plan the dinners for your family, illustrating as well as you can ways of making the menu pleasing.

List the food you eat for dinner for three days. Estimate the calories. Do you eat a third or more of your calories at dinner? Is your habit in this matter justified?

Be very careful as to your personal cleanliness at all meals. Take special pains to be ready for dinner.

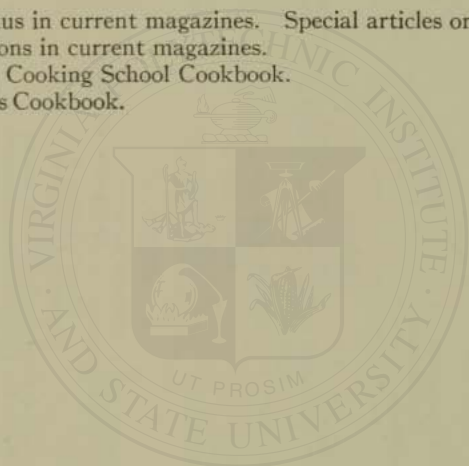
Try to do your part to make dinner a pleasing event in your family.

REFERENCES

Dinner menus in current magazines. Special articles on dinner or dinner combinations in current magazines.

The Boston Cooking School Cookbook.

Everybody's Cookbook.



CHAPTER XVIII

MEAT

Kinds of meat. The term meat may include the flesh of all animals used for food. In this chapter the term meat includes beef, veal, pork, mutton, and lamb.

Many other animals are used for food. Some economic prophets venture the guess that at some future time Alaska will be an important producer of reindeer meat for the world markets. Goat and kid are a cheap and available source of meat. This meat is known as "chevon," as the flesh of the cow is called beef, of the calf veal, of the hog pork.

Economic importance of meat. Do you know that in this country we spend more for meat than for any other kind of food? We eat approximately twice as much meat as Europeans do. One of every three dollars spent by American families for food is spent for meat. Some families use little or no meat, and therefore many families spend for it a larger proportion than one third. Why are we willing to spend so much for meat?

Why we like meat. Meat is one of our most palatable foods. It is almost universally liked because of its richness of flavor and because it satisfies the appetite. After a meal with a juicy steak or roast we feel well fed.

The cook likes meat because it is easy to prepare, and because, also, a large roast provides cold meat for later meals with almost no labor of preparation involved. The housewife finds meat a boon in planning the meals, for it makes other rather flat foods such as bread, potatoes, and rice, acceptable. Variety in menus is obtained merely by using a different cut of meat. One can also vary the kind of meat and the method of cooking.

When we speak of meat substitutes we mean certain foods other than meat which supply similar proteins; for example, milk, eggs, cheese, beans, and nuts. We do not mean that there is any one food which has all the qualities that make meat popular. For

flavor, convenience, and popularity, all three together, there is no meat substitute.

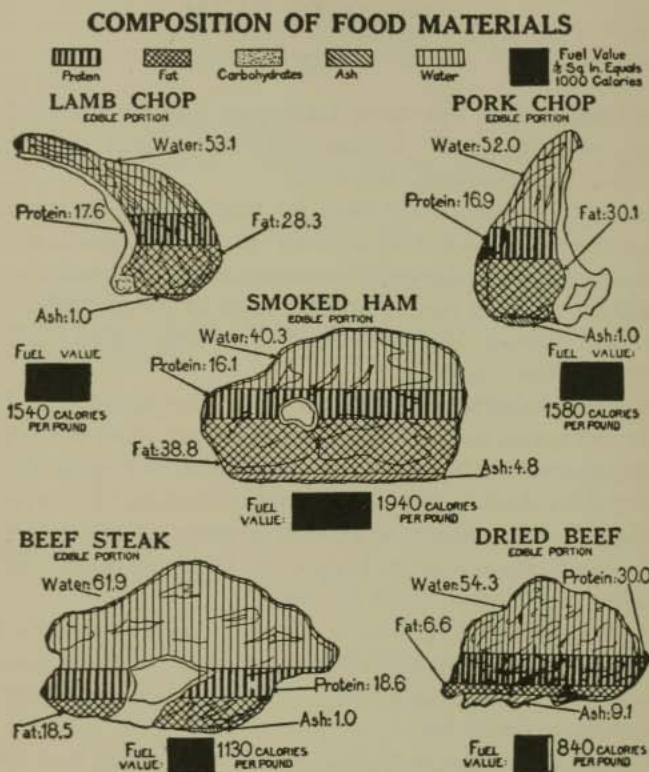


FIG. 26. COMPOSITION OF MEATS

Composition and food value of meat. Meat is about half water. The protein content varies from one sixth in fat cuts to one fifth in lean cuts. There is a wide variation in the fat content, from one tenth in very lean meat to one third in pork. The calories in each pound of meat are proportional to the fat content, pork chops yielding twice as much fuel as round steak and more than twice as much as veal. See Table V in the Appendix.

1. *Protein.* The protein of meat is "complete." You will re-

call this term, which was used in describing the proteins of milk and eggs. It has been explained as meaning that the protein in a given substance is sufficient to support growth and repair of the protein tissues of the body. Not all proteins are complete. Gelatin, for example, is an incomplete protein. In your reading you may have seen the term amino acids. These are the smaller units of which proteins are made. Just as bricks are made of clay, sand, and straw, the proteins we use in building our bodies are made of several kinds of materials called amino acids. Even though sand and clay are available, the brick cannot be made without straw. Likewise the body must have a certain assortment of amino acids in order to build or rebuild its protein tissues. A complete protein contains all of these required amino acids. Incomplete proteins are valuable, but they must be supplemented by complete proteins.

2. *Energy value.* Meat contains fat, which is an excellent fuel food. Fat is not so quickly digested as carbohydrate, but it has a higher fuel value. A good diet contains both fat and carbohydrate. The energy value of meat may be overrated if judged from figures giving composition, because when meat is trimmed for cooking a large part of the fat is discarded, and at meals much of it is left on the plate.

3. *Minerals.* Meat contains a good quantity of iron, phosphorus, and sulphur. It is noticeably lacking in calcium.

Meat is highly regarded for iron, but in this respect it is not superior to egg yolk or to leafy vegetables. Thin green leaves surpass it in iron content. Meat used as the sole source of iron may have two disadvantages: (a) the iron in meat is in the form of hemoglobin of the blood cells and may not be so easily digested as vegetable iron; (b) meat is subject to putrefaction in the intestines, and so at times much of the iron is lost. Meat is a good source of iron for persons of good digestion.

4. *Vitamins.* Meat is a poor source of vitamins. It cannot be counted on for vitamin C because the presence of that element varies with the food that was fed to the animal, and with the length of the storage period. Vitamin B is present in small amounts, but this vitamin is least likely to be missing in a mixed

diet. The parts of the animal which are commonly used for food contain little or none of the A vitamin, but this vitamin is present in the vital organs that are not so generally used for food, such as the heart, kidney, sweetbreads, and especially the liver.

5. *Extractives.* The flavor of meat is due to extractives. They have no food value but are an aid to good digestion, since they stimulate the flow of the digestive juices, especially the gastric juice.

The digestibility of meat. Meat is quickly digested. The connective tissues which determine the toughness or the tenderness of meat are easily dissolved by the gastric juice. Tough cuts of meat, if properly cooked, seem to be as easily digested as the tender cuts. Experiments show that the protein of meat is about as easily digested as that of milk or eggs. Lean meat is more quickly digested than meat with an excess of fat.

Place of meat in the diet. Meat is a valuable food. The fact that many people should not eat it is not necessarily a reflection on its value. It is more often a reflection on the dietary habits of these individuals.

For adults and older children meat is a wholesome, normal article of diet. Moderation in eating it is necessary. Although appetite is an asset, it is not a safe guide in the choice of food. This is evident from the mistakes that people make in eating too much meat and too many sweets. These are the two favorite kinds of food, but they must often be forbidden in special diets. The abnormal diet, of course, is a matter for the attention of a physician or a dietitian.

In the interest of economy and good health American families should spend less for meat and more for fruits and vegetables. Instead of purchasing meat with one dollar out of each three dollars spent for food, it would be better to spend for meat only one out of four or six dollars. Let us see why.

One danger in eating an excess of meat is that it replaces other needed foods. Meat must be supplemented by foods that furnish carbohydrate, vitamins, cellulose, and calcium. People who lead sedentary lives should eat only a moderate amount of meat, in

order to avoid intestinal putrefaction. Bad breath, a "dark brown" taste in the mouth, headaches, and constipation may be symptoms of intestinal putrefaction. Malnutrition is frequently the result.

We may safely eat and enjoy meat once a day. We need fear no shortage of protein if we eat daily one serving of meat, one egg or one meat substitute, two glasses of milk, with bread, cereals, and occasionally beans, peas, or nuts. Fruits and vegetables furnish in abundance the food substances lacking in meat.

For two good reasons children under seven should not be given meat regularly: (1) it has a tendency by dulling the appetite to push milk out of the diet; and (2) young children are susceptible to intestinal putrefaction. For school children one small serving of meat may be a regular part of the day's food.

The care of meat. All moist protein foods spoil easily. Meat, therefore, requires scrupulous care from the time that the animals are selected for slaughter to the handling of the meat in the home.

1. *Federal meat inspection.* When we consider that more money is spent for meat than for any other food, and that meat spoils easily, it is not surprising that the Federal Government exerts a rigid control over sanitary conditions in the meat industry. Federal control is exercised only when the product of the packing houses is handled in inter-state or foreign shipment.

The Federal inspection is twofold in nature. First the animals are inspected before and after slaughter to insure the use of only those that are healthy. Some animal diseases, such as trichinosis in pork and tuberculosis in beef cattle are communicable to human beings. Under the veterinary inspector all diseased animals are condemned and kept from the market. The sanitary inspector also has supervision of the handling of the meat that is suitable for food. There are rigid sanitary restrictions concerning the plant and the workers. The meat is handled rapidly, is kept at a low temperature during the handling, and is stored at approximately freezing temperature.

Each side of beef, veal, pork, lamb, and mutton is inspected

and if edible is then stamped "Inspected and Passed." You will see this government stamp on the meat in your market.

2. *State and municipal control.* Meat which is slaughtered and sold within a state does not come under the Federal Meat Inspection Act. Moreover, the federal act does not control the conditions in wholesale or retail establishments handling meat after it reaches a state or municipality. It is essential, therefore, that every state and every municipality exert rigid control in order to insure the sanitary handling of meat. Study the regulations in your community.

3. *Care in the home.* As soon as meat is received it should be unwrapped and placed in a clean, dry, covered vessel in the refrigerator, or in a place equally cold. It must be kept free from flies and dust.

HOW TO BUY MEAT¹

Grades of meat. Meat is graded, in the wholesale market, according to "market preference" — that is, the preferences of the persons who buy meat. The kind that will bring the highest price is called "prime," the next in the list, "choice." The differences in price in the same town for the same cuts are due to differences in grade. It is difficult for those who are unskilled to detect the grades. The main differences that we would detect between a steak from a "choice" animal and one from a "medium" animal would be in the matter of fat, and toughness or tenderness.

Beef. Good beef is firm, well mottled or marked with fat, and has a characteristic bright red color. The fat (suet) should be creamy white and firm. There should be no disagreeable odor. The beef is cut lengthwise into halves and each half in turn into a forequarter and hindquarter.

¹ The tables on the characteristics of cuts of beef, veal, lamb and mutton, and pork are used by permission from *Ten Lessons on Meat for Use in High Schools*, National Live Stock and Meat Board. Chicago.

BEEF CHART

WHOLESALE AND RETAIL CUTS

1 HIND SHANK

1 TO 3 SOUP BONES
4 - HOCK

6 FLANK

1 - FLANK STEAK
2 - STEWS OR HAMBURGER

12 PLATE

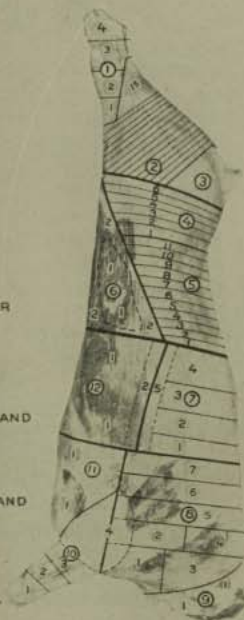
1 - STEWS OR BONED AND ROLLED ROASTS
2 - SHORT RIBS

11 BRISKET

1 - STEWS OR BONED AND ROLLED ROASTS

10 FORE SHANK

1 TO 3 SOUP BONES
4 - SHOULDER CLOD

**2 ROUND**

1 TO 14 ROUND STEAKS
15 HEEL OF ROUND

3 RUMP

STEAKS OR ROASTS

4 LOIN END

1 TO 6 SIRLOIN STEAKS

5 SHORT LOIN

1 TO 3 CLUB OR DELMONICO STEAKS
4 TO 11 PORTERHOUSE STEAKS

7 RIB

1 TO 4 RIB ROASTS
5 SHORT RIBS

8 TRIMMED CHUCK

1 & 2 BOTTOM CHUCK ROASTS
3 & 4 TOP CHUCK ROASTS
5 TO 7 CHUCK RIB ROASTS

9 NECK

1 - BONELESS ROASTS
STEWS OR HAMBURGER

Numerals in circles refer to wholesale cuts and major subdivisions of such cuts. Other numerals refer to retail cuts.

WHOLESALE CUTS AND SUBDIVISIONS ALL PERCENTAGES BASED ON CARCASS WEIGHT

① TO ⑥ HINDQUARTER	48.0%	⑦ TO ⑫ FOREQUARTER	52.0%
① TO ③ ROUND AND RUMP	24.0	⑦ RIB	9.5
① HIND SHANK	4.0%	⑧ & ⑨ CHUCK	22.0
② BUTTOCK	15.0	⑧ TRIMMED CHUCK	17.0%
③ RUMP	5.0	⑨ NECK	5.0
④ & ⑤ FULL LOIN INC SUET	20.5	⑩ FORE SHANK	5.5
④ LOIN END	7.0	⑪ BRISKET	6.5
⑤ SHORT LOIN	10.5	⑫ PLATE	8.5
④ KIDNEY KNOB	3.0		
⑥ FLANK	3.5		

FIG. 27. BEEF CHART, WHOLESALE AND RETAIL CUTS

CHARACTERISTICS OF THE FOREQUARTER OF BEEF

CUT	CHARACTERISTICS	METHODS OF PREPARATION
Neck	Juicy and well flavored.	Soup, stewing, and corning
Chuck	Good quality meat. The steaks are more or less rectangular in shape and contain cross sections of shoulder blade, backbone, and rib, but frequently the last two are trimmed off. Contains more connective tissue than cuts from the hindquarter contain. The lean is composed of more muscles, too, the fibers of which run in various directions, so that steaks cannot be cut across the grain. Low in fat but with a rather high percentage of bone.	Roast — fifth rib, oven roast Steaks Pot roasts Stews Boiling
Rib	Roasts from this cut are rich in flavor and very tender. A comparatively large muscle known as the "eye" and the rib bones make it easy to identify the prime rib roasts.	Oven roasts
Plate Plate Navel Rib ends	Lean and fat are deposited in alternate layers in plate cuts. These cuts usually contain ends of ribs and sections of breastbone. The presence of the latter is a sure indication that the cut is from the plate. The fat is sweet and well suited to forming a part of boiling meat.	Boned, rolled, sold either fresh or corned Rib ends roasted as "short ribs" Stews Pot roasts Corning Boiling
Fore Shank	Bone and gristle, varying amounts of lean.	Soups Stews

CHARACTERISTICS OF THE HINDQUARTER OF BEEF

CUT	CHARACTERISTICS	METHODS OF PREPARATION
Round — rump and shank off	Round or oval in shape with a small round bone and a large proportion of lean meat. Tender, juicy, and well flavored. The "top of the round" is the most tender portion of the steak and can be distinguished from the "bottom round" because it consists of one large muscle while the "bottom round" is made up of two.	Pot Roasts Steaks: Swiss Spanish Rolled
Rump	Is a somewhat wedge-shaped solid, juicy piece of meat of good quality.	Pot Roasts Steaks Corning Stews
Hind shank	Bony, connective tissue and some meat.	Soups Stews
Loin	Sirloin steaks are oblong in shape and contain sections of the back bone and hip-bone. Is more tender than the round. The porterhouse steak contains a T-shaped bone. The meat of the main portion is of very high quality but the strip end is rather coarse. The club steaks are similar to porterhouse but they contain no tenderloin. The loin contains the choice cuts of the hind quarter.	Steaks Roasts
Flank	Flank steaks are boneless and there are but two in each carcass. Consists of flat rectangular muscle weighing 1-2½ pounds. Muscle fibers run lengthwise, making it necessary to "score" the steak across the grain.	Stewing Broiling Braising

Veal. Veal is much lighter in color than beef and is also less firm. The flesh is a pinkish color and the fat is pinkish white. Veal is usually sold fresh. It is more difficult to cure than beef. It is considered less digestible than beef and it is less juicy.

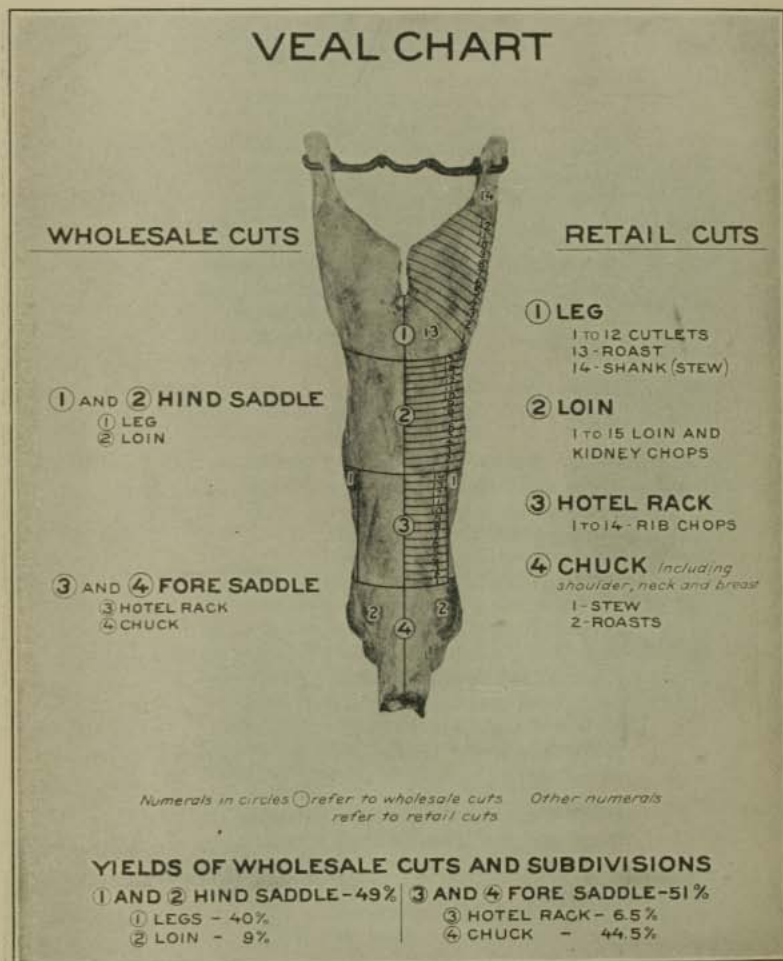


FIG. 28. VEAL CHART, WHOLESALE AND RETAIL CUTS

VEAL CUTS

CUT	CHARACTERISTICS	METHODS OF PREPARATION
Breast	Meat of good quality	Roasted, stuffed and roasted
Shoulder	Solid meat of good quality	Roasted, boned, stuffed and roasted
Chuck	Meat of good quality	Steaks, roasts
Leg	Solid meat of good quality, very little waste	Roasts, steaks (called cutlets)
Loin	Choice meat	Loin chops, roasts
Rib	Bone and fat. Lean meat, excellent quality	Rib chops, roasts
Shanks	Fore and hind shanks, bone, gristle, little meat	Stews, soups

Lamb and mutton. There is the same contrast between the flesh of lamb and of mutton that there is between that of veal and beef. Mutton is a dull red, while lamb is much lighter in color. Both contain fat well distributed and white and flaky in character. Mutton suet is much firmer than beef suet.

LAMB AND MUTTON CUTS

CUT	CHARACTERISTICS	METHODS OF PREPARATION
Leg	Solid meat, fine quality	Roasted, boiled
Loin	Choice meat	Chops, roasts
Rack — corresponds to rib chops	Bone, meat of fine quality	Chops, roasts, crown roasts
Shoulder or chuck	Well-flavored, tender meat	Stews, braised, stuffed and roasted
Breast	Bone, meat not so fine in grain as that in leg and loin	Boned and rolled for roast Stews
Flank	Good quality meat	Roast, stews

Pork. Pork is finer grained and lighter in color than the flesh of other animals. It should also be firm to the touch. The fat of pork is softer than that of other animals; it is also more plentiful.

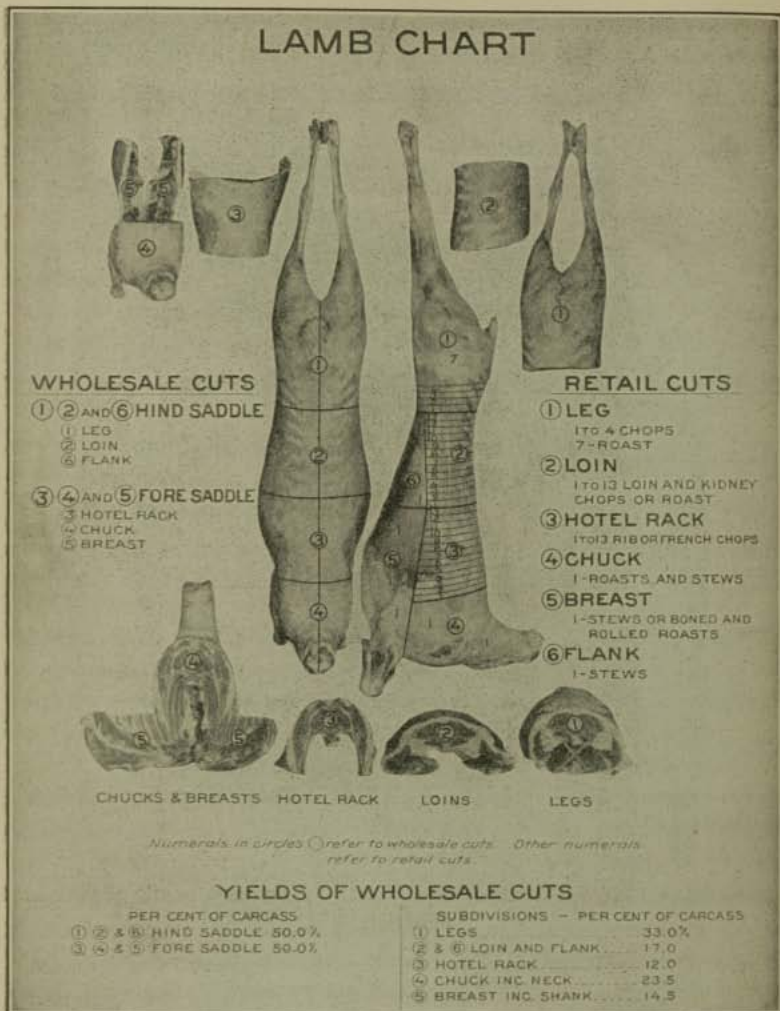
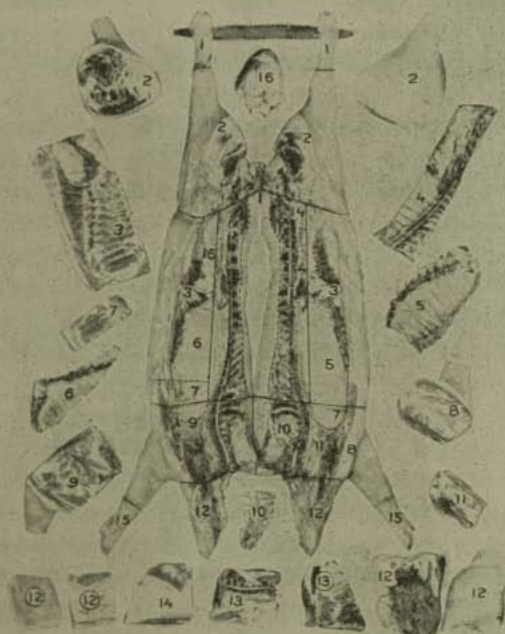


Fig. 29. LAMB CHART, WHOLESALE AND RETAIL CUTS

FRESH PORK CHART WHOLESALE AND RETAIL CUTS



WHOLESALE CUTS - PERCENTAGE OF CARCASS

1 - HIND FEET	1.00%	7 - BRISKET	2.25%	12 - JOWL BUTTS (TRIMMED)	2.25%
2 - HAMS	19.00	8 - PICNIC	7.50	13 - BONELESS BUTT	3.05
3 - CLEAR BELLIES	16.50	9 - N. Y. STYLE SHOULDER	16.00	13 - BOSTON BUTT	5.20
4 - PORK LOINS	12.75	10 - NECK BONES	.95	14 - LOIN BUTT	4.00
5 - SPARE RIBS (N. Y.)	2.50	11 - PICNIC BUTT	3.02	15 - FORE FEET	.92
6 - SPARE RIBS (N. Y.)	1.50	12 - JOWL BUTTS (UNTRIMMED)	3.75	16 - LEAF FAT	3.52

FIG. 30. PORK CHART, WHOLESALE AND RETAIL CUTS

PORK CUTS

CUTS	CHARACTERISTICS	METHODS OF PREPARATION
Feet	Bone, skin, fat, not much meat, but this little is delicate.	Stewed, boiled, broiled, fried in deep fat, pickled
Hams	Solid meat, little bone.	Fresh — steaks and roasts Cured — baked, broiled, boiled
Fat back	Large percentage of fat, very little lean.	Salt pork — pan-fried, combined with other foods
Clear bellies	Fat and lean.	Bacon — broiled or pan-fried
Loins	Leading fresh pork cuts. Contain backbone, ribs and tenderloin. Small amount of fat on outside. Tender, lean meat.	Roasts, chops
Picnic shoulder (Formerly called California hams)	Large percentage of lean meat. Well flavored. Sold fresh or smoked.	Fresh — roasted Smoked — cooked like ham
Butts — cut from top of shoulder and from the jowl	Boston butts — ends or top pieces cut from heavy shoulders for making picnic ham. Include end of shoulder blade. Picnic butts — surplus fat and skin are removed and the shank cut off close to the breast. Lean butts — consist of lean, boneless portion of Boston butts between blade bone and neck bone. Dry salt butts — made from jowl, edges trimmed smooth and the piece flattened out.	Steaks, roasts Fresh — roast Sweet — pickled and smoked like ham Cured
Spare ribs	Lean and fat. Good flavor.	Baked or boiled
Tenderloin	Choice, lean, tender, boneless. Sold as part of loin roast or separately.	Broiled, pan-fried, stuffed and baked
Fat	From one tenth to one third of the hog carcass is made into lard.	Frying, shortening

GENERAL METHODS AND PRINCIPLES OF MEAT COOKERY

1. Tender cuts of meat. Tender cuts of meat are from the parts of the animal where the muscles are little used. The tenderloin is the tenderest part of an animal. It is often removed whole and sold as a fillet. The tender cuts of meat are more juicy and contain less connective tissue than the tougher cuts and therefore require less cooking. Although more desirable, they are more expensive. Tender cuts are required for broiling, pan broiling, or roasting.

The problem in cooking tender cuts of meat is to retain the juices and to develop the flavor. Using a high temperature to sear the surface serves the double purpose of keeping in the juices and developing the extractives. The temperature must then be lowered sufficiently to cook the interior without burning the exterior. No salt is added until late in the cooking, as salt draws out the juices. Tender meats can be made tough and dry by poor cooking.

2. Very tough portions and bones (soups). The method of cooking very tough meat is the opposite of the method of cooking tender cuts, for in this case it is desirable to get all of the juices and flavor out of the meat. For soups and stews the meat, cut in small pieces, and bones are covered with cold water to which salt has been added. This mixture is cooked at a low temperature for a long time.

3. Cookery of less tender cuts of meat. Less tender cuts represent parts of the animal that are not tender enough for roasting or broiling but are suitable for the preparation of many pleasing dishes.

A combination of the methods for tender and tough meats must be used. The meat is first seared to develop the flavor, and is then stewed for a long time in order to be made tender. The liquid added is small in quantity and is served as a part of the finished dish. Thus there is no loss of flavor or food value.

For recipes and time and temperature for meat cookery, see pages 415-19.

Gravies and sauces. Some of the choicest flavor of the meat cooks out of it. This is usually conserved in sauces or gravies, which are necessary with the tougher cuts of meat. Why?

WAYS OF REDUCING THE EXPENDITURES FOR MEAT

1. Purchase meat in such a way as to take advantage of differences in price due to local conditions.
2. Use less expensive cuts of meat.
3. Utilize all the bone, trimmings, and all left-over cooked meats.
4. Serve less meat — by serving it less frequently, or by serving smaller portions, or both.
5. Serve combination dishes called meat extenders. These consist of meat mixed with some mildly flavored material such as rice, flour mixtures (pies, dumplings), or potatoes.

CLASS PROBLEMS

1. Investigate the packing-house industry. If possible visit a cold-storage plant in your town. Look up the Federal Meat Inspection Act. (*Food Products* by H. C. Sherman, Chapter VI.)
2. Find out the laws governing the handling of meat in your State. Find out whether your State and county maintain inspection of establishments handling meat.
3. In preparation for a meat-cutting demonstration, study the chart showing the cuts of meat. If possible, arrange to have a meat-cutting demonstration in the laboratory at school. A butcher may come to class and cut a side of beef that is to be used in the cafeteria. If this cannot be arranged, go to a market for a demonstration.
4. Visit markets. Note sanitary conditions. Learn to distinguish pork, lamb, mutton, veal, and the various cuts of each.
5. Weigh or measure amounts of cereals, bread, egg, milk, butter, bacon, and banana equivalent in fuel to a lamb chop or a serving of steak. (Figure from one-hundred-calorie portions. Table V, Appendix.)
6. Plan dinner menus for one week, varying the kind of meat.
7. Plan dinner menus for one week, using beef but varying the method of cooking.
8. Prepare tender cuts of meat:

<i>Method</i>	<i>Cuts of Meat</i>
Broiling	Mutton
	Chops: Veal
	Lamb
	Pork
Pan-broiling	Steaks: Beef

Method
Roasting

Cuts of Meat

Roasts: Pork
Leg of lamb
Leg of mutton

9. Prepare meat stock and clear soups.
10. Prepare tougher cuts of meat in various ways. (See pages 417-19 in recipes.)

Demonstrate the use of such utensils and devices as:

Fireless cooker Pressure cooker
Dutch oven Casserole

Demonstrate such methods of making meat tender as:

Stewing
Using tomato juice — Spanish steak
Pounding — Swiss steak
Grinding — Hamburger steak

11. Prepare meat in combination with other foods in dishes known as meat extenders.

Meat and vegetable stews Meat and crust
Meat and dumplings Meat pie
Meat and rice Meat turnovers

12. Prepare various sauces or gravies:

Brown gravy Milk gravy
Mint sauce Maitre d'hôtel butter
Tomato gravy Mushroom sauce

QUESTIONS

1. Why is it necessary to have federal, state, and municipal inspection of meat?
2. Outline the extent of federal inspection.
3. Make a chart showing wholesale and retail cuts from each wholesale cut for beef, veal, pork, mutton.
4. Why is meat a popular food?
5. What is the food value of meat? Explain what foods are needed to supplement meat and why.
6. Are we justified in spending one third of the money that is spent for food for meat?
7. Discuss the place of meat in the diet.
8. Describe good beef, veal, mutton, lamb, pork, as found in the market.
9. Explain what is meant by a complete protein.
10. What are extractives and what purpose do they serve in meat?
11. Name the tender cuts of meat and tell how they may be prepared. State the principles involved in their cookery.

12. Name the cuts of meat used for soup making and explain the process. State the principles involved.
13. Name the less tender cuts of meat and explain the principles involved in their cookery.

HOME PROJECTS AND HOME PRACTICE

1. Test your knowledge and develop a discriminating judgment of meats by purchasing the meat for your family for a month.
2. Plan the meat for your family meals for one week. Try to satisfy them with meat in the menu only once each day.
3. Keep accounts or study the accounts, of food expenditure in your household for two weeks. What per cent of the expenditure is for meat, for milk, for fruits, for vegetables?
Is the expenditure for meats desirable? Justify your statement, making suggestions for improvement if you deem improvement necessary. See if you can cut down your meat bill.
4. Prepare some of the less tender cuts of meat at home.

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CHAPTER XIX

FISH AND POULTRY

POULTRY

POULTRY includes chicken, turkey, duck, goose, pigeon, squab, and wild birds. Of these, chicken is the most commonly used in the household, and our study is based on the preparation of chicken for the family dinner.

In larger cities poultry is handled through cold storage facilities, but in smaller localities it is often purchased alive, or freshly killed and dressed, from local markets.

Poultry does not come under the Federal Meat Inspection Act. The government has made a thorough study of the handling of poultry and advises that if it is killed before shipping the feathers be removed, but that it be shipped without further dressing because it remains in better condition when not drawn before shipping. This is the practice. Since poultry is meat it spoils easily, and it must be handled in much the same way as meat is handled. It is put into cold storage, and often even frozen.

Selection of chickens. Chickens are sold as broilers or spring chickens, fryers, and fowls (hens or capons). A broiler is a very young chicken, usually about three months old. A fryer is a larger chicken, three to six months old, but young enough to be tender. Fowls are full grown hens or capons.

Selection of live poultry.

Heavy weight for size

Feathers in good condition

Bright red comb

Breastbone well covered with flesh

Skin in good condition (separate the feathers to see the skin)

Selection of dressed poultry:

(a) *Age.* Young birds have soft, smooth, yellow feet, flexible breastbone; very little fat under the skin or on the entrails and vital organs; many pin feathers, but few hairs. Older birds have

rough feet; hard or tough breastbone; a good deal of fat under the skin and about the entrails and vital organs; few pin feathers, and long hairs.

(b) *Freshness.* The flesh should be firm but neither stiff nor flabby. It should give to the touch. The eyes should be bright and full and the feet soft. The skin should be whole and a clear yellow in color.

If poultry has been frozen it should be marketed in this state and thawed just before cooking. Any food material, especially meat and fish, spoils rapidly when thawed. To thaw poultry put it in cold water until no part remains frozen — usually for $1\frac{1}{2}$ to 2 hours.

Composition and food value of poultry. In composition and food value, poultry does not differ in any important respect from other meat. It is chiefly a protein food and the protein is "complete." The fuel value varies according to the amount of fat present. The light meat is composed of more tender fibers than beef and pork, and contains less fat than the darker meat. For these reasons it is preferred for persons with weak digestion. Poultry, like meat, is lacking in calcium and vitamins, though it is considered a fairly good source of iron and phosphorus. In the diet, poultry is interchangeable with meat.

The dressing of poultry. Dressing poultry involves three distinct processes, — killing, picking, and drawing.

The best way to kill a chicken is by cutting the throat and thrusting a sharp knife through the roof of the mouth and out through the top of the head. This destroys the part of the brain controlling the muscles that hold the feathers, and thus, by releasing the feathers, renders the bird easy to pick.

See directions on page 420 for picking, drawing, and trussing poultry.

Ways of cooking. Because flavor depends on extractives, the fundamental principles of cooking poultry are the same as those for cooking meat. A high temperature is used at first to keep the juices in, and is followed by a lower temperature. For tough chickens long, slow cooking is required and methods and utensils similar to those used for tough cuts of meat are used. Young

chicken is usually broiled, fricasseed, smothered, or fried. Fowl is usually baked, roasted, boiled for salad or croquettes, stewed with dumplings, or stewed for chicken pie.

What to serve with chicken. One starchy vegetable and one succulent or green vegetable may be served with chicken. Boiled rice is a favorite for the starchy food in some sections of the country, but white potatoes are often used. Sometimes dressing takes the place of a starchy vegetable with roast fowl, and in that case two succulent vegetables are often used, or one vegetable and a small serving of salad. Suggestions for the succulent vegetable are spinach, broiled or stuffed tomatoes, asparagus, and eggplant. A tart jelly or fruit often accompanies fowl.

FISH

Fish is one of the oldest foods known to man. We do not eat so much fish in this country as do people in many other parts of the world, particularly in Japan, Norway, Sweden, and various sea islands. On a trip around the world you would see and eat many kinds of fish now unknown to you. The fish markets of the South Sea Islands contain strange fish of brilliant hues — red, green, orange, and iridescent. You would undoubtedly feel at first that they could not be good for food, but as a matter of fact they are edible.

Fish in our own waters offer us an almost untouched source of food. Domestic fisheries and allied industries are increasing rapidly in economic importance. The most important of these, besides the shellfish industry, discussed in Chapter XIV, are the codfish and sardine or herring industries in New England, and the salmon industry of the Pacific Northwest.

Kinds of fish. Fish may be classified according to their source as fresh-water or salt-water fish. In composition, fish may be termed lean or white fish — for example, cod, halibut, haddock, trout, flounder, perch; or oily or fat fish — as salmon, tuna fish, mackerel, shad, herring, redfish, red snapper.

A glance at the menu of a hotel on the Great Lakes will show you the usual fresh-water fish and ways of serving them. A dinner menu card from a seashore hotel will give the favorite

kinds of salt-water fish and ways of serving them. You will notice on each menu some fish that is not found in the region.

FISH ON DINNER MENU

(A hotel on the Great Lakes)

Lake Erie Whitefish	Jumbo Frog Sauté with Mushroom,
Broiled Lake Trout, Anchovy Butter	Bacon à l'Espagnole
Spinach	Soft Shell Crab Fried or Sauté, Cold
Halibut Florentine or Fried, Beet	Slaw
Salad	Half Lobster, Julienne Potatoes
Planked Lake Trout	Scallops Fried

FISH ON DINNER MENU

(A hotel on the Gulf of Mexico)

Baked Fillet of Red Snapper	Broiled Spanish Mackerel
Grilled Gulf Trout Maître d'hôtel,	Tenderloin of Trout, Tartar Sauce
Potatoes	Broiled Red Fish Maître d'hôtel
Select Oysters Fried in Bread	Boiled Finnan Haddie with Potatoes
Crumbs	Maître d'hôtel
Baked Red Snapper à la Portuguese	Crab Meat au Gratin
Potatoes Maître d'hôtel	Salt Mackerel, Broiled or Boiled
Shrimps Creole with Rice	

Composition and fuel value of fish. See Appendix, Tables V and VI.

Place of fish in the diet. Fish varies in composition similarly to meat. Some varieties have much more fat than others and are consequently higher in fuel value. The chief nutrient in fish is protein. The protein of fish is "complete" and is therefore interchangeable with meat in the diet. About one fifth of the edible portion of fish is protein. Like meat and poultry, fish is deficient in calcium and in vitamins, but vitamin A is present in somewhat larger amounts than in beef and poultry. Lean fish, like the white meat of chicken, is more quickly digested than beef; but fat fish, such as salmon, is digested about as readily as pork.

In some localities fish is an economical food, but its price varies with the distance from the source of supply and with the season. There is every reason to believe that fish will increase in importance as a food for the family table. Transportation facilities make it practicable to market fish in good condition at great distances from the source of supply, and people of the United States are learning to like many new food fish.

COMPOSITION OF FOOD MATERIALS

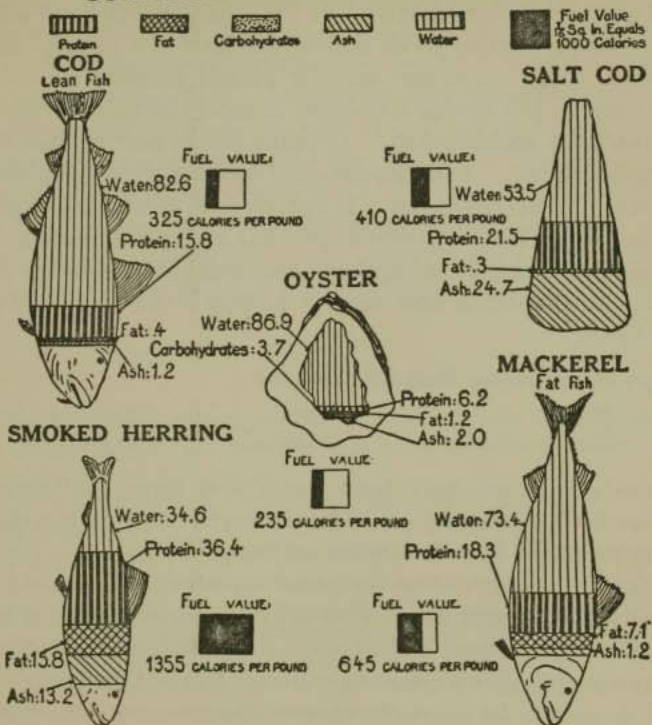


FIG. 31. COMPOSITION OF FISH

Buying and caring for fish. Freshness is the all-important quality in selecting fish. Fish deteriorates rapidly, and is at its best with regard to flavor when just fresh from the water. It must be shipped and marketed on ice or in a frozen condition. When frozen, it should not be thawed until ready for cooking. The ice that forms in the tissues breaks down the connective tissue, thus allowing rapid spoilage after thawing. Frozen fish may be thawed in cold water. Fresh fish is recognized by clean, bright red gills; eyes bright and full; flesh firm; no disagreeable odor; and scales easy to remove. It is best to purchase fish from a reliable dealer. Why?

When fish reaches the house it should be dressed and placed on ice until ready for cooking. It has a strong odor and will impart its flavor to other foods unless it is kept in a tightly covered container. The container may be placed directly on the ice, or ice may be put in the container around the fish.

Methods of cooking fish. Cooking improves the flavor and appearance of fish. Fish requires less cooking than meat because it has less connective tissue. If overcooked, it will fall to pieces.

Extractives which are present in meat are lacking in fish. For this reason fish needs the support of some additional flavor and is usually served with an acid sauce. Lemon is the best liked additional flavor.

Ways of Preparing Fish for Dinner:

Baked	Fried	Steamed
Broiled or grilled	Planked	Boiled

When boiled, fish loses both flavor and form, and therefore other methods of cooking are to be preferred except when the fish is being prepared for salad or for scalloped dishes.

Planked fish is served on the plank on which it is cooked.

What to serve with fish. Fish is rarely served without lemon or some sauce. These additions give the dish attractiveness of appearance and offer a pleasing contrast to the fish flavor. The vegetable should be carefully chosen, because not all vegetable flavors combine well with fish.

(a) *Sauces for fish.* (See recipes.)

Lemon	Maitre d'hôtel	Cream, with parsley
Egg	Drawn butter	Hollandaise
Tartar	Tomato	Mock Hollandaise

(b) *Vegetables that are good with fish.*

Potatoes, prepared in various ways	Carrots	Cucumbers
Asparagus	Celery, cooked or uncooked	Radishes
Tomatoes	Green salads	

(c) *A bread-crumb dressing is served with baked fish.*

(d) *Garnishes.*

Lemon sliced and dipped in chopped parsley or paprika		
Parsley	Cucumbers	Radishes
Watercress	Pickles	Tomato

Crisp bread offers a pleasing contrast to the soft texture of fish. Hard rolls or bread sticks may be served with it. In the South crisp corn sticks or corn muffins are usually served with fish.

No credence should be given to the old superstition that fish and milk should not be eaten together. You have seen this disproved in serving creamed fish, fish croquettes, and oyster stew. If the fish eaten is fresh there is no scientific foundation for the adage; and if not fresh it should not be eaten at all.

When serving fish to guests the menu should not be so limited as when meat or poultry is served, because many people do not like fish.

CLASS PROBLEMS

1. Procure from a hotel a sample menu of a "shore dinner" and of a "chicken dinner." Compare the two menus and explain the reasons for the differences in them.
2. Plan a menu for your family for a fish dinner. Estimate the cost of the dinner.
3. Plan a menu for your family for a chicken dinner. Estimate the cost.
4. Take a trip to the market to learn: (a) how poultry is marketed in your town; (b) how to select poultry; (c) what fish are available in your market and the conditions under which these are handled; (d) the price per pound of poultry and fish in your markets.
5. Weigh chickens, dressed and not dressed. How much should a broiler weigh? A fryer? A fowl for baking?
6. Demonstrate the dressing of a broiler, a fryer, and a fowl. Each member of the class should dress a chicken. This is an easy lesson to arrange in coöperation with the school cafeteria, or with some commercial eating place.
7. Prepare and estimate the cost per serving (see recipes pages 420-23):
 - Roast chicken, dressing, giblet gravy
 - Broiled chicken, butter sauce
 - Smothered chicken, with rice
 - Fried chicken, milk gravy
 - Chicken pie
 - Chicken and dumplings
8. Look up in a reference book the salmon industry, the cod industry, or the sardine industry. Write a report.
9. How large a fish would you purchase for a dinner for six persons? Make this calculation from the fish prepared in class.
10. Demonstrate the dressing, skinning, and boning of a fish.

11. Prepare various fish dishes and their accompaniments. Suggestions are

<i>Fish</i>	<i>Sauce</i>
Planked	Egg
Broiled	Hollandaise
Fried	Maitre d'hôtel
Baked	Drawn butter
Boiled	Tomato
Steamed	Tartar

Compare the methods of preparing fish and discuss the relative merits of the different methods.

12. Invite some housewife who is especially famous for her method of cooking fish or fowl to come to the laboratory and demonstrate her favorite recipe to the class. Collect other good recipes.
13. Figure cost, food value, and one-hundred-calorie portions of fish and chicken dishes.

QUESTIONS

1. What does the term poultry cover? How is poultry handled in large cities?
2. Describe the selection of chickens for broiling, frying, and baking.
3. What can you say of the composition and the food value of poultry compared to meat?
4. What do we mean by dressing poultry? Describe the process.
5. What methods of cooking chicken are most in use, and how would you select a chicken for each method of cooking?
6. Discuss the economic importance of fish as a source of food.
7. What kinds of fish are there? Name ten fish and classify them.
8. Discuss the composition and food value of fish. With what food is it interchangeable? What are its deficiencies?
9. Why is freshness important in food fish? How can you judge the freshness of fish?
10. How should fish be cared for after purchasing? Describe the cleaning of a fish for baking.
11. Explain why fish is served with a sauce. Name some of the more commonly used sauces, and tell when you would serve them.
12. Describe the most commonly used methods of cooking fish.
13. What vegetables and garnishes may be used with fish?
14. Plan three dinner menus using fish in the main course.

HOME PRACTICE

1. Dress a chicken for baking, one for frying, and one for broiling.
2. If the opportunity presents itself in your household dress a duck, a squab, a turkey, or birds.
3. Prepare a baked hen for Sunday dinner.
4. Purchase chicken and fish for your family several times. Find out the price per pound of each.
5. Plan and prepare three dinners with chicken as the meat.
6. Plan and prepare a dinner with baked fish as the meat.
7. Prepare fish for your family — if they eat fish — in two other ways. Include the preparation of the sauce to serve with the fish.
8. Prepare corn sticks or crisp bread sticks for a fish dinner.
9. For a review problem prepare fish cakes, salmon loaf, or chicken or salmon croquettes.

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CHAPTER XX

VEGETABLES FOR DINNER

THE nutritive value of vegetables and their importance in the diet is discussed at length in the luncheon unit, Chapter X. This chapter should be reviewed in connection with the study of vegetables for dinner.

Vegetables in the diet are all important for their valuable mineral salts, for their vitamins, and for their cellulose. Some are also valuable for protein.

In the dinner menu vegetables are of value not only for their nutrients, but because they make the menu pleasing. What vegetables are served for dinner? How are they prepared? Why are these vegetables and these methods of preparation chosen? How many vegetables are used for dinner, and in what combinations?

Let us try to answer these questions.

What vegetables are served for dinner? One very good way to answer this is by consulting the dinner menus of good hotels. Two à la carte menus from distant parts of the country follow:

JUNE DINNER MENU FROM AN OHIO HOTEL

Vegetables

Green Peas	Fresh Lima Beans
Asparagus, Hollandaise Sauce	Corn on the Cob
Buttered Beets	Spinach
New String Beans	Potatoes: Mashed, Creamed, Au gratin
Buttered Carrots	Baked, French Fried, New Potatoes in Cream

FEBRUARY DINNER MENU FROM A TEXAS HOTEL

Vegetables

Brussels Sprouts	Asparagus Tips, Drawn Butter
Cauliflower in Cream	French Artichokes, Drawn Butter
Buttered Beets	Green Stringless Beans
Buttered Young Carrots	Fresh Spinach
Boiled Onions in Cream	Stewed Sugar Corn
Fried Egg Plant	White Turnips, Butter Sauce
Fresh Peas	

Potatoes, Rice

Sweet Potatoes, Baked	Fried	Candied
White Potatoes, Baked	O'Brien au Gratin	
Hash Brown	Lyonnaise	
Julienne	Au Gratin	
Rice, Steamed	Boiled	Au Gratin
	Spanish	Creole

Pleasing vegetable combinations at dinner. The à la carte menus give a general idea of what vegetables are appropriate for dinner but offer no suggestion as to the eternal "fitness of things." What vegetables are properly served with the various dinner meats? The following combinations are suggested as tried and true.

<i>Broiled Steak</i>	<i>Roast Beef</i>	<i>Grilled Lamb Chops</i>
Mushrooms	Escalloped potatoes	Peas
Baked potato	Broiled tomato	Browned potatoes
Combination salad (lettuce and tomato)	Slaw, Spanish dressing	Water cress, French dressing
<i>Baked fish</i>	<i>Roast Pork</i>	<i>Baked Chicken</i>
French fried potatoes	Candied sweet potato	Rice
Buttered beets	Cinnamon apples	Cauliflower
Cucumber salad, French dressing	Mexican slaw	Head lettuce, French dressing

From these combinations it may readily be seen that the type of meat used for the dinner menu in some measure determines what specific vegetables are to be used. A starchy vegetable, usually potatoes, sometimes rice or sweet potatoes; a succulent vegetable; and a green salad represent the general choice in each of these menus. For a simple home dinner it is not necessary to have both the second vegetable and the salad. The salad may be served with the main course and as substitute for the second vegetable.

Comparison of vegetables for luncheon and dinner. Vegetables play second fiddle at dinner, but they may be the main dish at luncheon. At dinner the number of courses is greater than at

luncheon, and because of the multiplicity of dishes each dish must be simply prepared. For luncheon the problem is to make the vegetable dishes sufficiently rich to serve as the main dish. For dinner the problem is so to choose and prepare the vegetables as accompaniments to meat, the main dish, that they will add to the attractiveness of the meat. A creamed or scalloped vegetable is useful at dinner if the meat is meager in quantity, if a dry or cold meat is served, or if there is difficulty in using the milk allowance.

Each dinner should have two vegetables. The potato is the most universally used dinner vegetable, and in this chapter we shall discuss potatoes and rice. The food value of other vegetables has been sufficiently covered in Chapter X.

Potatoes. The *white potato*, although a native of South America, is usually called the Irish potato because it is a staple article of diet in Ireland. It is the most widely used vegetable in our country. Many families use potatoes daily.

The potato owes its popularity to various factors: (1) it is a mildly flavored food that blends with almost all other foods; (2) in texture it is a pleasing contrast to the solid form of meat and to the softness of other cooked vegetables or the succulence of salad plants; (3) potatoes are easily cooked and may be served in a variety of ways; (4) they are easily digested.

Composition and food value of potatoes.

	WATER	PRO-TEIN	FAT	CARBO-HYDRATE	ASH	VITAMINS		
						A	B	C
White potato	78.3%	2.2%	.1%	18.4%	1.0%	+	++	+ to ++
Sweet potato	69.0%	1.8%	.7%	27.4%	1.1%	++	++	?

Potatoes are an excellent and cheap source of fuel owing to the carbohydrate, chiefly starch, which they contain. In this respect they may be compared with grain products and bread. They contain only a small amount of protein, but what they have is a valuable kind. For one-hundred-calorie portions see Table V, Appendix.

Potatoes are rich in a variety of minerals. Potassium is the most abundant mineral, but this is not usually lacking in any mixed diet that contains one fruit and one vegetable. Potatoes contain some iron, and are important in this respect because they are eaten in such quantities. Phosphorus in considerable amount is also found in this vegetable.

Potatoes may be considered an excellent source of vitamins B and C. There is not so high a vitamin C content as in oranges, tomatoes, raw cabbage, or onions; nevertheless, because it is eaten in such quantities, the potato may be considered an important source of this vitamin.

New potatoes are waxy, owing perhaps to the presence of some sugar and more protein than the old contain.

Sweet potatoes are similar in food value to white potatoes, but they contain sugar in addition and are therefore higher in fuel value. Sweet potatoes are a staple article of diet in the Southern States and are coming into wider use throughout the country.

Suggested ways of preparing potatoes. Potatoes are cooked (1) to soften the cellulose; (2) to cook the starch; (3) to develop the flavor.

In a restricted diet it is advisable to cook potatoes in the skin in order to avoid loss of valuable minerals. This is not important in a mixed diet containing fresh fruits and raw vegetables. Why?

Some of the well-liked ways of serving white potatoes are:

Baked	Riced with butter	French fried
Boiled	Hash browned	Shoe string
Creamed	Julienne	Stuffed
Mashed	Chips	O'Brien
Scalloped	Soufflé	Au Gratin

Sweet potatoes are served more frequently with pork, fowl, and game than with beef. Some of the well-liked ways of serving sweet potatoes are:

Baked	Candied	Sauté
Glazed	Mashed and baked with nuts marshmallows	Soufflé

Rice. Rice is frequently served instead of potatoes as the starchy vegetable for dinner. For variety in starchy vegetables rice should be more generally used. It is cheap, nutritious, easily digested, blends well with other foods, and is easily cooked.

Only one starchy vegetable should be served at dinner. If rice is used it should be as a substitute for potatoes, not in addition to them. The same is true of macaroni, hominy, grits, and even of dried peas and beans. Why? In the Orient rice is the chief staple article of diet, and in the food supply of the world it is a much more important article than wheat or potatoes.

Food value of rice. The rice used by Americans is white or polished rice. It consists of the endosperm only and is chiefly starch and protein with only a trace of fat and minerals. Brown rice is the whole grain, and is therefore more nutritious. It contains minerals, fat, and a considerable amount of vitamin B. There is little market demand, however, for brown rice.

Rice may be substituted for potatoes in a mixed diet, but potatoes are preferable in a restricted diet. Why?

Suggestions for cooking rice. Like other cereals, rice is cooked in boiling salted water. Care must be taken not to overcook it. When thoroughly done the grains should stand apart. To accomplish this result three things are necessary: (1) the rice used should be head rice (whole grains); (2) it should be cooked rapidly; (3) when thoroughly cooked it should be drained in a collander and allowed to stand a few minutes in this utensil, covered with a folded cloth. See recipe.

Rice is cooked with other foods as in the following combinations: soups, or broths; stuffed tomatoes or peppers, with meat, curried rice, Spanish rice and creole rice.

Other vegetables in the dinner menu. The second vegetable should be a cooked vegetable or a salad.

Boiled and buttered vegetables, seasoned mildly, are preferred. From the menus listed at the first of this chapter you can see that almost any watery or succulent vegetable is suitable. Suggestions are: carrots, beets, asparagus, cauliflower, string beans, green peas, new corn, turnips, squash, eggplant, tomatoes.

Stuffed vegetables are suitable if only vegetable pulp and buttered bread crumbs are used for the stuffing.

Apple sauce, spiced apples or pears, and baked banana may be substituted for one vegetable in the dinner menu.

Dinner salads. Light salads are appropriate for dinner. A salad green, or a combination salad of lettuce with cucumbers or tomatoes is best. The dressing should not be rich. French dressing is preferred.

Sometimes a light, acid fruit salad, such as grapefruit salad with a light dressing, is served at dinner. If the salad is served as a separate course, crisp saltines may be served with it. No other accompaniments are used with salads at dinner. Gelatin salads are acceptable in the dinner menu.

Bread with dinner. At a formal dinner bread may be omitted. Bread is not so abundantly eaten at dinner as at other meals because of the presence of a starchy vegetable. Sliced bread, hard rolls, and hot biscuit are the kinds most frequently used. Those who are overweight should omit bread at dinner.

CLASS PROBLEMS

1. Review the chapters on vegetables and salads in Unit Two, Chapters X and XI.
2. Plan for use on the same day luncheon and dinner menus that illustrate the essential differences in the selection and preparation of vegetables and salads for these two meals.
3. Make a collection of dinner menus from magazines, cookbooks, hotels, or restaurants. Study the combinations of meat and vegetables used. Point out the contrasts in each menu.
4. Plan the vegetables and salads for dinner for a given family, using the following meats in the various menus: baked hen, roast leg of lamb, fried trout with tartar sauce, Swiss steak, pork chops. Justify your choice.
5. How are potatoes sold in your stores? How many potatoes in a pound? How many pounds in a peck? Discuss the relative advantages of buying by weight and by measure.
6. Prepare potatoes in some of the ways suggested on p. 185. Laboratory lessons on potatoes may be combined with the lessons on meat.
7. Prepare sweet potatoes in some of the ways suggested on p. 185. This lesson may be combined with the lesson on preparing various cuts of pork.

8. Prepare rice as a dinner vegetable.

Boiled rice	Italian baked rice
Steamed rice	Tomatoes stuffed with rice
	Brown rice

(*Note: Interesting recipes for rice dishes may be found in Farmers' Bulletin 1195, Rice as Food.*)

9. Prepare watery or succulent vegetables suitable for dinner.

Boiled and buttered vegetables.	Miscellaneous.
Carrots	Corn on cob
Beans	Asparagus
Beets	Hollandaise sauce
Turnips	Cauliflower
Squash	Cream sauce
Stuffed and baked.	Fruits used as second vegetables.
Tomatoes and rice	Apple sauce
Eggplant	Spiced apples
Summer squash	Baked banana

10. Prepare dinner salads.

Suggestions:

Swiss chard	Stuffed celery	French dressing
Water cress	Grapefruit	Roquefort dressing
Lettuce	Slaw	Thousand Island
Combination (vegetable)		dressing

11. Learn how to prepare and serve rare or unusual vegetables procurable in your market, such as:

Avocado pear (salad).
 Artichokes (drawn butter sauce).
 Brussels sprouts.

QUESTIONS

- Review the chapters X and XI on vegetables and salads in the luncheon unit.
- What reasons can you give for including vegetables in the dinner menu?
- Contrast vegetables in the luncheon and the dinner menu.
- Suggest suitable combinations of vegetables and various meats and tell why you think the combinations pleasing.
- What is meant by a green salad? What can you say of its value in the diet? Contrast salads for luncheon and dinner, explaining the reasons for the differences.

6. Why are potatoes the most popular dinner vegetable?
7. What can you say of the composition of potatoes and of their place in the diet? Compare sweet potatoes with white potatoes.
8. Discuss rice as a dinner vegetable.

HOME PRACTICE AND HOME PROJECTS

1. Purchase the vegetables for your family for a week.
2. Plan the luncheon and dinner vegetables for two weeks.
3. Prepare potatoes in at least six different ways.
4. Prepare for one week the second vegetable either as a hot vegetable or as a salad for dinner.
5. Substitute rice for potatoes in your dinner menus now and then. If rice is more frequently used in your home, substitute potatoes for it now and then.
6. Prepare baked bananas, apple sauce, and spiced apples. These are appropriate served with pork or chicken in place of a vegetable.

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- A good cookbook.
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CHAPTER XXI

DINNER DESSERTS

FOR most of us keeping the dessert till the end of the meal means saving the best for the last. Sweets are universally liked and if we eat them discreetly there is no reason why we should not enjoy them all our days. It is not the use of sweets but their abuse that is to be condemned. Their place in the diet and the menu is discussed fully in Chapter XV.

Comparison of desserts for dinner and for luncheon. There is no essential reason why the same dessert may not be used either for luncheon or for dinner. Because dinner is the heavier meal it is wiser and more pleasing to serve at it a light dessert. Most of the richer desserts were treated in the luncheon discussion.

In this chapter the desserts discussed for dinner are: frozen mixtures; gelatin dishes; butter cakes. This is an arbitrary division of luncheon and dinner desserts. Moreover, many desserts are suitable for either a luncheon or a dinner menu. A frozen dessert may appear in a luncheon menu, or a fruit whip in a dinner menu with equal propriety, but rich pudding or pie is more appropriate for luncheon than for dinner. Why?

FROZEN DESSERTS

Frozen desserts may be used frequently. They are refreshing and are favorites in the hot weather menus. Though chiefly appropriate in warm weather, frozen mixtures are acceptable in menus the year round. If wisely chosen and eaten with discretion they may be enjoyed by both children and adults. In the diets of invalids simple frozen mixtures are almost invaluable.

KINDS OF FROZEN DESSERTS

I. Water ices

Ices. An ice consists of fruit juices, water, and sugar.

Frappé. Any fruit ice frozen to a coarse mush is called a frappé.

Sherbet. Sherbets are made by freezing a water ice to a mush, adding gelatin or beaten egg white, and then completing the freezing.

Milk sherbet. Milk may replace part of the water in a sherbet. When milk is used gelatin or egg white is usually omitted.

Frozen punch. This is a water ice distinguished by high flavor. Spices are often used. A mixture of fruit juices is frequent.

II. Ice creams

Milk and cream are the foundation for ice cream. There are almost endless variations.

Plain ice cream is thin cream, or a mixture of cream and milk, sweetened and flavored and frozen.

Fruit creams are made of crushed fruit pulp, sweetened and frozen with thin cream, heavy cream, or custard.

Frozen custards are soft custards to which flavoring and thick cream are added before they are frozen. Caramel and maple are favorite custard flavorings. Chopped nuts or candied fruits may be used in custard creams.

III. Fancy creams

Frozen puddings are rich, highly flavored custards containing candied fruits and nuts. They are frozen in molds. Nesselrode pudding is an example.

Mousse consists of heavy cream, whipped, sweetened, flavored with a sirup and frozen in molds. Maple, caramel, and chocolate mousse are favorites.

Parfait is a custard with whipped cream, frozen in molds. It is not frozen so hard as frozen pudding or mousse.

Sundaes. Any ice cream may be served with such additions as chocolate sauce, caramel sauce, marshmallow sauce, chopped nuts, crushed fresh fruit, candied fruit, preserved fruit, whipped cream, or a mixture of two or more of these. When so served it is called a sundae.

Food value of frozen desserts and their place in the diet. A glance at the above list of frozen desserts will indicate the wide variation in food value. Water ices are in effect frozen beverages,

while ice creams are substantial food, and rich ice creams are highly concentrated foods. For the family menu ices and plain or fruit creams are preferable.

Very rich creams should be used only for special occasions and hence may be omitted from this discussion. A note of warning is needed against the use of these rich, concentrated foods between meals. Not only do they dull the appetite and replace much needed simpler foods, but they have a definitely bad effect on the digestive tract. When eaten they should be taken at meal time rather than between meals. If you eat anything between meals a fruit drink or an ice is preferable.

Simple frozen dishes such as milk sherbet or plain ice cream are a wholesome addition to the diet. They serve to introduce needed fruit juices and milk into the diet. Frozen mixtures should be eaten slowly and in moderate amounts.

GELATIN DESSERTS

Source and food value of gelatin. Gelatin is a protein extracted commercially from the bones, ligaments, and tendons of either sound young beeves or healthy calves. Because it is an incomplete protein, gelatin alone cannot support the growth or the repair of tissue. If supplemented with a complete protein it is satisfactory. One tablespoon of granular gelatin yields thirty-seven calories.

Gelatin is easily digested and is of value in cookery for invalids. It may be bought either in granular form as pure gelatin or combined with sugar, flavoring material, and coloring matter. A good class problem would be to determine the difference in the cost and convenience of gelatin in these two forms.

Properties of gelatin. Gelatin will not dissolve in hot liquid until it has first been allowed to swell in cold water. This is a general characteristic of all gelatin except specially prepared products. It melts at a high temperature and "jells" or becomes solid at a low temperature. It will not stiffen until it is cold, but after it stiffens it may be put out in a warm room without melting.

The proportion of gelatin to liquid varies somewhat according to the character of the final product, but a general proportion is

two tablespoons of gelatin to one quart of liquid (including the cold liquid in which it is soaked).

It is interesting to know that fresh pineapple contains an enzyme that digests gelatin. If fresh pineapple is put into a gelatin mixture it will digest the gelatin into other substances that do not jell. Pineapple must be cooked or canned if it is to be used in gelatin.

The general rules for gelatin are based on the properties of the product. (See recipes.)

BUTTER CAKES

Cakes are classed as butter cakes and as sponge cakes. For sponge cakes see Chapter XV.

Ingredients and proportions. See table for proportions for butter cakes on page 435. Three types of butter cake are listed: plain, foundation, and rich. The cake listed as plain cake is sometimes called "one-egg cake"; the rich cake is called "cup cake," or "one-two-three-four-cake," because it contains one cup each of milk and fat, two cups of sugar, three cups of flour, and four eggs and four teaspoons of baking powder.

Flour. The flour used in cake-making should be a soft wheat or a "general-purpose" flour.

Binding agent. It is important to have one egg as a binder in a cake mixture; this first egg is not considered as part of the leavening agent.

Leavening agent. To each cup of flour, two teaspoons of baking powder or two eggs are used. For substitution of soda and acid for baking powder, see Chapter VI on Breakfast Breads.

Sugar. The sugar is largely responsible for the texture of cake. It makes a light and grainy texture. Contrast the texture of cake with that of muffins, and then contrast recipes in this respect. When too much sugar is used the cake is so tender that it breaks into pieces when removed from the pan.

Fat, also, is partly responsible for the texture of cake, though not in so great a degree as sugar. The use of too little fat keeps the cake from being light, but too much fat makes it heavy and gives it a tendency to greasiness.

Liquid in cake is usually milk, but fruit juices, sour milk, whey, or a mixture of water and milk may be used.

Preparations for cake-making. Pans should be greased, or greased and floured. All surplus flour should be shaken from the pans. For loaf cake it is well to fit a greased paper in the bottom of the pan. Be sure the pans are clean, otherwise the cake will stick in spite of greasing and flouring. The oven should be ready for use when the cake is ready for baking. Assemble all ingredients and utensils before beginning to combine the cake. All measurements must be accurate if good results are to be expected. Because egg whites will not beat if any fat or egg yolk is present, it is wise to break the eggs one at a time over a cup or small bowl.

Methods of mixing and baking cakes. See recipes, pages 435-41.

Substitutions and modifications of ingredients in cake:

1. *Flour.* Cake recipes call for pastry or general flour. If a hard-wheat flour is used the amount should be reduced by two tablespoons per cup of flour. A good substitute for pastry flour is seven eighths of a cup of bread flour plus two tablespoons of cornstarch well mixed and sifted together.

2. *Eggs.* If the number of eggs is to be reduced in a cake recipe, the leavening agent and the liquid must be increased. For each egg omitted add two tablespoons of liquid and one teaspoon of baking powder. Two yolks or two whites are considered the equivalent of one egg. If yolks are used alone a little extra baking powder should be added. Use one fourth teaspoon baking powder for each extra yolk. It is not well to substitute for eggs in a rich cake.

3. *Chocolate* contains both fat and starch. It should therefore replace some of the fat and some of the flour if added to a recipe that does not call for chocolate. One ounce of chocolate (one square) is the equivalent of one tablespoon of fat and one tablespoon of flour.

4. *Cocoa* calls for the reduction of the flour in a recipe. For each one fourth cup of cocoa, reduce the flour one tablespoon. The substitution of cocoa in a recipe written for chocolate will not alter the amount of flour needed, but the fat should be increased one half tablespoon for each one fourth cup of cocoa used.

5. *Nuts.* For each cup of nut meats added, the fat in a recipe may be reduced two tablespoons.

Testing the cake. When the cake is done it will: (1) shrink from the sides of the pan, and (2) spring back when the center of the surface is touched lightly with the finger.

Causes of failure in cake-making. Failure in cake may be due to wrong proportions of ingredients; through poor recipe or inaccurate measurements; careless baking; or the use of poor ingredients.

1. Heavy cakes may be caused by:

(a) Falling while being baked, owing to jarring

(b) Too little flour.

(c) Too much fat — "sad" or heavy cakes.

2. A dry or bready cake cracks open on the top, owing to too much flour.

3. Coarse-grained cakes may be caused by:

(a) Too much leavening.

(b) Insufficient mixing of ingredients.

(c) Baking in too slow or too quick an oven. If the oven is too slow the grain will be even but coarse. If the oven is too hot the grain will be uneven. The cake may crack in the center in order to finish rising.

4. A crumbly cake may be caused by too much sugar.

5. Too much sugar may make a cake heavy and tough.

Cake fillings. Cake fillings are sometimes called icings or frostings. They are chiefly sugar. They may be classed as cooked or uncooked.

(1) Uncooked fillings consist of powdered sugar made into a smooth paste with water, fruit juice, cream, or butter.

(2) Cooked fillings. There is a wide variety of cooked fillings. Boiled icing and chocolate and caramel frostings are the most common. A thermometer is best for all sugar cookery. See page 298 for proportions and temperatures. Cream of tartar or a few drops of vinegar is sometimes added to insure a creamy texture. See Sugar Cookery, Chapter XXIX.

Cake frostings are capable of innumerable variations through the addition of such materials as cocoanut, pineapple, nuts, dried fruits, candied fruits.

Food value and place in the diet. Butter cakes are a concentrated food. Why? Cake may be considered chiefly a fuel food.

The number of calories varies with the richness of the recipe and with the filling used. A square of plain cake one and three quarter inches in size, without frosting, contains one hundred calories. This is only about a half portion. A very rich cake, heavily frosted, may contain five or six hundred calories per serving. Rich cake should not be included in the menu very often. Children, people with weak digestion, and persons who are overweight should avoid rich, heavily frosted cakes. Why?

Cake is a substantial food and should be considered a dessert in itself and not merely an accompaniment to desserts. When cake is used to accompany other desserts, the plainer kinds without frosting are preferable. Cookies are best for this purpose. Their crispness adds a pleasing contrast to the soft texture of frozen desserts, custards, and gelatin dishes.

CLASS PROBLEMS

1. Review Chapter XV for a study of the place of sweets in the diet. Plan desserts for dinner and luncheon menus to show essential differences.

FROZEN MIXTURES. (Recipes, page 457)

2. Calculate the one-hundred-calorie portions of all frozen and gelatin desserts made in the laboratory. Estimate the calories in one serving; also check each recipe for vitamins (use plus marks).
3. Estimate the cost of preparing frozen mixtures at home and compare with the cost of commercial ice cream. Which is more economical?
4. Visit an ice cream factory.
Ask to see fancy molds used for special occasions.
5. Calculate the calories in various fountain specials, such as banana split, double chocolate malted milk, chocolate nut sundae, butter-scotch sundae. Discuss the advisability of eating these, especially between meals.
6. *Experiment to determine freezing mixtures.* Use bowls the same size, and fill each bowl with the materials listed below. Insert the bulb of a thermometer into each bowl. Note the minimum temperature reached in each case and the time required.
 - (1) Crushed ice.
 - (2) Equal parts of crushed ice and rock salt.
 - (3) Two parts of crushed ice and one part of rock salt.
 - (4) Four parts of crushed ice and one part of rock salt.

In which preparations does the thermometer register freezing temperature? In which does it register freezing temperature the most quickly? What conclusions do you draw concerning preparations of ice and salt in freezing mixtures?

7. Explain "latent" heat in freezing. This is a problem in physics, and the physics teacher will be glad to explain it to the class.
8. Demonstrate two kinds of freezers to the class: (1) the usual triple-motion freezer; (2) the vacuum freezer, which requires no turning. Have the class use both and discover the relative merits of each. What is the price of each?
9. Prepare various frozen mixtures in the laboratory, selecting some from each of the following groups. Suggestions:

Water Ices

Fruit ices
Frappé
Sherbets
Milk sherbet

Ice Creams

Plain ice cream
Frozen custard
Caramel ice cream
Frozen apricots, peaches
or strawberries
Chocolate ice cream
Orange or lemon ice
cream
Peppermint ice cream

Fancy Mixtures

Chocolate mousse
Sundaes

GELATIN DESSERTS. (Recipes, page 455)

10. Look up the manufacture of gelatin.
11. Experiment to discover the solubility of gelatin:
 - Add to one teaspoon of gelatin one half cup of hot water.
 - Add to one teaspoon of gelatin one half cup of boiling water.
 - Add to one teaspoon of gelatin one half cup of cold water.
 - Soak one teaspoon of gelatin in two tablespoons of cold water for five minutes and add $\frac{1}{2}$ cup of hot water.
 - Note results. What do you conclude as to the solubility of gelatin?
12. Make comparisons of "Jello" and gelatin to see which is the more economical. Class plan this problem. Which is more convenient?
13. Prepare various gelatin desserts and estimate their calorie value and vitamin content. Suggested recipes:

Fruit jellies	Lemon sponge
Fruit gelatin	Orange charlotte
Perfection fruit salad	Spanish bavarian cream
Perfection vegetable salad	

BUTTER CAKES. (Recipes, page 435)

14. Prepare various kinds of butter cakes. Suggestions:

Plain cake	}	Bake as drop cakes, layer cakes, and loaf cakes
Foundation cake		
Rich cake		

Class discuss and score results.

15. Experiment with method of mixing cakes:

- (1) Cake method
- (2) Muffin method

Compare time required and results obtained.

16. Experiment with a standard cake recipe, modifying it by the use of:

Chocolate	Various fats
Cocoa	All egg yolks
Nuts	All egg whites

Compare the recipes thus obtained with recipes from cookbooks.

17. Frost cakes with cooked and uncooked fillings. Suggestions:

<i>Cooked:</i>	<i>Uncooked:</i>
Boiled	Orange
Chocolate	Butter
Caramel	

QUESTIONS

1. Review the questions at the end of the chapter on Sweets, Chapter XV in the Luncheon Unit. What is the essential difference between desserts for dinner and for luncheon?
2. Discuss the food value and the desirability of frozen mixtures in the diet.
3. Classify and name the most common kinds of frozen desserts.
4. Account for the difference in texture in various frozen mixtures.
5. What proportion of ice to salt do you recommend for water ices, ice cream, mousse? Give reasons for your choice.
6. Give general rules for making: (1) water ice; (2) milk sherbet; (3) plain ice cream; (4) fruit ice cream.
7. To what extent is gelatin a food?
8. Name the different types of gelatin dishes.
9. Give general rules for making gelatin desserts.
10. Discuss the food value of butter cakes and their place in the diet.
11. Discuss the place of butter cakes in the menu.
12. What is the difference between butter cakes and sponge cakes?
13. What preliminary preparations are necessary for cake making?
14. Give general proportions for plain cake, foundation cake, rich cake.

15. Describe two methods of mixing butter cakes.
16. Give directions for baking cakes. How can you tell when a cake is done?
17. What modifications are necessary in a plain cake recipe in the following instances: bread flour, addition of chocolate and cocoa, use of butter instead of other fats, omission of eggs, use of whites for yolks or yolks for whites?
18. What makes a cake heavy? Cracked? Coarse-grained?

HOME PRACTICE AND HOME PROJECTS

1. Form the habit of eating frozen desserts slowly.
2. Train yourself not to eat rich foods between meals.
3. Prepare a custard ice cream for dinner.
4. Prepare milk sherbet for dinner.
5. Prepare a fruit ice cream for dinner or for party refreshments.
6. Prepare two types of gelatin desserts at home.
7. Make a charlotte for Sunday dinner.
8. Bake a standard cake three times at home. Bake it once as a loaf cake, once as a layer cake, once as cup cakes.
9. Make three kinds of cake at home. Suggestions: white cake, gold cake, spice cake, chocolate cake.
10. Make boiled icing for a loaf cake.
11. Make chocolate filling for a layer cake.
12. Plan and prepare the dinner dessert for your family for two weeks.

REFERENCES

- Boston Cooking School Cook Book.* Little, Brown and Company. Useful for special recipes.
- Other good cookbooks.
- Sherman, H. C. *Food Products.* The Macmillan Company. Pages 234 and 239 for gelatin.
- Vulte and Vanderbilt. *Food Industries.* The Chemical Publishing Company. Page 230 for gelatin.
- Home Baking.* United States Department of Agriculture Farmers' Bulletin 1450 (1925).

CHAPTER XXII

THE PREPARATION AND SERVING OF DINNER

"DINNER is served." What welcome news, and with what pride it would be said if one might add, "And it has been prepared by Daughter!"

If you have been practicing in your home, as suggested in each chapter, your family will not be surprised some Sunday to see mother start to church in her "best bib and tucker," as carefree as a guest in her own home, content in the knowledge that an experienced cook is in the kitchen, and that a good dinner is in store. Each of you should plan to have your mother as your dinner guest. For such an occasion the dinner must be well planned, well prepared, and well served. Before this home project is undertaken it is well to summarize here some important points in planning, preparing, and serving the dinner.

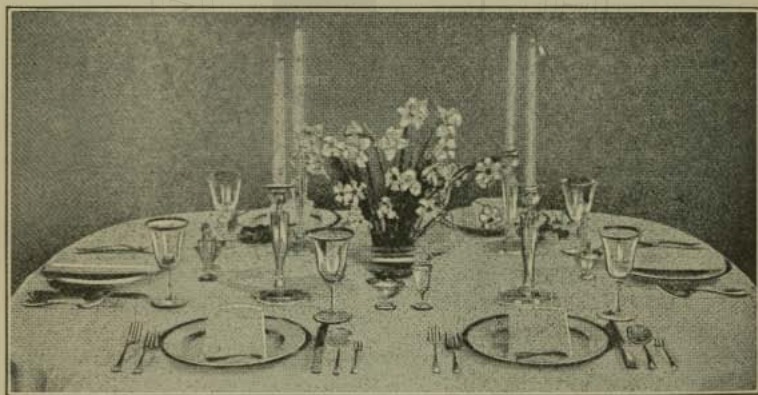


FIG. 32. CORRECT TABLE SETTING FOR A FORMAL DINNER

Courtesy, McCall's Magazine

The dinner menu. It is unnecessary to discuss in detail the dinner menu. A few questions will serve to emphasize the principles involved.

1. Is the menu a balanced meal when the other meals of the day are considered?

2. Is the menu planned for the group that is to be served?

3. Has account been taken of the adults and children?

For example, if coffee is planned for the adults, is milk provided for the children? The menu should be planned so that little or no special preparation is required for individuals. If children cannot have a rich dessert, why not serve a simple one for all?

If younger children should not have meat, why not have meat for the rest of the family, allowing a little meat juice on rice or on potato for the junior members?

4. Has the expenditure for food been considered sufficiently? The two items that have the widest range of price are the meat and the vegetables or fruits. Should cheaper meats be used? Are the fruits and vegetables seasonable and plentiful?

5. Is the menu pleasing? Has due regard been taken of the food preference of the family? Is there variety in the courses and in the dishes? Are there pleasing contrasts in flavor, texture, temperature, method of cooking, shape, size, color?

6. In the interest of time and energy, is the menu simple?

7. In the interest of good digestion and comfort, does the menu consist of combinations of food that can be easily digested? Is the order of the menu the best from the standpoint of good nutrition and good digestion?

The working schedule. There is no essential difference between planning a good working schedule for breakfast, for luncheon, and for dinner.

Dinner is a more complicated meal than the other two because of its multiplicity of courses and dishes. More food must be served hot for dinner than for other meals. For these reasons it is perhaps especially necessary to make a careful working plan for the preparation of dinner. On the other hand, your greater skill from practice in cooking and serving simpler meals and individual dishes should offset the greater difficulty involved.

You now have a good notion of the length of time required to prepare any given dish. You should also be skillful in doing several things at one time — that is, in managing.

Pertinent suggestions are:

Plan what can be done ahead of time. Salads, most desserts, the setting of the table, and other tasks will suggest themselves in connection with the working out of any given menu.

See that all supplies are on hand before you begin work.

Plan the utensils you will need so that the right thing is available at the right time.

Hot breads may be heated or kept hot in the top part of a double boiler if the lid is tight.

Mashed potatoes or other vegetables that might burn on the direct heat may be kept hot by putting the covered pan into a pan of boiling water.

Keep in mind the order in which the meal is to be served and have your schedule so arranged that everything will be ready when it is needed and as it should be — the hot things hot and the cold things cold. Some dishes can be allowed to stand and some must be served as soon as done.

Can you save time and work with a fireless cooker?

Division of the working schedule or plan. Divide the working plan into four parts:

1. Those things that may be done ahead of time.
2. Those things that must be done at the beginning of the preparation: (a) in order that the dishes may be cooked at the proper time; (b) in order that certain dishes may be ice-cold; (c) for proper blending of flavors.
3. Those things that may be prepared in between, such as short cooking of vegetables, preparing a beverage or a sauce, mixing biscuit dough. Here is the best place for finding time to freshen one's appearance in order to make sure of being a presentable hostess.
4. Late and last-minute things. Late things are those that come shortly before serving. They are covered by such activities as baking biscuit, combining salad, mashing potatoes. Last-minute tasks are those that must be remembered in the final minute before serving, such as pouring the ice water, placing butter on the table, putting cracked ice in the glasses for lemonade or iced tea, and serving the meal.

The writing out (in brief) of the plan for work is a short cut to becoming a skillful manager.

Plan to have your kitchen as nearly in order as possible when the preparation is completed.

Remember that you are not only the cook but a member of the family, and plan to have your person attractive and your good disposition in evidence when dinner is served.

If you can accomplish these things your pride in yourself will be pardonable.

The serving of the dinner. The service for a family dinner may be more formal in style than the service used for breakfast or luncheon, and still be very informal. The degree of formality is partly a matter of taste and partly a matter of how much help is available. A really formal meal cannot be served without competent help. Let us assume that the average American family does not have maid service and prefers dinner served in compromise style. For details of this service, see page 285, Chapter XXVIII.

CARVING ¹

The host usually carves the meat, but every housewife should know how. Frequently she must do the carving in the kitchen and even more frequently she must teach others to carve. The task requires skill and confidence, but confidence comes with skill. One cannot acquire skill in carving by studying descriptions of carving or by watching a skillful carver, but both of these are helpful. If you would be skillful at carving you must understand how it is done and you must watch some one else do it; but in addition you must use every opportunity to practice on your own account.

The art of carving is apparently little understood by the average person, man or woman. While the formal dinner service presents no opportunity to practice the art, the semiformal dinner, as well as the family dinner, requires that some member of the family shall be skilled in carving. The foods laboratory seems to be the logical place in which to teach the art. A very profitable demon-

¹ The material on carving and carving illustrations in this chapter are used through the courtesy of Miss Inez Willson, Home Economics Department, National Live Stock and Meat Board, Chicago. From *Ten Lessons on Meat for High Schools*.

stration may be arranged. If possible the boys of the school should be invited to attend this lesson, for it usually falls to the lot of the men of the family to do the carving. The ideal way to conduct such a demonstration is to have the different cuts of meat actually at hand, but the difficulty of doing that is evident. It is possible with the use of charts, illustrations, and blackboard work to learn the essential principles.

Principles of carving. It must not be expected that by merely watching a demonstration one can learn to carve, but a demonstration will help to teach the proper methods, and practice will develop skill. To be a good carver requires a knowledge of the anatomy of that which is to be carved. The necessary familiarity with the location of the joints and the direction in which the fibers run can best be acquired by experience in handling meats before, as well as after, cooking them. The advantages of good carving are many. Chief among them is getting the best flavor from the meat and at the same time disposing of the meat in the most economical manner. In carving a slice, after the first incision has been made the angle at which the knife is held should not be altered at all; if it is a jagged slice will be obtained. When the carver has mastered the control of the knife he is well on the way to success. The cut should be sharp and incisive. Never use a sawing motion.

Good tools are necessary. Good carving cannot be accomplished except with good tools. Sharp carving knives of different sizes are needed for different meats. Two, or at the most, three knives, and the fork and steel are sufficient for the average household. A large thin, broad-bladed, round-pointed knife is desirable, but it is needed only for carving steaks. A sharp-pointed knife of what is known as the French pattern, about nine inches long, is the best utensil for general use in carving joints of meat and poultry. And a similar knife about seven inches long is desirable for carving duck, partridge, and other game birds. A suitable fork is essential, and while the expert carver does not require the protection of the steel guard upon the fork, the inexperienced person will, for in carving the edge of the knife is often drawn toward the hand holding the fork. The resistance of the knife

blade varies greatly, and there is always danger that its edge may be deflected by a skewer or piece of bone or tendon, and cause a serious accident.

Knives must be sharp. No one can do satisfactory carving without a sharp knife. It is, therefore, sound economy to buy a carving set of the best grade. The knives should be ground as often as necessary, and a good steel should be part of the kitchen equipment. The edge of the knife grows dull from standing and so it should be sharpened upon the steel — but not at the table — immediately before it is used.

Practice neatness. First of all one must learn to carve neatly, without scattering bits of meat or spattering gravy over the cloth or the platter. Be careful to divide the meat in such a manner that each person at the table is served equally well. If there is not enough of the choice part for every one serve in such a way that each one will receive some of both kinds, instead of giving out all of the best part first and leaving the less desirable portions for those who are helped last. Each portion should be placed neatly on the platter with the browned or best side up. The remainder of the meat on the platter should not be jagged and rough but should be inviting enough to tempt one to a second helping. When the whole of the joint is not required, learn to serve economically so that the piece of meat will be in good condition for another dinner.

A few points for the guest. The guest should appear absolutely unconscious of the efforts of the carver. Even the most skillful carver will lose his confidence if he finds himself the center of attention. The tactful hostess will engage the interest of the others so that the act of carving will not cause a silence to settle over the company. If one's preference as to part is asked, he should name it unless he feels that others will probably make the same choice.

BEEF

Beefsteak. Steak is the simplest meat to carve. It is easier to carve if the bone is removed before cooking, but when that is done the steak itself is harder to handle during cooking, and is less attractive when served. If the bone has not been removed, the

carver should first separate the meat from the bone by cutting along the edge of the bone with the point of the knife. Then beginning with the wide or bone end of a porterhouse steak, or

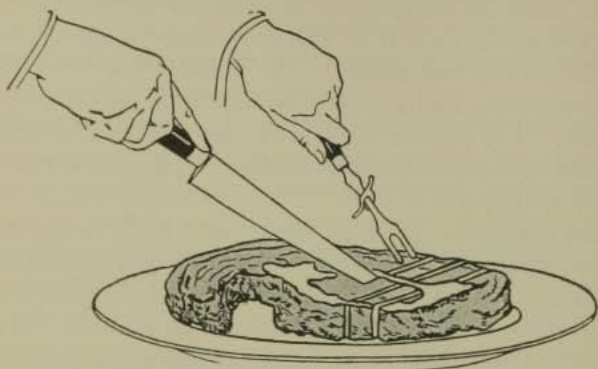


FIG. 33. CORRECT METHOD OF CARVING A STEAK

similar steak, and following the grain, he cuts the steak into sections an inch or so in width — depending on the number to be served. A small piece of the tenderloin and a small piece of the wide part is served to each one. The small or flank end is less choice and is not served unless it is necessary.

Fillet or tenderloin. The carver should hold the meat with a fork grasped in the left hand and thrust into the meat. He cuts

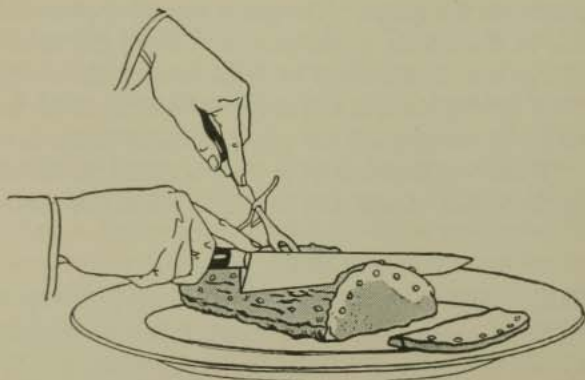


FIG. 34. A FILLET OF BEEF IS SLICED ACROSS THE GRAIN

the meat straight across the grain in slices a little less than half an inch thick, beginning with the thick or forward end of the fillet.

Rump, loin, or round roasts. These roasts are carved in the same way as the tenderloin except that the slices are cut quite thin, since the meat is less tender than that of the fillet.

Standing rib roasts. For service at a more or less formal dinner, the ends of the ribs may be decorated with paper frills. The roast is placed on a platter with the ribs protruding to the left of the carver. The carver steadies the roast by grasping the upper-

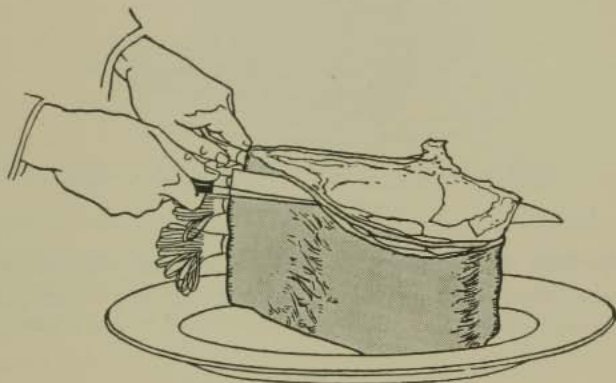


FIG. 35. A STANDING RIB ROAST IS CARVED IN THIS MANNER

most rib with the left hand, or he may hold it by thrusting the fork into the thick center. He then cuts very thin slices across the grain of the meat until the knife reaches the bones. When several slices have been carved, the point of the knife is drawn along the edge of the bone to separate the slices from the ribs.

Rolled rib roasts. The roast is steadied by firmly inserting the fork just below the slice that is to be taken next. The rolled roast may be held in place by wooden skewers placed directly across the grain of the meat and parallel to the slices. The skewers are usually loosened and removed without difficulty; they should be placed to one side of the platter. If the roast is held in place by cords instead of skewers, one cord at a time should be cut, as it is reached in carving. This method keeps the roast in

shape and preserves the uniformity of the slices and it also prevents the juices from running out. The cords should be loosened

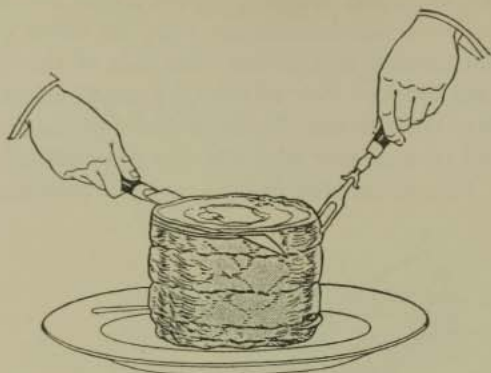


FIG. 36. A ROLLED ROAST IS CARVED IN THIN HORIZONTAL SLICES

with the fork and allowed to fall back upon the platter, care being taken that they do not fall upon the cloth. Cut the slices very thin.

VEAL

Leg or knuckle of veal. This joint is carved in the same way as a leg of lamb.

Tongue. The center of the tongue is the choicest portion. To carve a tongue, cut it across in wafer-like slices. The tip of the tongue is more delicate if cut lengthwise in very thin slices, but this is not the usual practice.

Loin of veal. For this joint see directions under pork loin.

PORK

Ham. The methods of carving ham vary with the way it is to be served. If the ham is not to be brought whole to the table, the simplest and most economical way to carve it is to begin at the end and cut in thin slices on each side of the bone. If the ham is to be carved at table and if the choice portions are to be served at once, an incision is made through the thickest part, a little way

from the small end. The ham is then shaved off in very thin slices. The knife must be very sharp to make a thin slice. With

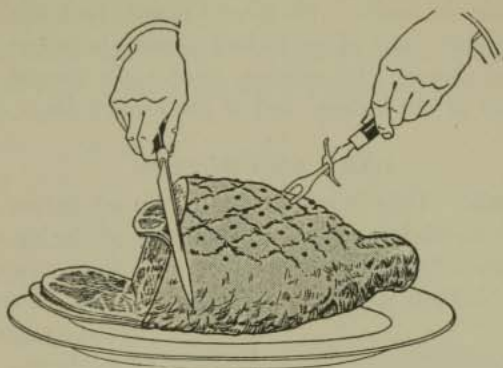


FIG. 37. ECONOMICAL METHOD OF CARVING HAM

each slice should be served a portion of the fat with its crisp crust. This method is the same as that used for carving a leg of lamb, except that the slices of lamb are cut thicker.

Loin roast. The backbone of the loin of lamb, veal, or pork

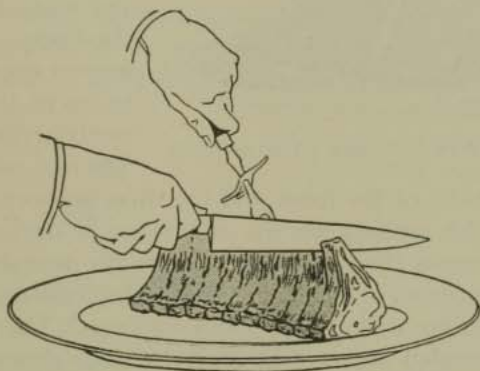


FIG. 38. THE WAY TO CARVE A LOIN ROAST OF PORK, VEAL, OR LAMB

should be cut at each rib before the loin is roasted. Cutting off neat and even chops is a simple matter if properly done. But if

the loin has not been carefully jointed, the carver will have to turn and twist his knife to find the exact spot in which to insert it in order to divide the bones. He should insert the knife in the thick part of the joint, and after feeling a way between the bones, separate the chops. In serving veal each person should be served a piece of the kidney and of the kidney fat.

LAMB AND MUTTON

Leg of lamb. This joint should be placed before the carver with the bone to his left and the curved side of the leg uppermost. Steady the roast by inserting the fork well down toward the end of the roast. Thin slices should then be cut. There are two

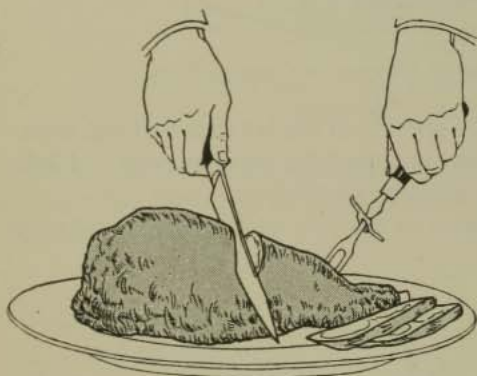


FIG. 39. ONE WAY TO CARVE A LEG OF LAMB

correct ways of cutting the slices. One is to begin at the right end or thickest portion of the roast, and cut them at an angle of about thirty degrees, cutting back to the left until the roast is sliced to the bone. The other way to cut the slices is to carve the roast directly across the grain.

The first cut is made at

about the middle of the roast and the slices are then taken from each side. This method has the advantage of having the meat cut directly across the grain, which is always desirable, but it is objected to by many as not being economical, since the slices of the roast at either end are too small to serve. The first way is to be recommended because the slices are made almost across the grain, and it permits the whole upper portion of the roast to be carved in good-sized slices. If it is necessary to use the lower portion of the roast, the bone should be removed by making an incision on either side of it and running the knife underneath between the bone and the meat. The lower part of the roast

may then be sliced in the same manner as the upper part, the knife being held at such an angle as to increase to any desired extent the size of the slices.

Saddle of lamb or mutton. This cut is rolled and fastened with cords or skewers. In carving, this joint should first be boned. To do this, place it with the bone resting upon the platter and the end toward the carver, make an incision the entire length down the backbone and remove the meat from the bone in two pieces. It may then be carved according to two entirely different methods. The English method of carving is to slice the meat lengthwise. The French method is to slice each piece crosswise as in serving tenderloin of beef, but the slices are cut thinner.

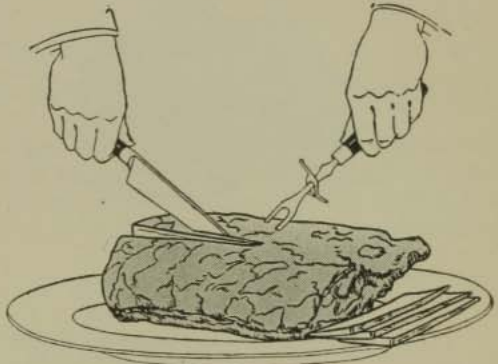


FIG. 40. ENGLISH METHOD OF CARVING A SADDLE OF LAMB

Crown roast. Carving the crown roast of lamb or pork is exceedingly simple,

since the divisions between the chops are clearly indicated, and the only care that must be exercised is to cut the pieces of equal thickness. A single chop with a portion of dressing and a spoonful of gravy is served to each person.

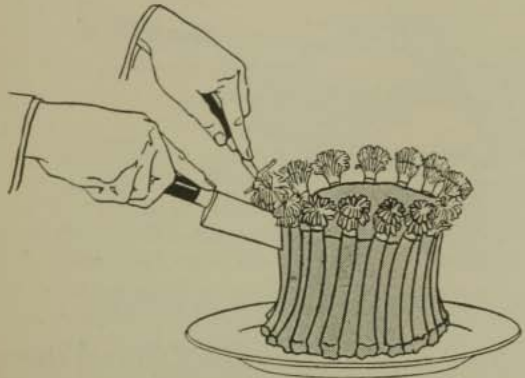


FIG. 41. METHOD OF CARVING A CROWN ROAST OF LAMB OR PORK

ROAST CHICKEN OR TURKEY

The chicken or turkey should be placed before the carver, with the breast up. To remove the wing, cut through the joint which is slightly below the tip of the shoulder (one fourth to one half an

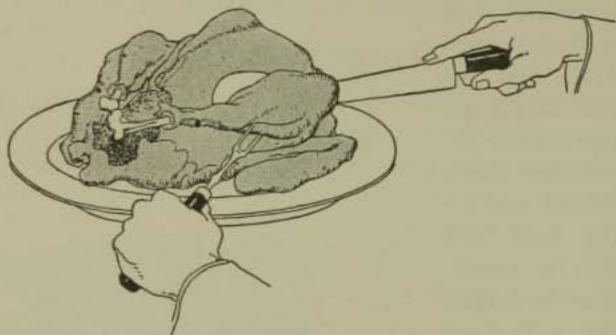


FIG. 42. FIRST STEP IN CARVING A ROAST TURKEY OR CHICKEN

inch on a chicken). The carver may cut through between the end of the bones. To remove the leg, he should cut under the leg as it lies close to the body, through the skin until the flesh around

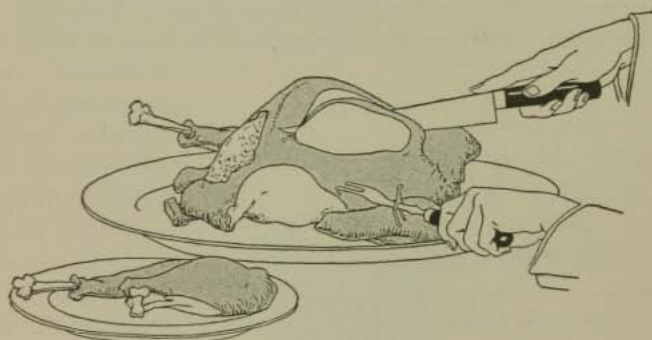


FIG. 43. CARVING THE BREAST OF A TURKEY OR CHICKEN

the joint is reached. Then pulling the drumstick forward either with the fork or by grasping the tip with the fingers, he cuts to and through the joint, the position of which is evident when the leg is

moved. The drumstick is separated from the second joint by cutting through the joint between the bones. On a large bird dark meat is sliced from the second joint, slicing lengthwise with the knife parallel to the bone. Slice the meat on the breast, cutting down and parallel to the breast bone and ribs. Begin serving only after several pieces have been cut.

CLASS PROBLEMS

1. Study table service for home dinners. See Chapter XXVIII, Unit Four.
2. Plan market order, working schedule, and table service for the following menus to be served to a given family without maid service. Assume that milk is to be served with the meal to each child under fourteen years. Indicate items in the menu that you would omit for the children.

- (1)
- | | | | |
|---------------|--|-------------------------------|--|
| | | Grapefruit | |
| Broiled Steak | | Asparagus, Drawn-Butter Sauce | |
| Baked Potato | | Hot Biscuit | |
| | | Sliced Tomatoes | |
| | | Cocoanut Cake | |
- (2)
- | | | | |
|-------------|--|-------------------------------|--|
| | | Bouillon, Toasted Crackers | |
| Swiss Steak | | Stuffed Eggplant | |
| Rice | | Bread and Butter | |
| | | Head Lettuce, French Dressing | |
| | | Orange Charlotte | |
- (3)
- | | | | |
|-------------------------------|--|------------------|--|
| | | Tomato Bouillon | |
| Baked Fish, Hollandaise Sauce | | Sliced Cucumbers | |
| French Fried Potatoes | | Corn Sticks | |
| Lemon Ice | | Crisp Wafer | |
| | | Coffee | |

3. Estimate the cost of the above menus at current market prices. Suggest changes that will make the meal more economical.
4. Review all the chapters of the Dinner Unit.
5. Plan three meals per day for three days for a given group. Show how these meals meet the food requirements of the group. Point out the factors which make the menus pleasing or displeasing.
6. Assume that you are to eat the dinners listed in Problem 2. Plan your breakfast and lunch on each of these days so that you will have a well-balanced meal considering fuel, protein, vitamins, and phosphorus, calcium, and iron. Assume that lunch is brought to school one day, eaten at the school cafeteria one day, and eaten at home one day.

214 PREPARING AND SERVING DINNER

7. Serve each of the dinners listed under Problem 2 as a mock meal.
8. Serve group dinners at school.
9. Serve a mock formal dinner at school.
10. Plan, prepare, and serve formal dinners for a small and a large group at school.

Note: This may be carried out when the occasion arises. Class parties, group banquets, business men's luncheon clubs, and various other dinner functions offer an opportunity for the home economics department.

11. Plan home projects in the serving of dinners. Class time should be used for the plans, the records, and the reports. (See page 68, Chapter VIII, Unit One.) Home projects in the preparation and serving of dinners may well use class time, not only for the written work but for the actual home work required in the execution of the plans.
12. Oral reports of home projects. During this time one day each week might be designated "Accomplishment Day," when each girl is expected to report on her home project.
13. From a collection of dinner menus from magazines and hotel cards, figure out the rules for writing menus.
14. Estimate the number of calories you eat for each meal for three days. Do you eat one third of your total number, more, or less, for dinner?

QUESTIONS

1. Review the questions at the end of each chapter in the Dinner Unit.
2. What tools are needed for carving? What is the purpose of the guard on the carving fork? Why is it desirable to cut across the grain in carving?
3. Describe the carving of a chicken or turkey.
4. Describe the carving of a steak, rib roast, baked ham, leg of lamb, rolled beef roast.
5. Explain the difference between a home project and home practice. What should be recorded in a project plan? What should be recorded as the project is carried out? What should be included in the story?
6. Class reports on home projects. Bring to class questions that arise as you carry out your project.

HOME PROJECTS

Plan and prepare dinner for your family for a week or two.

Plan all the meals for your family for two weeks. Purchase all supplies, keep a record of expenditure.

Have mother for a guest for several Sundays.

Entertain some of your mother's or father's friends at dinner. You act as cook and maid.

Plan and prepare dinner for some special occasion, as: Thanksgiving, Christmas, mother's or father's birthday, or their wedding anniversary.

REFERENCES

Suggestions for short cuts in meal preparation in current magazines.

Chapters XXII, XXVI and XXVIII of this book.

Bailey, N. Beth. *Meal Planning and Table Service*. Manual Arts Press, 1923.



UNIT FOUR

GENERAL

Introductory note: UNIT FOUR consists of general information that is useful throughout the other parts of the book. For convenience it is assembled in one part.

Cross references to the chapters in this unit occur throughout UNITS ONE, TWO, and THREE.

UNIT FOUR may therefore be considered as a handy reference during the study of other parts of the text, and as a general review and summary for UNITS ONE, TWO, and THREE.

CHAPTER XXIII

WHAT SHALL THE FAMILY EAT?

THIS chapter is a summary and a review of the foregoing chapters in which we have considered one group of foods or one meal of the day, usually from the standpoint of individual needs. It remains for us here to consider good proportions in the diet for the family group over a period of a day or a week.

THE FOODSTUFFS

As we use food we think of it as milk, meat, potatoes, lemons, eggs, cabbage, bread, and so forth. Similarly, our clothes are shoes, hats, underwear, dresses, belts, collars, stockings, and the like. We know that these numerous articles of clothing are made of a relatively small number of substances: linen, cotton, silk, wool, leather, straw. In like manner articles of food are numerous, but the food substances of which they are made are few: proteins, fats, carbohydrates, minerals, water, and vitamins. These food substances are called "foodstuffs" in order to distinguish them from "articles of food."

Foodstuffs and body tissues. Our bodies are made of the same substances that compose our food. Every cell is largely protein,

VITAMINS IN FOOD

	"A"	"B"	"C"	"D"		"A"	"B"	"C"	"D"
BREAD, (WATER)	-	+	-	-	TOMATO (RAW OR CANNED)	++	+++	+++	
" , (MILK)	+	+	-	+	BEANS, KIDNEY	+	+++	*	
" , WHOLE WHEAT (WATER)	+	++	-	-	" , NAVY	+	+++	*	
" , " " (MILK)	++	++	?	+	" , STRING	++	++	+	
BARLEY (WHOLE)	+	++	-		BEETS	-	+	+	
CORN, YELLOW	+	++	-		CABBAGE, RAW	++	+++	+++	
OATS	+	++	-	-	" , CANNED	*	*	++	
RYE, CRACKED	+	++	?		" , COOKED BRIEFLY	++	++	+	
WHEAT, KERNEL	++	+++	-	+	CARROT, RAW	++	+	+	
" , BRAN	+	+++	-		" , COOKED	++	+	+V	
LIVER	++	++	?	+	CAULIFLOWER	+	++	?	
KIDNEY	++	++	+	+	DANDELION GREENS	++	++	+	+
BRAINS	+	++	?	+	LETTUCE (GARDEN)	++	++	+++	+
HEART	+	+	+	+	ONIONS	?	++	++	
FISH, FAT	+	+	?	-	PARSNIP	-	+	?	
" , ROE	+	++	?	+	PEAS, FRESH	++	++	+++	+
MILK, FRESH, (UNPASTEURIZED)	+++	++	++V	++	POTATO (BOILED)	+	++	++	
" , CONDENSED	+++	++	+V	+	SWEET POTATO	++	+	?	
" , EVAPORATED	+++	++	?		RUTABAGA	-	+	+++	
" , DRIED, (WHOLE)	+++	++	+V		SPINACH, FRESH	+++	+++	+++	
" , SKIMMED	+	+	+V		" , CANNED	+++	+	+++	
BUTTERMILK	+	++	+V		SQUASH	++	?	?	
CREAM	+++	++	+V		TURNIPS	-	++	+++	
BUTTER	+++	-	-	+	APPLES	+	++	++	
CHEESE	++	++	-		BANANAS	?	+	+	
EGGS	+++	+	-	+	GRAPE JUICE	?	+	+	-
ALMONDS	+	++?	*		GRAPEFRUIT	?	++	++	-
COCONUT	+	++	-	+	LEMON JUICE	-	++	+++	
HICKORY NUTS	*	++	*		ORANGE JUICE	+	++	+++	
PEANUTS	+	++	*		PINEAPPLE (RAW OR CANNED)	++	++	+++	
WALNUTS	*	++	*		RASPBERRIES (RAW OR CANNED)	*	*	+++	
					PEACHES (RAW OR CANNED)	++	+	++	

+ .. contains the Vitamin
 ++ .. good source of the Vitamin
 +++ .. excellent source of the Vitamin
 - .. no appreciable amount of the Vitamin

? .. doubt as to presence or relative amount
 * .. evidence lacking or insufficient
 V .. variable

FIG. 44.

Courtesy, Bureau of Investigation of the American Medical Association

but it contains also all of the other foodstuffs. The muscle-tissue and blood proteins are good examples of body proteins. Carbohydrate is the chief body fuel, and is found stored in the cells, especially in the liver and the blood. Fat not only provides fuel,

but it furnishes protective coatings for organs of the body and for the nerves. Minerals occur in all body tissues and fluids. Iron, phosphorus, and calcium (lime) are the most important minerals. Bones and teeth are the most evident examples of the use of phosphorus and calcium. Iron is a well-known constituent of red blood corpuscles (hemoglobin). All tissue, whether plant or animal, contains water.

Vitamins are essential to all plant or animal life and well-being. They are not part of the body substance, but are substances found in food which regulate body processes. They are more necessary to the body than oil is to an engine.

ARTICLES OF FOOD CLASSIFIED

Articles of food may be classified according to their composition and use. The most useful grouping for dietary purposes is: (1) vegetables and fruits; (2) meats, milk, eggs, and fish; (3) cereals; (4) sugars or other sweets; (5) fats and fatty foods.

(1) **Vegetables and fruits.** Vegetables and fruits furnish various foodstuffs but we count on them principally for minerals and vitamins.



FIG. 45. A WEEK'S SUPPLY OF VEGETABLES AND FRUITS, FRESH, CANNED, AND DRIED FOR THE AVERAGE FAMILY OF FIVE, SUPPLYING ONE FIFTH THE NEEDED FUEL

Any other combination of ordinary vegetables and fruits of equivalent weight (70 pounds fresh material) would supply the same fuel. This proportion of vegetables and fruits may be raised or lowered by half. Always use some leaf vegetable.

The green-leaf vegetables are important as a rich source of iron and of vitamins A and C. Vitamin B is found in all fruits and vegetables. Since the C vitamin is not stored in the body it must be supplied daily. It is destroyed by the aging and by the cooking of foods, and so a fresh raw fruit or vegetable should be served every day. Vitamins B and C and the minerals are water soluble. Care must therefore be taken that these foodstuffs are not lost in cooking.

Fruits and vegetables are also very important because their flavors add needed variety to the diet. The acids of fruits and the cellulose of fruits and vegetables are valuable as regulators of the digestive tract.

Canned fruits and vegetables may be used for the sake of convenience or economy, but never to the exclusion of *green-leaf vegetables and fresh fruits*. Why?

(2) **Protein foods (meat, milk, and meat substitutes)**. The body must have a daily supply of complete protein, which is protein that furnishes all the material needed for building or replacing body proteins. Complete proteins are furnished by milk, eggs, cheese, meats, fish, poultry, peanuts, and a few other foods. These

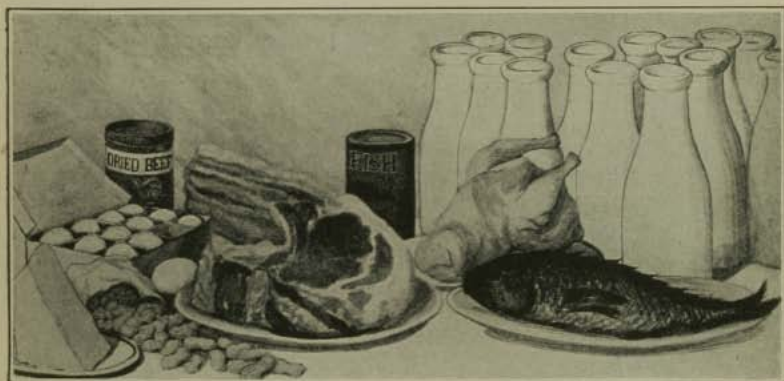


FIG. 46. A WEEK'S SUPPLY OF EFFICIENT PROTEIN FOODS FOR THE AVERAGE FAMILY OF FIVE, SUPPLYING ONE FOURTH THE NEEDED FUEL

For adults this proportion may be raised or lowered by half but for a family with three children the milk shown is a minimum allowance. Any other combination consisting of 14 quarts of milk and 14 pounds of flesh foods, cheese, and eggs would furnish about the same amount of body fuels.

foods differ widely in some respects but in the adult dietary they are interchangeable so far as protein is concerned.

Milk stands preëminent not only as a source of protein, but as a source of calcium, phosphorus, and vitamin A, and is also valuable as a source of iron and of vitamin B. No food can take the place of milk. In addition to protein, eggs are important for their iron and phosphorus and for vitamin A. Meat contains valuable iron but, because of its tendency to intestinal putrefaction, it should not be eaten in large quantities by inactive people. (See Chapter XVIII.) Protein foods, especially meat, are well liked.

(3) **Cereal grains and their products.** Cereal foods are to be depended upon chiefly for carbohydrate. They also supply some

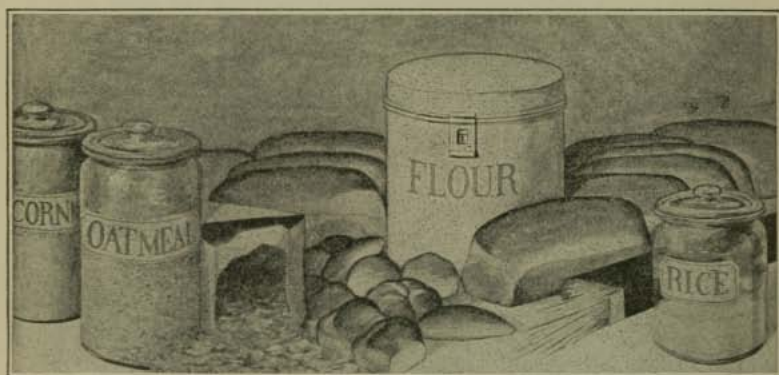


FIG. 47. A WEEK'S SUPPLY OF CEREAL FOODS FOR THE AVERAGE FAMILY OF FIVE, SUPPLYING ONE FOURTH THE NEEDED FUEL

Any other combination of cereal foods equivalent to 12½ pounds of dry cereal would furnish about the same fuel. This proportion may be raised or lowered by half. Use whole grain products if vegetables and fruits are scarce.

protein, though the cereal proteins in them are not complete. Whole-grain cereals are valuable as sources of vitamin B, iron, phosphorus, and cellulose. In a limited dietary, therefore, it is in the interest of health to use whole-grain products. Cereal foods are inexpensive. Their cost is low and their fuel value high.

(4) **Sugars and other sweets.** This group includes sugar, molasses and sirups of all kinds, honey, sweet chocolate, preserves, jellies, jam, and marmalade. These furnish carbohydrate hence

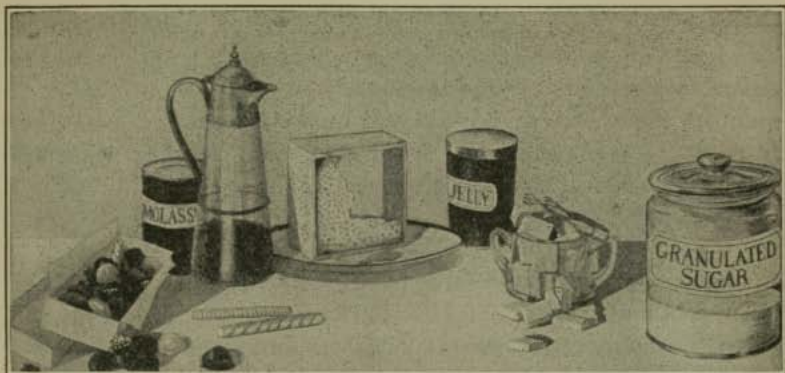


FIG. 48. A WEEK'S SUPPLY OF SWEETS FOR THE AVERAGE FAMILY OF FIVE, SUPPLYING ONE TENTH OF THE NEEDED FUEL

Any other combination of such foods which furnishes about $4\frac{1}{2}$ pounds of sugar would furnish about the same fuel. Sweets may be omitted or their proportion raised by half.

they are fuel foods only. Because they lack vitamins, minerals, and proteins, they are not as essential as other foods.

Sweets dull the appetite and are harmful to the digestive tract if eaten alone. They are an economical source of energy and, eaten in the proper proportion, if they do not replace other foods that are more necessary, they are valuable in the diet.

(5) **Fats and fatty foods.** This group of foods includes butter,



FIG. 49. A WEEK'S SUPPLY OF FATS AND FAT FOODS FOR THE AVERAGE FAMILY OF FIVE, SUPPLYING ABOUT ONE FIFTH THE NEEDED FUEL

Any other combination of such foods equivalent to about four pounds of fat would furnish about the same amount of body fuel. This proportion may be raised or lowered by half. The less milk used the more butter needed.

cream, cheese, lard, oils, bacon, nuts, chocolate, and fat meats, as sausage. These foods are valuable because they add richness and flavor to the diet. Some fats, such as cream or oil, taken in quantity are laxative. Cream and butter are sources of vitamin A. Fats are a cheap source of fuel though not so cheap as cereals. They lack most of the other foodstuffs.

HOW SHALL WE MEASURE FOOD?

The way to measure food is by the number of heat units (calories) produced when the food is burned. Proteins, fats, and carbohydrates may be measured by calories, but water, vitamins, and minerals cannot be measured in this way. All measures are limited in their application. A quart is a measure of volume. We may measure milk, water, oats, beans, by quarts; but not cloth. Just as we have inches, feet, yards, miles to measure distances; ounces, pounds, tons, to measure weight; pints, quarts, gallons, to measure volume — so we have calories to measure heat.

You are familiar with the degree as a heat measure. Perhaps you cannot tell just what a degree is, but you use and understand the term. A degree tells you how hot a thing is, but it does not tell you how much heat the thing is capable of producing when burned. A cup of water and a teakettle of water may both be at boiling temperature. Which contains more heat units? They are at the same degree (temperature) but they differ as to calories (amount of heat).

An equal weight of coal, wood, and gasoline will produce different numbers of calories. We measure heat units by the amount of heat that is required to raise the temperature of a given amount of water. A calorie is the amount of heat required to raise one kilogram of water one degree Centigrade, or approximately two cups of water four degrees Fahrenheit.

How many calories are needed? Just as the amount of gasoline needed by an automobile for a given time depends on the weight of the car, the size of the engine, the distance and grade traveled, so the number of calories the body needs daily depends upon the person's age, weight, and the amount of his physical activity. The distance that a car travels makes a difference in the amount

FOOD ALLOWANCES FOR HEALTHY CHILDREN (*Gillett*)¹

AGE IN YEARS	CALORIES PER DAY	
	Boys	Girls
Under 2	900-1200	900-1200
2-3	1000-1300	980-1280
3-4	1100-1400	1060-1360
4-5	1200-1500	1140-1440
5-6	1300-1600	1220-1520
6-7	1400-1700	1300-1600
7-8	1500-1800	1380-1680
8-9	1600-1900	1460-1760
9-10	1700-2000	1550-1850
10-11	1900-2200	1650-1950
11-12	2100-2400	1750-2050
12-13	2300-2700	1850-2150
13-14	2500-2900	1950-2250
14-15	2600-3100	2050-2350
15-16	2700-3300	2150-2450
16-17	2700-3400	2250-2550

DAILY ENERGY REQUIREMENTS OF ADULTS ACCORDING TO OCCUPATION²

MEN	CALORIES REQUIRED BY MEN WEIGHING ABOUT 154 POUNDS
Tailor	2300-2600 calories
Shoemaker	2700-2950 "
Carpenter	2800-3500 "
Metal worker	3350-3950 "
Farm laborer	3150-4200 "
Painter	3500-3800 "
Excavator	4200-4700 "
Stone-worker	4600-4700 "
Lumberman	4900-5300 "
WOMEN	CALORIES REQUIRED BY WOMEN WEIGHING ABOUT 123 POUNDS
Hand sewer	1500-1700 calories
Machine sewer	1800-2250 "
Waitress	2400-3000 "
Laundress	2800-3350 "

¹ Courtesy of The New York Association for Improvement of the Condition of the Poor.

² Rose, M. S., in *Laboratory Handbook of Dietetics*. Reprinted by permission of The Macmillan Company, publishers.

of gasoline that it consumes, and in like manner the amount of physical exertion taken by an individual decides the number of calories that he needs.

From the tables on page 223 you can compute the calories needed daily and weekly by yourself and others.

Body weight is a good indication of whether or not a well person is eating the right number of calories of food, but it is not an entirely safe indication of whether or not all the vitamins and minerals are present in sufficient amounts.

Consult the Appendix Tables I and II for body weight. Are you eating enough calories?

People who are normal in weight and who keep their weight do not need to count their calories. People who are underweight, especially young people, should make a deliberate effort to increase the calories they eat daily. Persons who are more than ten per cent overweight should make an effort to reduce the number of calories that they eat. In reducing the number of calories, care should be taken not to eliminate those foods which furnish vitamins and minerals. Why? Many adults who are overweight are learning to "count the calories," and many who are underweight are trying to gain. A study in the length of life shows that persons who are underweight are taking a chance and those who are overweight are taking a chance. Play safe!

HOW MUCH FOOD SHALL THE FAMILY EAT?

The kind of food one should eat is relatively easy to determine. The amount of food that he should eat and the proportion that should be furnished by each group of foods in order to balance the diet, is difficult to state. Age, size, and occupation are the chief factors to consider in determining the amounts of food that a given person requires. The needs of the family group are the sum total of the needs of the individuals in that group.

The Bureau of Home Economics, United States Department of Agriculture,¹ has computed the amount and proportion of food needed for a typical family for one week. "The family chosen

¹ *Good Proportions in the Diet*. United States Department of Agriculture Farmers' Bulletin 1313.

FOOD - CALCIUM

FOOD	HELPING	AMOUNT OF CALCIUM (LIME)
Milk	½ pint (300)	
Cheese	1 oz. (279)	
Buttermilk	½ pint (262)	
Cauliflower	4 oz. (147)	
Dandelion	4 oz. (126)	
Figs, Dried	2 oz. (97)	
Beans, Dried	2 oz. (96)	
Orange	1 (6oz.) (81)	
Spinach	4 oz. (80)	
Bread, Boston Brown	2 oz. (77)	
Maple Syrup	1½ oz. (48)	
Celery	2 oz. (47)	
Rutabaga	2 oz. (45)	
Egg	2 oz. (40)	
Carrots	2 oz. (34)	
Bread, Whole Wheat	2 oz. (30)	
String Beans	2 oz. (28)	
Cabbage, Raw	2 oz. (27)	
Bread, White (Milk)	2 oz. (26)	
Oatmeal	1 oz. (21)	
Wheat Bran	½ oz. (18)	
Peas, Green	2 oz. (17)	
Bread, White (Water)	2 oz. (16)	
Meat	4 oz. (15)	
Tomato	1 (4 oz.) (13)	
Wheat, Entire	1 oz. (13)	
Potatoes	3 oz. (13)	
Cornmeal	1 oz. (6)	

Calcium (lime) constitutes a larger proportion of the body-weight than does any other "inorganic" element.

A definite amount is lost daily and must be replaced by calcium-containing foods.

The growing child needs more calcium daily than does the adult.

The Daily Amount of Calcium recommended for Children and Adults is shown below:

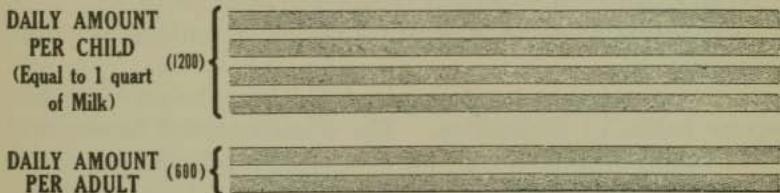


FIG. 50.

Courtesy, Bureau of Investigation of the American Medical Association

consists of a man, a woman, both doing moderately active muscular work, and three children, under 12 years of age." Such a family needs about eighty thousand calories per week, which is eight hundred one-hundred-calorie portions. See the references at the end of this chapter.

FOOD AND GOOD DIGESTION

Proper food and wise habits of eating are the most important factors in good digestion. The digestive system receives the food, puts it into a form that is available for use in the body, and disposes of solid waste. In order to perform these tasks well it must be in good condition. That term covers good muscular condition, regularity, proper elimination, and a lack of irritation.

The automatic muscular action of the digestive system is best when its manner of work is regular and undisturbed. Regularity is determined by whether or not food is eaten regularly. If digestion is to be undisturbed, there must not be stuffing at one time and underfeeding at other times. Moreover, the digestive system does not function well when the body is fatigued or debilitated, as during excessive physical activity or great excitement or mental strain. Because of the relation of excitement, heavy work, and fatigue to digestion the following rules are important.

Eat in pleasant surroundings.

Rest for a few minutes before and after eating.

Eat only a moderate noon meal and a moderate (not a light) breakfast if engaged in heavy work all day.

Be good-humored, especially during and after meals.

After eating allow an hour to elapse before bathing or going swimming.

It is not necessary to discuss in detail here the necessity for regular habits of elimination. The other essential factors are water before breakfast, fruit for breakfast, regular meals, water between meals, good muscular tone, and some roughage (cellulose) in the diet. No one of these can be omitted.

The digestive system must be guarded against irritation. Constipation may be both the cause and the effect of irritation. The overuse of sugar and the overuse of such irritating foods as bran

FOOD-IRON

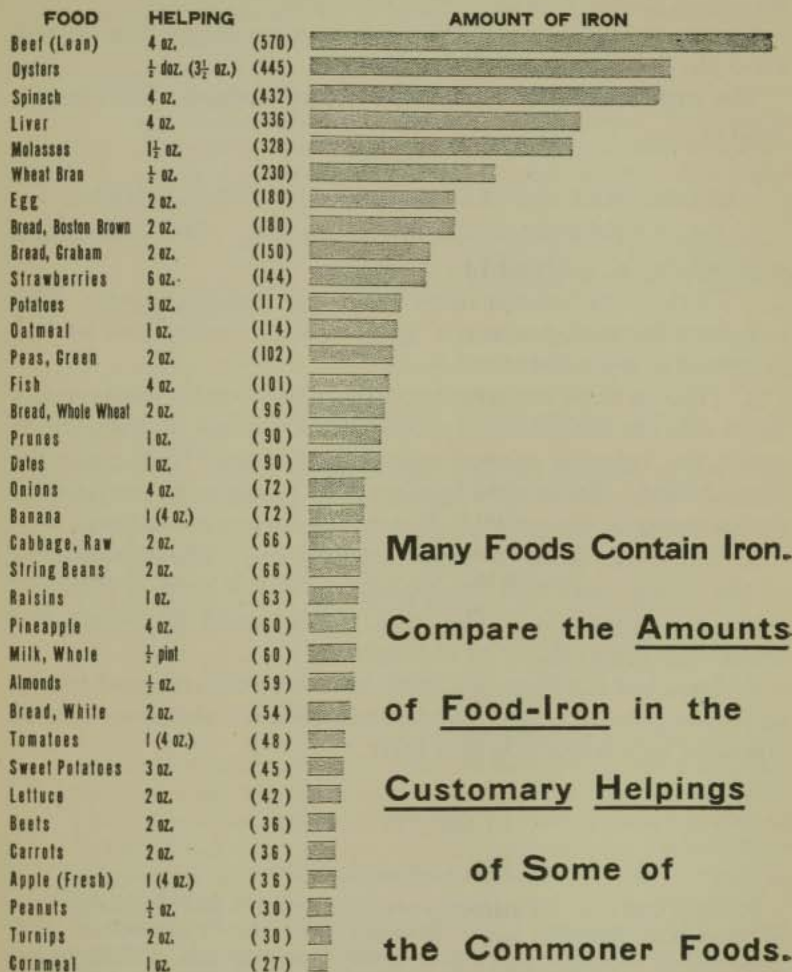


FIG. 51.

Courtesy, Bureau of Investigation of the American Medical Association

and high seasonings should be avoided. Extreme irritation causes illness. Slight irritation interrupts the regular automatic muscular action that is necessary to good health.

For the chemical and mechanical processes of digestion see any good physiology text of recent date.

The expenditure for food and the food budget. See Chapter XXIV.

RULES THAT SHOULD GOVERN THE FAMILY MEALS

1. Select food which meets the body needs. This necessitates a knowledge of foods and food values.

2. Divide and arrange these foods into pleasing meals. This calls for a knowledge of what "goes together," and of how variety in menus is produced.

3. Prepare these menus in such a way as to retain the flavors of foods that are desirable and modify those that are undesirable; to retain the valuable mineral salts and vitamins; to improve the digestibility. The cooked food must be tempting to the appetite and pleasing to the palate. Herein lies the art of cookery.

4. The meals must be served attractively. The appointment of the dining room and the appearance of the linen, dishes, and silver are important. The table service must be simple and effective, without flurry or excitement.

5. Last, but not least, the spirit of hospitality and good fellowship must prevail. Good manners add an essential charm, whether the meal be a frugal one or a feast.

CLASS PROBLEMS

COMPOSITION OF FOODS

We have said that various foods contain protein, fat, carbohydrate, water, minerals, and vitamins, but we have not proved it. The presence of all these except vitamins can be detected by chemical tests. Vitamins are studied through animal-feeding experiments and require a long time and controlled conditions.

To test the composition of any food material divide the material into small pieces by grinding or mashing and add water. Apply the following tests, the reagents for which may be found in any chemistry laboratory.

1. *Tests for protein.*

(a) *Xanthoproteic test.* Add concentrated nitric acid, and heat the liquid slowly. If protein is present you will obtain a yellow color which may be deepened by cooling and then adding ammonium hydroxide. Egg white gives a good test. Why does nitric acid stain the skin yellow?

(b) *Biuret test.* Use two porcelain evaporating dishes. In one place a small amount of the solution to be tested. In the other dish put an equal volume of water. To each dish add dilute copper sulphate solution (about one tablespoon). Stir with a glass rod. To each solution add a little sodium hydroxide solution. The solution containing protein will turn a violet shade. The dish with water is a control test for judging any change in color. A pink color indicates peptones, a digestive product from protein.

Note: If Biuret solution is available, use this instead of copper sulphate and sodium hydroxide. Try these tests on solutions of egg white, milk, cheese, ground meat, cereals, beans, or any other food material. What are your results? Conclusions?

2. *Test for fat.* Notice the grease spot that may be made on filter paper or on a paper napkin by butter, oils, nuts, the drippings of cooked meat, or the water in which meat has been cooked. Try to evaporate it by holding it over a flame. Make a similar test with a spot made with kerosene or water. What are your results? Conclusions?
3. *Test for starch.* Add very dilute iodine. A blue color indicates the presence of starch. A purple color indicates the presence of dextrin, a starch derivative. Apply this test first to cornstarch and then to other foods such as potatoes, dried peas or beans, sugar, egg white. What are your results? Conclusions?
4. *Test for sugar.* Sugar, when boiled with Fehling's solution, will give an orange or brick red color. Cane sugar (sucrose) must be boiled for three to five minutes to give this test because it will not react with Fehling's solution until it is "inverted." Fehling's solution is made by mixing together a solution of cupric sulphate with Rochelle Salts and an equal quantity of a solution of sodium hydroxide. It may be procured from the drug store if it is not available in the chemistry laboratory. Test fruit juices, well-cooked cereals, cooked bread — especially the crust — honey and various other sweets with Fehling's solution. Record results and conclusions.
5. *Tests for mineral ash.* Food is burned in order to show the presence in it of mineral ash. It should be heated in a porcelain evaporating dish until there is no residue or until a white ash remains. A white residue is the amount of mineral ash that the food contains. It is

always very small in quantity. To detect the presence of phosphorus, calcium, or iron in the residue, use the following tests:

Note: These tests may be demonstrated with a small quantity of wood ash.

- (a) *Test for iron:* Dissolve a small portion of the ash residue in dilute hydrochloric acid. Filter. Add ammonium thiocyanate solution (NH_4SCN). A blood-red color indicates iron.
- (b) *Test for calcium:* Dissolve a small portion of the residue in water. Filter. Add ammonium chloride (NH_4Cl), ammonium hydroxide (NH_4OH) and ammonium oxalate ($(\text{NH}_4)_2\text{C}_2\text{O}_4$). Boil. A white precipitate, soluble in hydrochloric acid (HCl), indicates calcium.
- (c) *Test for phosphorus:* Dissolve a little of the residue in a few drops of nitric acid (HNO_3). Filter. Add a larger quantity of ammonium phosphomolybdate. Heat the test tube in boiling water. A yellow precipitate indicates phosphorus.
6. *Test for water.* If the material loses weight in drying, it contains water.

SUGGESTED METHOD FOR RECORDING RESULTS OF TESTS IN PROBLEMS
I to 6

Indicate presence with a plus sign, absence with a minus sign

FOOD	PROTEIN	CARBOHYDRATE	FAT	MINERAL			ASH	WATER
				Ca	P	Fe		
Beans.....								
Nuts.....								
Potatoes.....								
Sugar.....								
Apple.....								
Cornstarch.....								
Milk.....								
Cornmeal or oat- meal.....								
Butter or chicken fat.....								
Egg white.....								
Meat.....								

QUESTIONS

1. Explain the term foodstuffs.
2. Of what use is each foodstuff to the body?
3. Into what five groups may articles of food be grouped? Why are they so grouped? Discuss the significance of each group in the diet.
4. What foodstuffs are found in milk? Whole wheat bread? Flour? Sugar?
5. Explain what a calorie is and how it is used in food study.
6. What factors determine the number of calories needed per day?
7. State the proportion of the total amount of calories that may be furnished, in a well-balanced diet, by each of the five groups of foods.

HOME PROJECT

Plan meals for your family for one week that will meet the calorie requirements as estimated in problem 8, and that will approximate the proportions in the diet suggested by the pictures in this chapter.

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CHAPTER XXIV

LET'S GO MARKETING

Buying in person. A business-like purchaser of foods shops in person at least once or twice a week. Personal shopping offers the opportunity to know conditions in the stores where the food is bought, to tell salesmen directly the kind and quality of food desired, and to keep in touch with seasonable foods and with new types of food. Shopping by telephone is not entirely to be condemned. When a reliable salesman knows his customer's needs and preferences he can satisfactorily execute a telephoned order.

General conditions in the retail store. When you make your next trip to market notice the condition of the store.

1. Does the store give evidence of systematic cleaning? A store cannot be expected to look as well during a rush hour as it does at other times, and yet there may be at all times an unmistakable air of cleanliness or of the lack of it. Do not mistake white paint for cleanliness.

2. Are the salesroom and its fixtures more elaborate than the public should demand when it is also asking for reasonable food prices?

3. Is the building screened with fine-meshed screens; and do screening, neatness, and cleanliness extend beyond the salesroom to the other rooms? Would the stores that you visit attract business through their back doors?

4. Is each type of food kept in a suitable way?

Milk should be bottled and in a refrigerator. Cheese should be kept cold in covered containers. Butter and eggs should be kept in a cold place, where they will not absorb odors. The more perishable vegetables and fruits should be kept in a refrigerator, with samples only on display, and other vegetables and fruits in a clean, dry place that is raised above the floor level. Cereals and all other dry products, if not in packages, should be kept in containers which are easy to clean and are insect- and dust-proof. Canned, bottled, and package goods should be kept neatly on clean shelves. All poultry, meat, and fish should be kept in a very clean, very cold place.

Live poultry should be kept in a separate room. No food of any kind (in a retail store) should be stored on the floor or in boxes or containers on the floor.

5. Are the salesmen clean, and do they handle the food carefully and in a clean way? Stores where food is sold should have a clean, convenient place where the salespeople may wash their hands.

Types of retail stores. A discussion of the buying of food rarely lasts very long before some one brings up the subject of cash-and-carry stores versus credit and delivery stores. In addition to these two general types there are the mail-order houses and the public markets and curb markets in large cities; and in some localities there may be the "vegetable man" and groceries and meat markets on wheels.

Cash-and-carry versus credit-and-delivery. The *price of food* is perhaps the subject of first importance in a comparison of the cash-and-carry type of shop with the credit-and-delivery type. The credit-and-delivery type necessarily has somewhat higher prices because of what its method involves: the expense of bookkeeping; waiting for payment; the employment of a larger sales force; and the trouble and expense of maintaining a delivery system. The cash-and-carry store, not having these expenses — though it has a larger and more expensive salesroom — is able to offer lower prices. Often the cash-and-carry store belongs to a chain system having stores in many towns and cities; such an organization has the opportunity of buying food in very large quantities. One investigation showed that the saving per family on food bought in a cash-and-carry store rather than in a credit-and-delivery store amounted to between five and seven cents per person per day. The food bought at the credit store was delivered, and that bought at the cash store was carried home by the purchaser.

More of the buyer's *time and energy* is consumed in purchasing from a cash-and-carry store than from a credit store.

There is more *personal service* in a credit store.

Public markets. No general statement can be made on the economy of buying in public markets and at curb markets. The prices in those places are usually lower than the prices in other

stores. Many of the less used articles of food, such as French artichokes, alligator pears, and special salad greens are found, even in a large city, only in the public market. The public market in a large city is an interesting place to visit occasionally, even if food is not purchased there regularly.

General suggestions for buying food supplies. The buyer's aim should be to deal fairly and to perform her job in an efficient manner. Some general suggestions follow. They may need modification and additions for application in any given community.

1. Consider carefully your needs and make a list of the articles and the quantities to be purchased.

2. Do not handle the food. Handling such foods as tomatoes and peaches is not a clean practice, and it is costly because it bruises delicate, perishable foods. The salesman should be the one to select such articles under your direction.

3. Make a practice of knowing current prices of foods of the kinds and quality that you desire.

4. Ask a reliable grocer or market man for his advice when you are not certain about grades or brands.

5. Buy as many articles as possible by weight. It is unbusiness-like to purchase by the "ten cents' worth," or the "quarter's worth," to ask for enough for "three or four people," etc. Only in rare cases, as in the purchase of lamb chops, when you need a certain number and the number in a pound varies greatly, are you justified in buying by number. Even then, notice the number in a pound and the price per pound. Such fruit as peaches, pears, and plums are best bought in average sizes by the pound. There are three average-sized tomatoes, potatoes, pears, or apples in a pound; three to four peaches; six to eight plums or apricots. The buying of food by measure — by the quart, peck, or bushel — is uncertain, because measures have not been thoroughly standardized, and very different amounts may be put into measures that are equal in volume but vary in shape.

6. Do not ask for more service or higher quality than the price you are willing to pay will command. Delivery once a day is much cheaper than three or four deliveries per day, and should be

adequate. Never ask for immediate delivery. Do not expect generous measure and weight; accuracy should satisfy you. Do not demand immediate attention when you enter a store. Do not expect the most expensive quality for a moderate price.

7. Avoid out-of-season foods and food in fancy packages, such as bacon in glass jars.

8. Buy in quantity when possible. Purchase as large a quantity of perishables as can be used before they spoil, in order to take advantage of a lower price. Staples should be bought in quantity when storage is available and the prospect of use justifies it. Canned goods may be bought by the dozen cans or the case; sugar by the one-hundred-pound sack; vinegar by the five gallons.

9. Make it a rule to prefer the large package to the small, except with regard to those goods that will deteriorate or will be used wastefully.

10. Check over your purchases when they reach the kitchen, and *if your kitchen scales are accurate*, take time occasionally to find out whether you have received accurate weight.

11. Learn to know what sizes, brands, or grades give the best value for the prices paid. For example, prunes are sold by the number in the pound. Grades are called 20-30's (twenty to thirty in a pound) 30-40's, and so on. The smallest (70-80's) are the cheapest and also the most economical.

12. Ready-to-eat food is usually much more expensive than uncooked food.

SUGGESTIONS FOR BUYING SPECIFIC FOODS

The buying of fruits. See Chapter II.

The buying of vegetables. See Chapter X.

The buying of meat. See Chapter XVIII.

The buying of canned goods. Cans are of standardized sizes. The most used household sizes are numbers $\frac{1}{2}$, 1, 2, $2\frac{1}{2}$. The number 2 size usually contains servings for four persons, but number $2\frac{1}{2}$ will serve six or more. It is economical to buy a number $2\frac{1}{2}$ can for three or four persons, and use it for two meals, instead of buying for the same group a number 2 can for use at only one meal.

When comparing the prices of canned goods, compare first the sizes of the cans. Prices are also determined by grades. The usual grades of canned goods are standard, extra standard, and fancy. The grades have nothing to do with food value. They are determined by the size of the material canned — small vegetables and large fruits are desirable; by shape — well-shaped foods command a high price; by whether the food is whole, sliced, or in pieces; whether it is solid or soft; whether its surface is smooth or rough; whether the color is rich or otherwise; whether the sirup (in a can of fruit) is heavy or light. The very tiniest peas are the highest in price, and the largest raspberries bring a fancy price.

With the exception of peas, grades of canned goods are not indicated on the label. You have to learn grades by brands. Certain well-known brands are always extra standard, and others — usually less well known — are standard. The fancy grade is always high-priced.

The buying of dried food. In buying dried food always consider cleanliness. Dried food in packages is sometimes no more expensive than that sold in bulk, but it is well to compare the two.

FOOD LAWS

Food laws and food inspection are necessary to insure foods being as represented. Substitution of food either gives a different food value from the one expected, or puts a less expensive food in place of a more expensive one. The first may defraud the body, the second defrauds the purse. Because of the very great danger to health, the sale of food that is not fit to eat should be punishable by law.

The Federal Food and Drugs Act. The Federal Food and Drugs Act forbids the misbranding (false labeling) or adulteration (substitution or mixing) of any food that enters interstate or foreign commerce. The law is general rather than definite or specific. For instance, it says that a food shall be considered adulterated if it contains any substance injurious to health. It does not specify what substances are injurious to health, but provides for experts to determine such matters. The Federal Pure Food and Drugs Act is enforced by the United States Department of Agriculture.

On canned and packaged goods that enter interstate commerce, the label must state the correct name of the food in large letters; the weight of the contents in ounces or pounds, or the numerical count if the weight is not stated. Descriptive matter must be true; and the name and address of the manufacturer, if given, must be the true name and address. If anything is mixed with the food in the package, both the name and the descriptive matter must show that it is: thus, when coffee has some chicory mixed with it the name may be "Coffee Compound" or "Coffee Blend," and the fact that the package contains chicory will be definitely stated. Bottled water cannot have a picture of a spring on its label unless the water actually comes from a spring, because deceptive pictures are forbidden as misbranding.

The Government thus does its part to see that the food shall be what it is represented to be. The buyer of food must also do his part by the simple procedure of reading the label! A few years ago "egg substitutes" were to be found on the market. Packages, the contents of which were claimed to be equivalent to two dozen eggs, were sold for fifteen cents. This substance was bought and used, even though the label stated that the package contained starch, baking powder, and coloring matter. The starch was the thickening agent, the baking powder the leavening agent, and the color gave the appearance of eggs. The food was not impure or poisonous, but one package was actually worth about two cents instead of fifteen.

The Federal Meat Inspection Law. See Chapter XVIII on "Meat."

State and municipal food regulations. Because the United States Government cannot regulate conditions within a State, except when the conditions directly affect other States, it is quite as important for each State and community to supervise the food sold within its borders as for the Federal Government to supervise that in interstate commerce. Many States have food laws modeled after the federal law. A few food problems are likely to be almost entirely state or community problems as: the milk supply, at least part of the fresh fruit and vegetable supply, and part of the meat supply.

City and town regulation of food is usually carried out by the enforcement of ordinances. City ordinances should provide: (1) that each person or shop selling food must have a license; (2) that meat should be inspected before, during, and after slaughter; (3) that all places where food is kept be well-constructed, clean, and free from pests of any kind; (4) that certain foods, such as milk, be kept at cold temperatures; (5) that food for sale shall not be exposed in the street or on the sidewalk; (6) that food should not be adulterated or misbranded.

THE FOOD BUDGET

The question of what it should cost to feed a group of people economically must be answered with qualifications. It is better to find out first how much money can be spent for food. Many are tempted to deprive themselves of things they want or need in order to eat an expensive food that is forgotten as soon as it is eaten. To take the middle ground of having good food that is well cooked and attractively served, is wise for both health and purse. An occasional extravagance is a real help to a jaded appetite or to low spirits — if not indulged in too often!

The amount of money to be spent for food varies with income; likes and dislikes; the number of persons in the group to be fed; their age and their activities; locality; and the home production of food.

From figures published in the Thrift Budgets of the Savings Division, United States Treasury Department,¹ we find that the estimated figures for food vary, for a yearly income of from twelve hundred dollars to eighteen hundred dollars, from thirty-five cents per person per day in a family of five to fifty cents per person per day in a family of two; and they vary for a yearly income of from twenty-four hundred dollars to three thousand dollars, from forty cents per person per day in a family of five to sixty-five cents in a family of two. These are estimates only, but they are made up by experts and may be considered as a guide.

¹ See Andrews, B. R. *Economics of the Household*. The Macmillan Company. Chapter XVI, pp. 548-49.

The cost of food. It is interesting to see what the consumer's dollar purchases. No one to-day who spends a dollar for food thinks that he is buying only food; he realizes that he is also paying to have the food brought to him. The way that the money is applied may be illustrated by the following figures on flour and oranges.

A dollar spent for flour has been found to be divided approximately in the following way: ¹

For flour, the consumer's dollar goes as follows:

Paid to farmer for wheat.	\$.595
Local elevator. . . . .	.054
Shipping from elevator to mill. . . . .	.058
Miller. . . . .	.012
Shipping of flour. . . . .	.091
Retailer. . . . .	.190
	<u>\$1.00</u>

For oranges: ²

Grower received for fruit on trees.	\$.306
Cost of picking, packing and selling through coöperative exchange. . . . .	.117
Shipping. . . . .	.216
Wholesaler. . . . .	.081
Tax. . . . .	.007
Retailer. . . . .	.273
	<u>\$1.00</u>

Summary of economical buying. The housewife will find it more economical to buy food when it is in season in her locality than to buy out-of-season foods that must be shipped from a distance.

Perishable foods are more expensive than non-perishable supplies. For this reason canned or dried foods are cheap when compared to the same food in fresh condition.

¹ Monroe and Stratton. *Food Buying and Our Markets*, p. 78. Courtesy of M. Barrows and Company.

² Report of the Joint Commission of Agricultural Inquiry, 67th United States Congress (1921), Part IV, 225.

Goods in fancy or small packages are usually more expensive than the same food in large packages or in bulk.

When cost is a major consideration much attention cannot be paid to flavor and texture. Tough cuts of meat, though they may not be so desirable, are as nutritious as the tender cuts.

A wider use of cereals is in the interest of economy. As the proportion of cereals is increased, more whole grain cereals should be used.

Most families could improve their dietaries and decrease the expenditure for food by reducing the expenditure for meats.

It is not economical to reduce the amount of milk below one quart daily for each child and one pint for each adult.

At least one fresh fruit should be furnished daily.

One leafy vegetable is needed daily, and for the older members of the family one other vegetable.

Some protein food besides milk is needed daily. Eggs best supply this additional protein for young children. Additional protein may be provided for the other members of the family by serving beans, peas, nuts, cheese, or meat.

It is sometimes in the interest of economy to use a butter substitute; cheese in main dishes for luncheon or dinner; only occasionally such appetizers as bacon and fancy cakes; and standard rather than fancy goods.

CLASS PROBLEMS

1. Class discuss store conditions and plan a card for rating a store. Visit two or three stores. While you are there read the labels on several different packages. For example, look to see what jelly and jam contain, and how much cereal packages weigh.
2. Ask the salesman or storekeeper to show you different sizes of cans, sizes of prunes, grades of rice, sizes of oranges or grapefruit or apples, large and small packages of several food products.
3. Plan a weekly order for a family of five at forty cents per person per day; at fifty cents per person per day. Suggest typical menus for this list.
4. Break up the list into (1) regular orders, as the order for milk; (2) weekly or semiweekly orders of staples; (3) daily orders of perishables.
5. Compare prices in cash-and-carry and credit-delivery stores. What foods differ most in price?

6. Find out what articles of food were represented:
(1) on home tables yesterday; or (2) on the school cafeteria menu to-day; or (3) in a day's menu planned by the class.
Include all food materials and condiments. Group the foods according to which were produced locally, which in the State, which in the United States, and which in foreign countries. Indicate these results on an outline map of the world. (An interesting class exhibit can be made in this way.)
7. Study the Federal Food and Drugs Act. (See Sherman, H. C., *Food Products*, Chapter II and Appendix 4, pages 588 to 614, for a model label and most of the important regulations up to 1924.)
8. Find out what are the state and local regulations of the food supply; how many inspectors are employed in the work; whether or not they have a laboratory and what is done there; what are the greatest problems in food control.
9. Visit a wholesale grocery. Ask how and where different foods are bought, and about grades of canned goods; and how often a carload of such articles as sugar or canned milk is received.
10. Look up the method of producing and sending to market such foods as oranges, wheat, canned meat. Study the production of meat in a large packing house.
11. Write to the coöperative marketing organization in your State to learn how coöperative organizations get food products to market.

QUESTIONS

1. Why should you buy in a cash-and-carry store? In a credit-and-delivery store?
2. What advantages are there in buying in person? In buying over the telephone?
3. Outline a plan for purchasing a month's food supplies for your own or some other family.
4. Summarize the conditions you would expect to find in a clean retail store.
5. What foods can be bought by weight in the stores that you know? What others might well be sold in this way? What are the disadvantages in buying food by measure?
6. What food would you buy in large packages rather than small packages? Give examples of packages that you have seen.
7. What are the usual sizes of cans used for canned goods in the home? What grades of canned goods are usually sold in the retail trade? How are these grades determined? Suggest ways in which you might use each grade.
8. What food is inspected under the provisions of the Federal Food and

- Drugs Act? Who enforces this law? What does it forbid? Why should the buyer of food read the labels on packages of food before purchasing? How is the violator of the Federal Food and Drugs Act penalized?
9. What provision is made for the inspection of meat that enters interstate commerce?
 10. What laws govern the care of food in your State? How are they enforced? Why do many States prescribe a standard weight per bushel for various staple foods?
 11. What is the estimate of the amount of money to be spent on food per person in a family on a \$1200 to \$1800 income? On a \$2400 yearly income?
 12. List the food that is produced in your community. Describe the process involved in the production or the manufacture of one article of food that is produced in your town or city.
 13. Name some of the foods that are brought from a distance. Where do they come from? Outline the way in which one of them comes to your home table from the producer.
 14. What part of the consumer's dollar that is spent for wheat goes to the farmer? To the "middle man"? To the shipper? To the retailer?
 15. List the causes of food spoilage. Suggest proper care for the classes of food that are used in the home.

HOME PRACTICE

1. Keep a record of the food bought in your home for one week. Find out how much is spent for (1) meat, milk, eggs and cheese; (2) fruits and vegetables; (3) cereals and cereal products; (4) sweets; (5) fats and fatty foods. What is the expenditure per person per day?
2. Suggest ways of making your home diet less expensive. Point out ways in which good economy is shown at home.
3. Make several trips to a store to see how different kinds of food may be bought.
4. Study the cost of a food produced at home.

HOME PROJECT

Undertake for two weeks to do the buying and keeping accounts of the food bought for your family. Try to improve the meals and yet keep the cost approximately the same, or to lower the cost and keep the meals good.

Plan this project very carefully before undertaking it. Some of the problems to be solved are: how often you will visit the markets, where you will purchase food, whether you will buy in large or small amounts.

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CHAPTER XXV

THE KITCHEN

The importance of kitchen planning. A kitchen is never right by accident. A convenient one is the reward of thoughtful planning and furnishing and good care. It would be a simple matter if there were specific rules that could be laid down, but the kitchen must be designed with reference to the special family, house, locality, and workers.

Use of the kitchen. The kitchen is a food workshop. It should be sanitary, cheerful, attractive, compact, conveniently arranged, and used only for the preparation and serving of food. Too frequently it is a passageway, a laundry, a washroom for farm hands, or a general storage room. This results in making the kitchen inconvenient in arrangement, unsightly, and unsanitary. These uses are unrelated to food work; if the kitchen is to be used for such purposes it must be larger than if it is to be used merely as a kitchen. And there would be serious drawbacks to that. "How unreasonable it seems to travel over this increased space seven days in the week for the sake of a piece of work (such as laundry) that normally occurs but once a week."¹ Common sense demands that these activities be provided for elsewhere.

Relation of the kitchen to other parts of the house. The work of the kitchen is most directly associated with the dining room, pantry or storeroom, fuel supply, laundry or wash room, cleaning closet, rear entrance to house, and incinerator or garbage disposal.

If a pantry is provided it should open directly into the kitchen. If two pantries are provided, one is a pass pantry between dining room and kitchen. Frequently the breakfast nook serves the purpose of a pass pantry. A pass pantry must be omitted from the small house, but it is very useful for washing and storing dishes, for placement of the refrigerator, for serving, and for

¹ Young, Helen. *Planning the Home Kitchen*. Bulletin from Extension Service, Cornell University (1916).

keeping heat and cooking odors from the rest of the house. The dining room may open directly into the kitchen.

A back passageway is a convenience. The kitchen may open into such a passageway and through this one door the wash room or laundry, cleaning closet, cellar, and outside entrance may be reached. (See Figure 52.) A screened back porch with an exit to the yard is almost indispensable. It should communicate directly with the kitchen and in cold weather may be shut in with glass and used for storage. In a southern climate it is a convenient place for doing much work, such as paring vegetables, and it may also be used for serving meals. If there is a basement under the kitchen used for storage of fuel and food, a dumb waiter is a great step-saver.

Size and shape. It is easy to arrange an almost square kitchen conveniently. A long narrow kitchen is difficult to arrange. The room should not be very large or very small. One hundred and fifty square feet is sufficient size for a kitchen and pantry — where gas, oil, or electricity is used for fuel; or one hundred and twenty square feet for the kitchen without the pantry. If coal or wood is used the kitchen should be larger; two hundred square feet will give adequate floor space (without a pantry). Ten by twelve is a good-sized kitchen for the average small house.

Windows. The window is necessary for light and ventilation. The number of windows depends on the wall space available and on the climate. A kitchen should have at least two windows, if possible, for ventilation. An outside door may substitute for one window.

The sills of the windows should be high enough to permit the use of the wall space beneath for a table surface or a sink, yet low enough to allow an outside view, and the outlook should be pleasant. The top of the windows should reach to within six inches of the ceiling and so provide an escape for the heat and odors that rise to the top of the room. Sash windows are more easily handled than casement windows, though the latter provide more ventilation and are attractive.

Adequate artificial lighting is necessary for the kitchen and for all storage space.

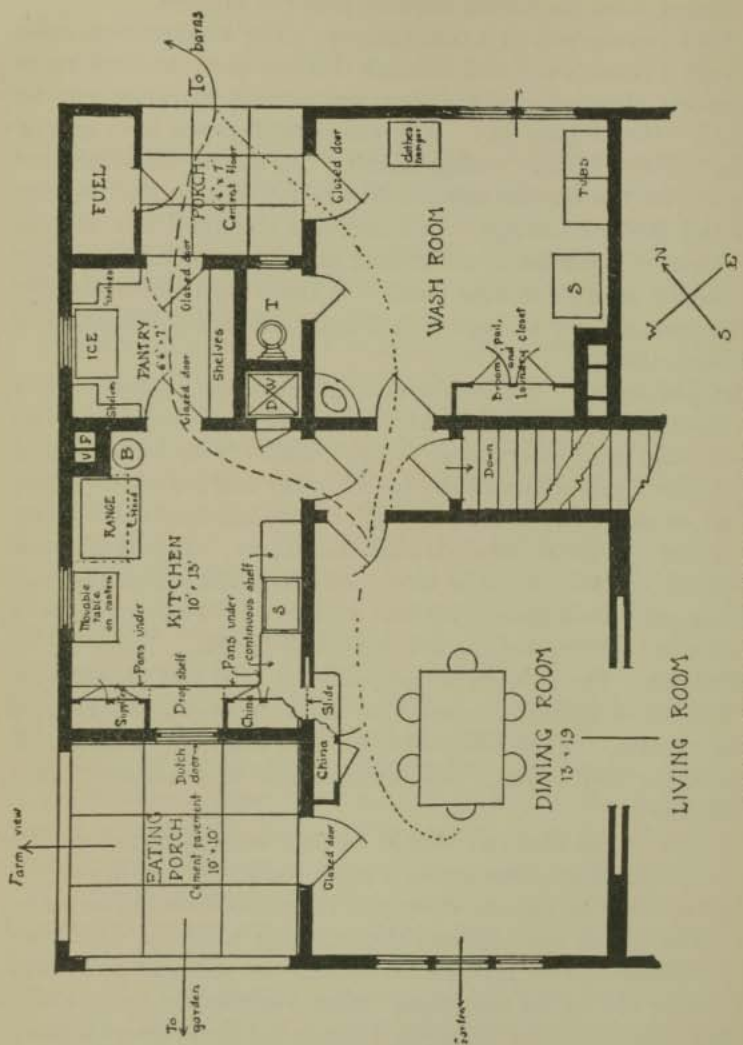


FIG. 52. PLAN OF THE WORKING AREA OF A FARMHOUSE

In this plan the principles of kitchen arrangement are clearly expressed. (Courtesy, Cornell University, Extension Service.)

Doors. The location of every door placed in a kitchen should be debated very seriously. A door means a passageway. We must have doors, but they should be as few as possible, and they should be grouped on one side or on adjacent sides of the kitchen in order that the worker may not be interrupted by frequent passing through. Moreover, if a convenient arrangement of working space is to be effected the wall space must not be much cut up with doors.

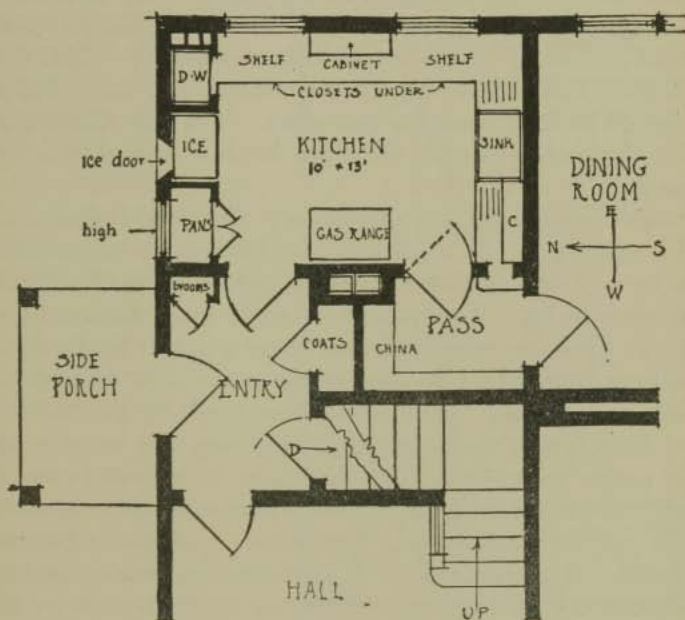


FIG. 53. A KITCHEN FOR A SUBURBAN HOUSE

Developed in accordance with the principles of good arrangement. The equipment is built in place; the fuel is gas. (Courtesy, Cornell University, Extension Service.)

From the kitchen there must surely be easy access to the pantry, the dining room or breakfast room, cleaning closet, hall, cellar, laundry, and outside. One door into a back hallway may offer access to several of these places. Study the position of doors in the kitchen plans given in this chapter.

INTERIOR FINISH

All surfaces in the kitchen should be easy to clean. To this end the surfaces of walls, floors, ceiling, and woodwork should be flat, plain, free from cracks, and non-absorbent. These precautions are in the interest of freedom from dirt and from such household pests as ants, roaches, and water bugs.

Floors. The kitchen floor must be comfortable to stand on and easy to clean. Linoleum answers both purposes. Very attractive tile patterns are available in linoleums. The printed material is cheaper at the first outlay, but it will not wear as well as the solid or "inlaid" patterns. Linoleum should be glued to the floor after it has been stretched by several weeks' use. The surface should be kept waxed or varnished. The only disadvantage in using linoleum is its cost, but if the kitchen is small this is not a large item.

A wood floor is also very satisfactory. If wood is used a hard wood is preferable. A wood floor should be made impervious to grease by rubbing it with hot linseed oil, or by varnishing it with a good floor varnish. A varnished floor will show wear and spots, but it can easily be refinished about once a year. Small mats of linoleum or rubber may be used at the stove, sink, and table.

Walls and ceiling. Paint is the best finish for kitchen walls. An oil paint which can be washed with soap and water is best. Water paints are cheaper, but they must be renewed more frequently than other kinds, and there is almost never a convenient time for painting the kitchen. Enamel is a washable and satisfactory finish. Papering, since it is absorbent and non-washable, is not satisfactory for kitchens. Tiling or vitrified brick are good wall finishes if expense is not considered.

In color the walls and ceiling should add to the charm of the kitchen. If the room is sunny, tones of gray or gray-green may be used, but if it needs light then yellow, buff, or white should be chosen. The all-white kitchen is popular.

Woodwork. The most satisfactory finish for woodwork or "standing trim," including built-in cabinets, is enamel. The choice of color depends upon the rest of the kitchen. French gray, ivory, and white are the most used, but a very charming touch

may be added by employing an unusual color. Color in wood-work is especially favored if there is a breakfast alcove.

THE ARRANGEMENT OF EQUIPMENT

The grouping of the essential permanent equipment in a kitchen makes the difference between convenience and inconvenience.

Kitchen triangles. Three is the kitchen number. (1) The three related rooms are kitchen, dining room, and pantry. (2) The three essential pieces of furniture in any kitchen are work table, stove, and sink. (3) The three operations carried on in a kitchen are the preparation and serving of food; the cleaning-up; and the storing of supplies and utensils.

The routing of steps in the kitchen is therefore in triangles. The effectiveness of such a wise placing of equipment that the triangles be-

tween stove, sink, work table, dining room, and storage places will be small is convincingly illustrated by Figures 54 and 55.

Working areas within the kitchen. The triangular routing is the result of three operations, essential parts of kitchen work, that necessitate the use of three interrelated spaces.

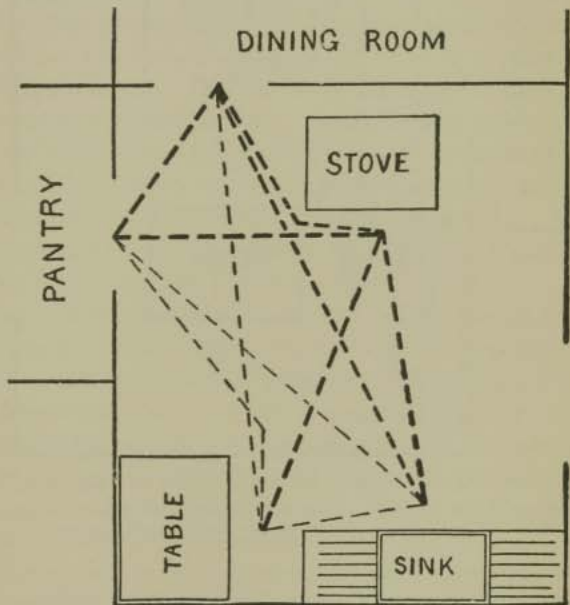


FIG. 54. FAIRLY SMALL KITCHEN

In which distances traveled in preparing, serving, and cleaning up after a meal are unnecessarily long due to inconvenient location of sink and table.

1. *The preparation and serving area:* table or cabinet, stove, fireless cooker, breakfast nook, dining room.
2. *The cleaning area:* sink, garbage container, incinerator.
3. *The storage area:* Food storage: refrigerator, pantry, cabinets, dumb waiter.

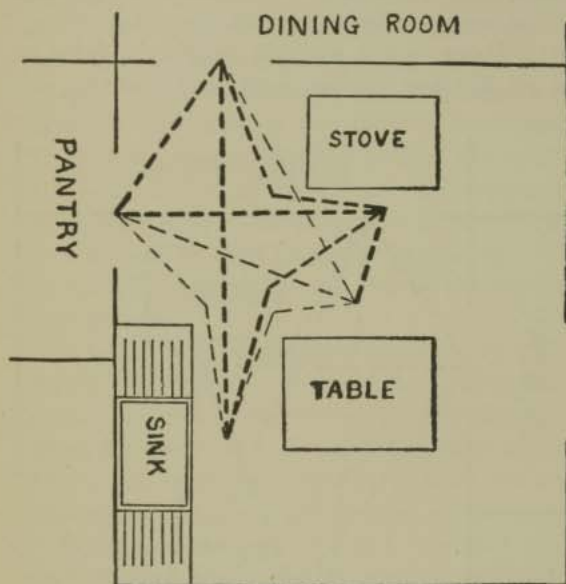


FIG. 55. SAME KITCHEN AS THAT SHOWN IN FIGURE 54
Steps have been saved by putting the sink and table in more convenient locations with respect to pantry, stove, and dining-room.

lar, as well as collecting utensils and dishes. Cleaning-up involves returning unused food to refrigerator and cupboard, and dishes and utensils to their places.

The preparation and the cleaning units must also be related, for the preparation of food involves cleaning operations such as washing fruits or vegetables, cleaning fish or poultry, putting utensils to soak, to say nothing of the frequent need for water in mixing and cooking.

The safe plan is to build a small kitchen with wall space in large units and with working space free from use as a passageway. In

Utensil storage: drawers, cupboards, shelves, racks or hooks.

Preparation and cleaning areas.

The storage area must be located so as to be convenient to both the preparation area and the cleaning area. Why? The preparation and serving of food involves collecting food supplies from refrigerator, pantry or cupboards, and cel-

such a kitchen, with the available floor space nearly square, one can scarcely make a mistake in placing equipment if the kitchen is well lighted and well ventilated. This is the reason for planning the kitchen carefully when building.

If one wall area is somewhat cut off from the other space this should be chosen for the stove, because the kitchen is more comfortable to work in and easier to clean if the stove is removed from the rest of the equipment. The water heater may be conveniently placed behind or near the stove. A convenient arrangement of table and sink is effected by placing built-in cabinets and sink in the same wall. The sink is often placed under a window.

Height of working surfaces. The table surface and the upper rim of the sink should be the same height. A convenient height is two inches lower than the elbows of the worker. This obviates stooping to work, and prevents water running down the arms. For the average person thirty-four inches is the proper height. A very tall worker prefers a thirty-six inch height, and a very short one likes thirty-two inches for the sink and table.

The storage area. Storage space is necessary, but here again no absolute rules apply. The chief considerations are: to store each article near the place where it will be most used; to place the storage facilities where they are accessible, easily cleaned, comparatively free from dust, and not in the way; and to provide a variety of storage places for the different types of articles — shelves, drawers, cupboards, hooks and racks. The usual storage places are pantries, cabinets, and closets with shelves.

Pantries are a convenience but are not essential. In a large house, if supplies are bought in quantity a storage place is necessary, especially for food that needs to be kept at a lower temperature than that of the kitchen. A north wall is a good location for a pantry.

Cabinets are of two types, movable and built-in. If well made, the built-in cabinet is preferable, because it has no cracks and no surfaces to be cleaned behind or under. There should be a concave baseboard at the front in order to allow room for the toes when the worker stands at the cabinet. The construction should be so arranged that the doors of its upper portion may be opened

without shoving from its table surface articles as tall as a pitcher or a quart bottle of milk. The upper part of the cabinet is a shallow case for supplies or dishes. The part below the table top is deep and offers excellent space for drawers or for storing large utensils, or for both.

The *work-table* surface of a built-in cabinet is best finished with paraffin. Paint or enamel is not satisfactory.

Shelves are a boon in the kitchen. A shelf should be no deeper than is necessary for holding one row of articles. Shelves that are to hold large utensils have to be deep and far apart, but the most useful shelves for dishes and supplies are narrow and placed rather close together.

SELECTION OF KITCHEN EQUIPMENT

Stove. If a gas or electric stove is to be purchased, it should be remembered that the type with the oven at the side obviates much stooping. This type of stove is called a "cabinet range." The oven burner is on the same level as the top burners. An electric stove should have three "heats" — high, medium, and low. If an insulated or "fireless cooker" oven is chosen, be sure that it has an escape for the steam, which otherwise tends to produce soggy crusts on breads. An "oven regulator," or heat control, is a convenience on a gas or an electric stove. If the stove is not so equipped a thermometer in the oven door is desirable.

In purchasing a gas stove it is necessary to know whether the fuel is natural gas, artificial gas, or gasoline gas, because the construction of the burner is different for each kind of gas. The oven for any kind of stove should be of rust-proof metal. Why? An eighteen-inch oven is a correct size for an average family. Oil stoves with built-in ovens are available, and built-in ovens are much more satisfactory for baking than are portable ovens.

Whether buying a gas, an oil, or an electric stove it pays to buy a good one of standard make. A cheap stove is frequently a poor stove.

Sink. A porcelain enamel sink is the best kind for the kitchen. It is very easy to clean. An inexpensive wall sink may be ob-

tained in this material. The most attractive type consists of the sink, two drain boards, and the back, all cast in one piece, but this is exceedingly expensive, and the same service can be rendered by a cheaper wall sink with separate wooden drain boards. Wooden drainboards should be fitted to avoid dirt-catching cracks.

Kitchen table and table tops. The table top is the working surface in a kitchen. This may be furnished by a built-in cabinet, a commercial cabinet, or a table. If space permits, a table is desirable in addition to cabinets. In the cabinets the drawers and storage spaces below the working surface are not convenient of access, though in a small kitchen it may be necessary to utilize that space.

Table tops should be easily cleaned, non-absorbent, not warped or cracked by heat, fireproof, resistant to acids and alkalis, reasonable in price, and attractive in appearance. There is no table top that meets all these requirements.

Wood and porcelain enamel are the materials most in use for table tops. Porcelain enamel is the most easily cleaned of all the materials, but it is affected by acids and chips easily. It should not be difficult to remember to wipe tomato or fruit juice off at once, or to avoid cracking ice or screwing the food chopper on such a table top.

The refrigerator. One style of refrigerator is shown in Figure 56. Both side icing and top icing are satisfactory if the food is rightly placed. The outside of the refrigerator must be of material that is easily cleaned and non-absorbent. The corners should be rounded. White stone or porcelain enamel is the best lining for the food chambers of a refrigerator. The ice chamber should be lined with zinc or galvanized iron. Electric refrigeration is the most efficient household refrigeration. It is automatic. The initial cost may be high, but if the local electric rate is not high it is a good investment. In purchasing an electric refrigerator estimate the amount of ice you will need and buy one that is large enough to meet your need. To buy a refrigerator that is too small or too large is poor economy. A seventy-five-pound ice box is found in a refrigerator of moderate size.

Utensils. Kitchen utensils are used for such a wide variety of

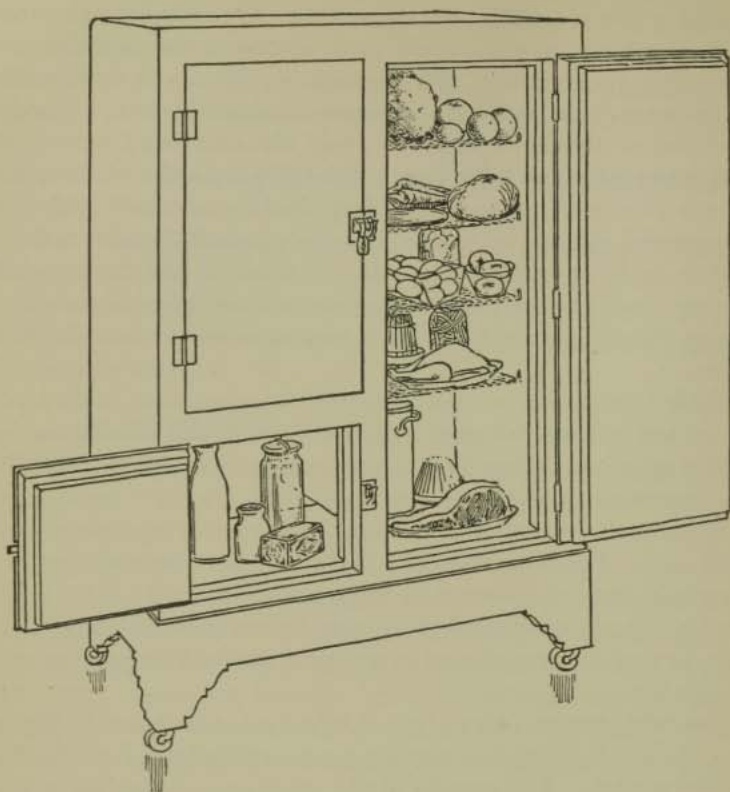


FIG. 56. THE PLACEMENT OF FOOD IN THE REFRIGERATOR

Reproduced from publication, "Where to Place Food in the Household Refrigerator," by courtesy of the National Association of Ice Industries.

purposes that no one material is suitable for the composition of all utensils. There is usually a choice of material for any one utensil. (See pp. 255, 256.)

Kitchen utensils.

	<i>Wooden</i>	<i>Miscellaneous</i>
Mallet	Chopping board	Asbestos mats
Chopping bowl	Towel rack	Food chopper
Spoons	Ice-cream freezer (bucket)	Scales
Bread board	Ice bucket (cedar)	Vegetable brushes

MATERIAL	ADVANTAGES	DISADVANTAGES	UTENSILS FOR WHICH SUITABLE
Aluminum	Attractive Easy to clean (acids) Heats quickly Durable (if a good grade)	Expensive Darkened by alkalis (never boil soda or borax in aluminum) Discolors with some vegetables Does not hold heat	Percolator Measuring cup Double boiler Sauce pans and covers Cake pans Muffin pans Cast aluminum: Waffle iron Griddle Skillet Frying kettle
Enamel ware (Steel coated with glass)	Easily cleaned Cheap (gray) Attractive	Chips readily Will crack with high temperature, as in baking or frying	Saucepans Mixing pans Pudding pans Double boiler Dishpan Bowls Ladle Pitchers Roaster Pie pans Shallow pans Funnels Skimmers
Tinware	Light Cheap Heats quickly	Affected by acids Tarnishes with heat Does not hold heat	Cake pans Biscuit cutter Bread pans (heavy) Muffin pans Fruit press (potato ricer) Baking pans Flour sifter Measuring cup Steamer Wash boiler
Glassware	Attractive Easy to clean Holds heat Not attacked by acids or alkalis	Used only in oven Not suitable for pots and pans Scratches easily Breaks with quick changes of temperature	Pyrex: Measuring cup Baking dishes Custard cups Pie plates Bread pans Fruit knives Refrigerator dishes Tea pots Plain glass: Lemon squeezer Measuring cups Storage jars for supplies

MATERIAL	ADVANTAGES	DISADVANTAGES	UTENSILS FOR WHICH SUITABLE
Earthenware	Attractive Does not scratch Easy to clean Holds heat Not attacked by acids or alkalis	Cannot use directly over flame Breaks rather easily	Baking dishes Custard cups Tea pots Bowls for mixing Crocks for supplies
Cast iron or wrought iron	Holds heat Not affected by acids and alkalis	Heavy Rusts easily	Griddle Waffle iron Corn stick pans Kettle for frying Skillets
Russian iron	Light Does not rust easily Stands high temperature	Expensive	Bread pans Baking sheets Roaster Bread stick pans
Steel	A sharp cutting edge All cutlery should be a well tempered steel	Rusts easily (unless stainless steel) Must be kept sharpened	Spatula Carving knife Paring knives Bread knife Can opener Scissors
Wire	Light Cheap	Hard to clean without a brush Not durable	Dish drainer Broiler Frying basket Soap shaker Toaster Wire egg beater Strainers

Labor-saving devices. The simplest labor-saving device is the most effective. Raised table and sink heights, stainless steel paring knives, oven-heat regulator, Dover egg beater, loose-bottom cake pans, and wire or wooden racks for draining dishes are examples of simple labor saving devices that should be found in every kitchen.

Some labor-saving devices save labor in one process only to entail labor in other ways. In a small family, for example, a bread mixer or a dish-washing machine may make more work than it saves. It may be more sensible to omit the cake than to provide a cake mixer. Important considerations in determining the advisability of purchasing any tool or device are:

1. Does it do the work it is supposed to do?

2. Can a net saving of time and energy be counted on when the care of the device is taken into consideration?

3. How often would it be used?

4. Is it well made and easy to handle and to clean?

The size of the family and the amount of work to be done determine whether special equipment saves or makes labor. In the home kitchen there is greater need for a few well-selected simple tools than for a large number of devices that increase the task of the housekeeper and occupy space that could be used to better advantage.

Kitchen conveniences. Every kitchen should have a clock and a bookshelf.

The refrigerator drainpipe should be provided in the plumbing.

An incinerator for garbage is a great convenience for a city kitchen.

The gas or electric meters should be placed on the rear porch or elsewhere, so that they may be read by the inspector even when the family is absent.

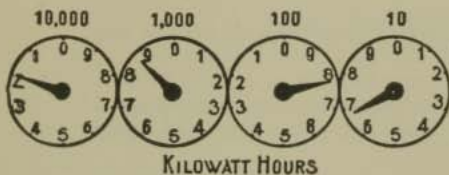


FIG. 58. AN ELECTRIC METER INDEX

Reading, 1876 kilowatt hours

for percolator, dish washer, iron, and various other purposes. A droplight is convenient.

A folding wall ironing board should be placed in the kitchen if there is not a separate laundry.



FIG. 57. A GAS METER INDEX

Each division on the right-hand circle denotes 100 feet; on the center circle 1000 feet; on the left-hand circle 10,000. Read from left to right, taking the figures which the hands have passed, viz.: 3, 4, 6; add two ciphers for the hundreds, making 34,600 feet registered. To ascertain the amount of gas used in a given time, deduct the previous register from the present, viz.:

Register by above dials	34,600
Registered by previous statement shown by dotted lines	18,200
Gives number of feet since registered	16,400

The asbestos-wrapped water heater will prevent overheating of the kitchen.

For convenience gas, electricity, or oil is preferable to wood or coal.

Electric wall plugs in the kitchen are needed

A dishwashing machine is advantageous if a large number of dishes are to be washed.

A drying rack for dishes saves much labor.

Covered glass jars are excellent for storing supplies.

Hooks or racks are desirable for the most frequently used utensils.

SCORE CARD FOR THE KITCHEN¹

	<i>Points</i>
I. GENERAL PLAN OF THE KITCHEN	40
Location	5
(Is it convenient to dining room, pantry, cellar, and other storage rooms? Does the exposure insure good lighting and ventilation? Is the outlook pleasant?)	
Size	5
(Is there adequate space for work, but not so much as to cause unnecessary travel?)	
Walls and ceiling	5
(Are they free from cracks? Is the finish easy to clean or renew, and attractive and suitable in color?)	
Floor and floor covering	5
(Is it smooth, comfortable to walk and stand on, easy to clean, durable, not injured by water and grease, attractive, and suitable in color?)	
Woodwork	3
(Is the finish easy to clean, durable, and attractive in color?)	
Doors and windows	5
(Are they conveniently placed? Do they allow adequate light and ventilation? Are they screened against flies and other pests?)	
Lighting	5
(Are sink, stove, and work table well lighted both at night and during the day?)	
Cupboards and built-in storage facilities	7
(Are they convenient and easy to clean and keep in order? Is space economically used? Are they protected against household pests?)	
II. WATER SUPPLY AND SEWAGE DISPOSAL	20
Sink with running water	13
(Is there hot and cold water? Is the supply adequate and sanitary? Is the sink convenient in location and height?)	
Disposal of waste	7
(Is it sanitary and convenient?)	

¹ Adapted from Department Circular 189, *The Well-Planned Kitchen*. United States Department of Agriculture (1923).

SCORE CARD FOR THE KITCHEN

	<i>Points</i>
III. EQUIPMENT AND FURNISHINGS	30
Kinds	15
(Are they durable, convenient to use and keep in order, and suited to kinds of work done? Is there a comfortable chair to encourage occasional rest periods?)	
Arrangement	15
(Are they so grouped as to save steps? Are the working surfaces at the proper height?)	
IV. CLEANLINESS AND ORDER	10
(How do they promote health and comfort of the family as well as the attractive appearance and convenience of the room?)	
Total Score	100

CLASS PROBLEMS

1. Score your home kitchen by the score card on pages 258, 259.
2. Plan your home kitchen on cross section paper showing the size, location, doors, windows, placement of equipment. With broken lines indicate the routing of the work. Can you improve the convenience of your home kitchen by rearranging any equipment?
3. Draw a plan to scale for a suggested remodeling of your kitchen. Justify suggested changes.
4. Discuss the placing of food in a refrigerator constructed with a top ice compartment.
5. Divide the class into groups for investigating the advantages of certain equipment.

Suggested investigations

Dish-washing machines	Metals for utensils
Water heaters	Electric stoves
Refrigerators	Gas stoves
Electric refrigerators	Oil stoves

Suggested method

Visit stores and see types available. Procure advertising literature, prices, and names of some housekeepers who are using the device. Make inquiries of housekeepers who are using the article as to its advantages and disadvantages. Study advertisements in current magazines and list the advantages of the article as claimed by the manufacturer. If possible, visit stores to study equipment. If this is not possible invite some one from the commercial field to explain

- special articles. Class discussion of reports and demonstrations. Conclusions.
6. Discuss the fuels available in the community and the advantages and disadvantages of each. Emphasize relative costs.
 7. Learn to read a gas meter and an electric meter.
 8. Collect kitchen plans and criticize them in class.
 9. Investigate the cost of the same kitchen floor in pine, in hard wood, in linoleum.
 10. Divide the class into groups of four and have each group plan and furnish a kitchen for a given family. Draw the plan to scale on bristol board, and ink it in. On posters mount pictures of the furnishings and equipment. Give prices. Discuss the work of the groups and select the best plan for display.
 11. If you had thirty dollars to spend on kitchen equipment, how would you spend it for your own kitchen, and why?

QUESTIONS

1. What purposes should a kitchen serve and why? What other purposes does it often serve? What are your objections to these additional uses of the kitchen?
2. What other parts of a house are especially related to the kitchen?
3. In your locality what is the best location for the kitchen? Why?
4. What sizes are convenient for average kitchens?
5. What considerations determine the number and location of doors and windows in the kitchen? What is the objection to many doors?
6. What is your preference for the kitchen floor, walls, ceiling and wood work? Why?
7. Prove the statement that the way the essential permanent equipment in a kitchen is grouped makes the difference between convenience and inconvenience.
8. What are the three working areas in a kitchen, and how are they related?
9. Discuss the height of working surfaces in the kitchen.
10. Explain the use and describe the construction of good storage space, pantries, cabinets, and shelves.
11. Mention important points in the selection of stoves, sinks, tables, and refrigerators.
12. The materials most used in kitchen utensils are aluminum, enamel ware, tin, glassware, earthenware, iron, steel, wire. Name some practical utensils for which each material is suitable, and state some advantages and disadvantages of the material.
13. Name some very simple labor-saving devices practical in any kitchen.
14. How can you determine the advisability of purchasing any kitchen tool or device?

15. Name some so-called labor-saving devices that in some households may not save labor. Explain.
16. Suggest some kitchen conveniences.

HOME PROJECT

1. Clean your kitchen at home.
2. Take an inventory of the utensils in your home kitchen. List the articles that need replacing and the new articles that are needed. Find out what these articles would cost.
3. What utensils in your home kitchen are the most useful? What are the least useful?
4. Clean the cabinets, pantries, and closets used as kitchen storage space in your house.
5. Rearrange your kitchen in accordance with the plan made in problem 2.
6. Carry out the remodeling of your home kitchen in accordance with the plan made in problem 3.

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CHAPTER XXVI

WHERE SHALL WE EAT?

General considerations. The place in which we eat must be cheerful and hospitable. In summer we like to picnic or to have our meals out of doors on the porch. In winter we may have supper before a cheerful fire in the living room, or breakfast in the inviting warmth of the kitchen.

In Colonial days the kitchen was the center of the family life and of much of the household activity. Beside the hearth the housewife sat at her spinning. Much of the cooking was done over the open fire. In this cheerful place the family ate their meals. In our imagination we can smell the nutty fragrance of the baking bread, and hear the singing of the tea kettle that swings in the big fireplace, and we can shut our eyes and see the crisp white frills at the windows and the colorful rag rugs. Is it any wonder that the charm and convenience of eating in the kitchen has made a reappearance in modern times?

The breakfast room or breakfast nook. In homes of to-day the breakfast room is much in vogue. In the small house it is supplanting, to some extent, the dining room. There seems no very good reason why the small house should have both a dining room and a breakfast room, and the breakfast room has the advantage in cost, coziness, and convenience.

A popular adaptation of the breakfast room is the breakfast alcove or nook in the kitchen, with the pullman style of table and built-in bench seats. In the warmer climates, for obvious reasons, a breakfast room is more acceptable than a breakfast nook in the kitchen. It may contain built-in cabinets for the storage of dishes and linens, and also storage space in the benches. It may also be used as a children's reading room or playroom, a sewing room, or the household office.

The dining room. In the large house the dining room is important, although many smaller houses and apartments are dispensing

with this room. When the family is large it is a necessity if meals are to be enjoyed in comfort.

The dining room is usually adjacent to the living room. It must be furnished in such a way as to harmonize with the neighboring rooms. Sunlight and air should be considered in locating the dining room. If it is not placed where the sunshine reaches it much of the day, the color of the walls and hangings should suggest sunlight — cream or yellow, for example. If the room is sunny, softer tones in grays or greens will be a wise choice.



FIG. 59. A DUAL PURPOSE DINING ROOM

"Here is an example of a dining-room that may easily be adapted to other uses besides that of eating, cupboards at each side may hold dishes, books, or antiques." From *A Home of Your Own*, by Della Thompson Lutes. Copyright, 1925. Used by special permission of the publishers, The Bobbs-Merrill Company.

The dining room is usually the most formal room in the house. It ought to have an air of balance and poise. There should be no extra furniture or ornaments; everything should have its own special use. The presence of much furniture interferes with the serving of meals. In addition to the table and chairs there is

usually a buffet or server; there may also be a smaller serving table or a tea wagon. With regard to floor covering, a large rug is preferable because the smaller ones roll up and get in the way when meals are served.

The combination dining room. A living room and dining room combined is practical. The gate-leg or refectory table looks well in a living room and is appropriate for the serving of meals. A small table or a spinet desk with the top closed may be used for a serving table. In order to preserve the informality of a living room the chairs should not be all alike.

The dining room may also be satisfactorily used as a library or a study room. The built-in cases may be used to hold books instead of china.

Whether or not a dining room is included in the house plan depends upon many circumstances but chiefly upon the size of the family, the size of the pocketbook, and the taste of the family. The floor space that is occupied by the dining room in many houses could be used to better advantage for a more spacious living room, or for a sun room.

LINENS

For dinner and the dining room. The white damask linen tablecloth is the most favored for the dining room, and is always used for dinner. The napkins should match the cloths. Simple hand-sewn hems are used.

For breakfast or the breakfast room. Simplicity is in good taste for table linen at all times, but it is the dominant note in the breakfast linens. The bare table is used without pads. The cloth only partially covers the table. Either a square luncheon cloth or a table runner with rectangular doilies will meet with favor. Color is frequently used, especially in the borders. Linens for the breakfast room are often coarse, and embroideries are used. Many very attractive, inexpensive breakfast-room "sets" are available in fabrics of cotton, linen and cotton mixed, and linen. Small napkins are used at breakfast. The napkins usually match the cloth.

For luncheon or supper. The simple linens used for breakfast

may also be used for luncheon or supper when this meal is served in the breakfast alcove. For a luncheon served in the dining room, the table cloth may be laid as for dinner, or the bare table with doilies may be preferred. Luncheon sets are often quite elaborate, with needle work or insets of lace, but very simple ones, also, are beautiful. Luncheon napkins are medium sized, and preferably match the cloth.

Between meals. The table may be left bare, but it often has a centerpiece, or else a table runner of coarse natural linen. There may be also a bowl of flowers.

Points in purchasing table linen. Linen, like jewelry, should be purchased from reliable stores. Even experts cannot tell by casual examination the difference in grades of linen. Buy linen by the weight. The double damask is the most durable and the most satisfactory. Good table linen is closely woven. It does not pay to buy cheap damask. If good linen cannot be afforded, rather than buy a sleazy grade, buy a good grade of cotton. Colored table "linens" are a fad; it is not wise to invest in expensive material of this type. A cotton and linen mixture has an advantage over linen because cotton holds its color better than linen and is cheaper.

Sizes of the table linens. In purchasing linens the size of the table must be considered. A drop of six or eight inches should be allowed at the side and ends of the table for damask cloths. Linen table damask may be bought by the yard or in pattern cloths. Patterns are usually woven in 2, 2½ or 3 yard lengths.

Plate doilies are used at the ends and sides of the table for the individual covers when the above runner sizes are used.

A luncheon cloth is 54 inches square; a breakfast or very small cloth is 45 inches square; cloths for tables as small as card tables are 30 to 45 inches square.

Sizes of napkins

Dinner napkins are 22, 24, or even 26 inches square. Luncheon napkins are 16 or 18 inches square, but the size is not arbitrary. When a damask cloth is used for luncheon, the small or medium size dinner napkins may be used. Breakfast napkins are 14 to 16 inches square.

Sizes of damask cloths

<i>Table size</i>	<i>Cloth size</i>
48 to 54 inches	70 to 72 inches wide
<i>Length of tablecloth</i>	<i>Number to be seated at the table</i>
2 yard cloth	4 persons (crowded for 6)
2½ yard cloth	6 persons
3 yard cloth	8 to 10 persons
3½ yard cloth	12 to 14 persons

Sizes of table runners and luncheon cloths

<i>Size of runner</i>	<i>Pieces in set</i>	<i>Number of persons</i>
18 × 36 inches	5	4
18 × 45 inches	7	6
18 × 54 inches	9	8
18 × 72 inches	13	12

CHINA

The china on our tables represents the chinaware of the world. England furnishes Royal Doulton, Minton, Worcester, and Wedgwood; France charms with Haviland and "eggshell" china; there are novelty wares from China and Japan, and from most of the countries of Europe. American china has only recently succeeded in competing with the wares of foreign countries. Syracuse china is the best known of the cheaper American product; Lennox is a standard high-grade china of American make.

In none of the household furnishings may the housewife better express her individual taste than in her china. Books have been written on the choice of china, and some people spend much time and money in collecting rare old dishes.

General rules in selecting china. Dishes which are to be used for all purposes should be chosen with great care. Since food is ornamental in itself it is more attractive when served on dishes that are not overdecorated. Conventional patterns in china are therefore to be preferred to all-over floral designs. In selecting china it is wise to see a table laid with the whole set. One plate may be attractive by itself, whereas the effect of the whole layout may not be at all pleasing. Dishes are sold in sets and in open-stock patterns. It is wise to choose open-stock patterns for then

your dishes may be replaced for a period of years; but even open-stock patterns are sometimes discontinued. Avoid odd shapes, sizes, and patterns in choosing dishes for general use. If the china is to be used only for the breakfast room, or for a tea service, one may indulge in more unusual patterns. A high price is no guarantee of tastefulness. Very tasteful china may be bought at reasonable prices.

Kinds of china. The most expensive china is bone china, such as the Royal Doulton. Bone china is very heavy, very durable, and expensive.

Porcelain, such as Haviland, is highly glazed, light in weight, and only moderately expensive. For these qualities porcelain chinas are popular. Porcelain is of the same quality all the way through. Semi-porcelain china is heavier, less highly glazed, and less expensive than "porcelain" or "bone" china. English semi-porcelain and the light-weight Syracuse china are durable, may be procured in attractive patterns, and are very satisfactory for general use.

Much of the novelty "china" is not china at all, because it contains no porcelain. Some of it is made of clay, highly glazed and ornamented. This is really pottery. "China" of this kind is available in attractive patterns, but because it is so easily broken it is more suitable for sets used occasionally, such as teaset, than for those more generally used.

GLASSWARE

Every table needs at least a little glassware to give it a sparkle. Styles in glassware come and go, but the clear crystal type is always conservative; it may be plain or etched. The articles that are preferable in glass are:

Tumblers or goblets	Salt shakers
Stem glasses for fruit cocktail or dessert	Dessert dishes
Punch cups	Finger bowls
	Candlesticks

The more expensive glassware is blown glass and is often called crystal. The less expensive is pressed glass. The two names are given from the processes of manufacture.

FLAT SILVER

The knives, forks, and spoons are called "flat silver." Much time and energy will be saved by choosing a plain pattern, for it is much easier to care for than an ornate pattern. There should preferably be a pattern of some sort, because perfectly plain flat silver is not very artistic and has a tendency to become scratched. Silver may be bought in a bright finish or a dull so-called "satin finish." The satin finish is beautiful and is not easily marred by scratching. In selecting a pattern for silver look at all the pieces to see if the pattern is attractive on each kind, and if the sizes and shapes of all the various pieces are desirable.

Flat silver may be "solid silver" (sterling) or plated. The plated ware is much easier to keep untarnished and is preferred for daily use even by many people who can afford solid silver. Plated silver may be purchased in a wide selection of patterns.

In buying silver knives remember that blades of stainless steel are procurable. Hollow-handled knives are not so durable as the flat-handled kind, but they are prettier.

CARE OF THE DINING ROOM AND ITS FURNISHINGS

When in use the dining room must be well aired, scrupulously clean, and free from dust. It is best to air the room before each meal. A vacuum cleaner and oil floor mops are useful aids in cleaning. It is not enough for the room to be clean; it must also be attractive. Flowers arranged in low bowls or a simple centerpiece of fruit add a charm to the table both at meal time and throughout the day. The glassware must be sparkling, the china clean, the silver untarnished, the linen spotless. The silver and the table linen require special care.

Care of silver. Silver should be carefully sorted and handled to prevent scratching. If washed as soon as used, it will need less frequent polishing.

Silver that is tarnished may be cleaned in two ways:

(1) A silver paste and soft cloth may be used for polishing. The paste should be removed afterward by washing and scalding the silver.

(2) An easy way to clean table silver is to boil it in an aluminum

pan with salt and soda or in an enamel pan with salt, soda, and a small piece of aluminum. Use a tablespoon each of soda and salt for each quart of boiling water. Put the silver in as soon as the salt and soda are added, but be sure the water is actually boiling. A large pan should be chosen for there will be an effervescence for a few minutes. After the silver becomes bright, wash it in hot soapy water and dry it thoroughly.

Removal of stains from table linens. The stains that table linen is usually heir to are easily removed by the ordinary processes of laundering.

Chocolate, cocoa, cream, egg, fats and oils of all kinds, honey and sirup, meat, gravy, and milk make stains that will "come out in the wash." The material is first soaked in cold or lukewarm water, then rubbed with soap, and afterward boiled or washed in hot water and rinsed thoroughly. Tea and coffee stains, iron rust, fruit stains and candle wax are not so easily removed from table linens. Specific directions for the removal of these and other stains may be found in Farmers' Bulletin 1474, *Stain Removal from Fabrics*. This bulletin is available from the United States Department of Agriculture.

General directions for removal of stains.

1. Know what the stain is.
2. Stretch the stained portion over a bowl and moisten it with cold water.
3. Use a dilute reagent in small quantities. This is best accomplished with a glass stirring rod or a dropper. For choice of reagents follow directions from bulletin 1474.
4. If several reagents are suggested use the simplest and weakest one first.
5. If a chemical has been used wash the material thoroughly to remove it.

CLASS PROBLEMS

1. Collect pictures (preferably in color) of dining rooms and breakfast rooms or alcoves. Study and discuss these in class, making a list of the good points and the bad points in each.
2. Arrange for a class excursion to a furniture store or use catalogues for studying furniture for the breakfast room, breakfast alcove, and

dining room. Note also furniture that might be used for a dual-purpose dining room. Secure prices and compare costs of each.

3. Study sizes of breakfast nooks, breakfast rooms, and dining rooms in houses in which the members of the class live.
4. If possible secure pictures of colonial kitchens and dining rooms. In your reading watch for any description of family life which pictures the serving of meals in colonial days.
5. Divide the class into three groups. Group I may undertake to prove that a dining room is more advantageous than a breakfast room in a house of given size. Group II may try to prove that the breakfast room is more desirable. Each group should work out on cross-section paper a floor plan for a house. The two houses must cover the same floor space and have the same number of rooms, but one will have a good-sized dining room and the other an average-sized breakfast room.

Group III may act as judges in the debate. During the time that Groups I and II are at work on the plans, Group III may collect illustrations of silver, china, and glassware, and samples of table linens for demonstration to the class.

6. If possible visit houses to study furnishings of breakfast rooms and dining rooms. In the larger cities the stores often furnish and show model rooms.
7. During Better Homes Week the home economics department may assist in furnishing a home for demonstration purposes. The furnishings are often loaned by local merchants. If possible have the foods classes assist in selecting the dining or breakfast room furnishings; also those of the kitchen. If the project of furnishing a home is not feasible, use a class period for visiting such a house and afterwards have a class discussion of the project.
8. Demonstrate types of table linens, using the full-sized cloths and napkins. If these cannot be borrowed, use samples.

The buyer of linens in a department store possesses a fund of valuable and interesting information on linens. A most interesting and profitable class period will result from arranging with him to come to the school and give an illustrated talk on table linens.

9. Secure the coöperation of well-informed persons from the commercial field for a study of china and glassware, table silver, and electrical appliances.
10. For a given dining room or breakfast room each girl may plan the furniture, wall covering, curtains, rugs, linens, silver, glassware, and china. Obtain prices and mount pictures to illustrate your selections. Compare the costs of furnishing breakfast rooms and dining rooms.
11. Demonstrate the cleaning of silver in an aluminum pan. (See description, pages 268, 269.)
12. Class may investigate methods of laundering table linen. A demon-

stration may be given by a member of the class who is skillful in laundering.

13. Demonstrate the removal of stains from table linen. Prepare Javelle water, oxalic acid solution, and potassium permanganate solutions. Bottle and label. Use for this study Farmers' Bulletin 1474, *Stain Removal from Fabrics*.
14. Use the meal-service lessons at school to learn: (1) the arrangement of flowers for the table; (2) the removal of stains from table linens; (3) the laundering and folding of table linens.

QUESTIONS

1. Describe the general characteristics of the place in which we like to eat our meals.
2. What are the relative advantages of a breakfast room and a dining room in houses of various sizes?
3. Describe the furnishing of a room that might serve both as a dining room and as a living room.
4. Name the various ways in which a breakfast room may be used.
5. Describe a pleasing formal dining room.
6. Describe a pleasing breakfast room.
7. Describe linens suitable for dinner, for luncheon or supper, for breakfast.
8. In what widths can table linen be bought? For what sized table is each width suitable?
9. Give a few general principles in selecting china.
10. What tableware would you select in glass?
11. How would you select and care for flat silver?
12. How can the following stains be removed from table linen: chocolate, cocoa, cream, egg, honey and sirup, meat, fruit, iron rust, candle wax, tea and coffee?

HOME PRACTICE

1. Undertake entire charge of the care and cleaning of the dining room or breakfast room in your house for one week.
2. Arrange the flowers for the table each day. If wild flowers are available, use them.
3. Care for table linen at your house by removing stains, mending, and perhaps laundering.
4. Polish the silver at home.
5. Plan the furnishings for the dining room or breakfast room in "a home you may have for your own."

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CHAPTER XXVII

COURTESY AT THE TABLE

ETIQUETTE

"ETIQUETTE is the name given to the rules of society and society is the game that all men play. If you play it well, you win; if you play it ill, you lose. The prize is a certain sort of satisfaction without which no human being is ever quite satisfied."¹

The charm of good manners. To be at all times at ease and free from embarrassment one must be first of all unconscious of self but thoughtfully considerate of others; and one must not only know what is good form but must make good form a habit through daily use. Confusion results from trying to think what to do. The only sure way to be well mannered away from home and school is to be well mannered at home and at school. "Company" manners are as troublesome as a sore thumb and equally as evident. Awkwardness is due to ignorance. Ease comes with habitual good manners.

Let us consider in this chapter accepted social usages at the table. What is necessary in order to be at ease and to be welcome at the table? Fortunately the rules are simple and may be acquired with practice and observation.

Table etiquette

Appearance at the table. Every self-respecting person comes to the table neatly attired and clean. Hands are never clean unless they have just been washed. Fingernails must be clean. Even at the family breakfast table slovenly attire is not permissible.

The A B C's of good table manners. Promptness, a virtue at all times, is a necessity at mealtime. It is inconsiderate to keep others waiting; moreover the food is at its best when first served.

At an informal meal women and girls enter the dining room first; at some formal meals each man is requested to escort his dinner partner.

¹ From *Etiquette of the Table*. Courtesy Kansas State Agricultural College.

Stand by your chair until mother or the hostess makes the move to be seated. Sit or rise from the left side of the chair unless this is obstructed. It is a mark of good breeding for a man to assist in seating a woman by pulling her chair out a little from the table and pushing it up a little as she sits. It is also courteous for him to assist her in rising from the table by pulling the chair out. This is not necessary however, and if the chairs are properly placed one should be able to sit down at the table and also rise from the table without moving the chair.

Many American families observe the custom of saying grace, or returning thanks, at the table. If you do not know the custom of the family it is best to pause a moment just before or just after all are seated in order that, if grace is to be said, you will not interrupt it with conversation. Since many people do not say grace, a host should not ask a guest to return thanks unless he knows that he will do so without embarrassment. A simple grace is preferable to a ceremony. Grace is not said at formal meals.

Do not begin to eat until all are served. It is customary for the hostess to give all signals, so to speak; she is the first to sit, the first to begin to eat, the first, at the end of the meal, to place her napkin on the table and rise. It is not good form at the table to attempt to arrange hair, or to toy with the silver or dishes, thump on the table, or pick at the tablecloth or at crumbs. Sometimes it is necessary to use a handkerchief at the table, but it must be done unobtrusively. In cases where this is not possible, as in continued coughing, it is best to leave the table temporarily.

Eat in a leisurely way. Chew with the lips closed; any other practice is inexcusable. Take small bites and thus save embarrassment in conversation. If you are called upon for a remark when you have food in your mouth do not make the mistake of trying to reply immediately. All well-bred people eat noiselessly. Do not smack your lips or gulp down water, or make any sound in eating soup. It is rude to blow on food to cool it. If even with leisurely eating and small bites hot food cannot be eaten in comfort, wait for it to cool. Sometimes it is necessary to remove a fish bone, a fruit seed, or some other substance from the mouth. To do this shield the mouth with the napkin and remove the

substance with the thumb and finger and lay it on the side of the plate. Some people prefer to remove such substances from the mouth with the side of the fork or the spoon with which they are eating.

Posture at the table. Good posture has much to do with good looks and also with good digestion. Sit erect. It is not good form to sit so close to the table that you touch the cloth. Feet belong on the floor. There is no tasteful way to drape them about the rungs of a chair. Be comfortable, but do not use more than your share of the space under the table. Do not bend over your food. It requires some care to be able to eat without soiling the tablecloth, but only occasional accidents are pardonable.

Conversation at table. Bid your family a cheerful "good morning" at the breakfast table. Mealtime is a time for social intercourse. Be cheerful and agreeable. Table talk must avoid disagreeable subjects and those that are likely to cause hot disputes. Good humor is an aid to good digestion. Take part in the talk by contributing news or incidents of interest to the others, but do not monopolize the conversation. Do not interrupt others. A good listener is even more appreciated than a good talker. Be respectfully attentive to older people and make a point of including them in the conversation.

At a large or formal dinner it is your responsibility to converse with the person on either side of you. At the family table general conversation is best. Never converse exclusively with one person — and certainly there should be no secrets at the table. Never read at the table unless you are alone. If an accident happens at the table it only makes matters worse to apologize profusely. Regret should be expressed and the incident considered closed. The food that is served is not discussed at formal meals; but in the family circle or with friends, where mother or sister or a friend has done the cooking, it is a mark of thoughtfulness for you to show your appreciation of good food.

Serving and being served. When you are asked your preference in food, if you have a preference state it, otherwise accept what is served without comment. You are expected to pass any article of food which is near you, unless there is a maid. The

serving silver will be near the dish. Place the silver in the dish conveniently and offer it to your neighbor first, unless he is occupied, in which case serve yourself first. Never reach across the table or in front of any one. Ask courteously for what you want by addressing — by name — the person nearest the article, as "Jack, please pass me the salt."

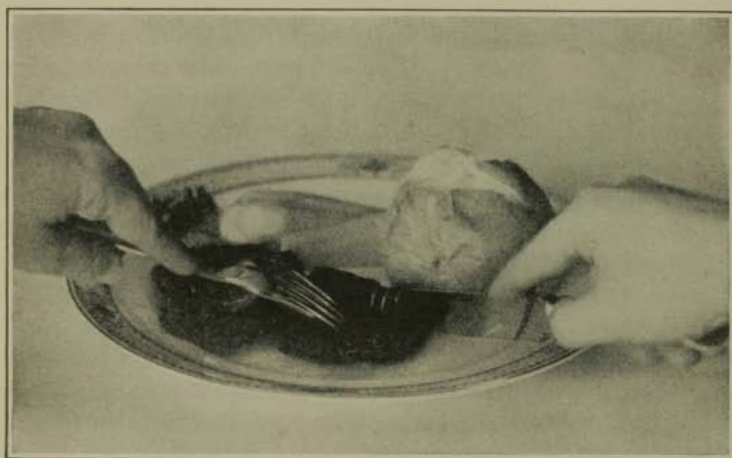


FIG. 60. THE KNIFE AND FORK IN USE

Anticipate the needs of others at the table. You should observe when any one wants the butter or the cream and sugar near you. Do not overdo the passing of food, however. Never serve yourself with your own silver. Sugar spoons, butter knives, and other serving silver are provided for this purpose. Be careful not to remove from the mouth a spoon or fork with a partially eaten mouthful still on it. It is an ugly habit to take food out of the mouth. Some people acquire this habit in eating ice cream without realizing that they have it or that it is disagreeable to others. Keep your plate pleasing at all times. Do not mix food in it. Do not "sop" food with bread. Dishes should stay firmly on the table; do not tip your soup bowl, or lift a dish from the table in eating from it. Conserves or jelly may be placed either on the bread and butter plate or on the dinner plate. In the former case

this sweet may be used as butter is used on bread, a little at a time, spread with the butter spreader. In the latter case it is eaten as a relish, with a fork.

At home second helpings are permissible. In passing the plate for a second helping let the silver remain on the plate, laid across the middle in such a position that it will not readily slip. Good form does not demand that some food be left on the plate. This custom has been abandoned as a rather foolish formality. We can now eat the lettuce on our salad plates instead of leaving it. When we finish eating, the dishes should be left in position. They should never be stacked at the table or in removing them from the table.

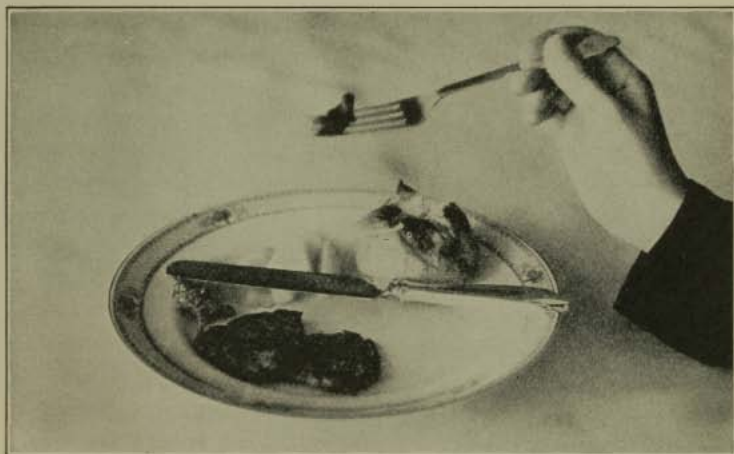


FIG. 61. THE FORK IN USE — KNIFE ON PLATE

The use of flat silver. The silver is usually laid from the outside in the order of use. If you are puzzled at any point as to which piece to use, watch the hostess. The silver should be left in place until needed and should be in the hand only while cutting or conveying food to the mouth. Cut only one bite at a time. Never hold a fork or spoon in mid-air with a morsel of food in it. Never place food on a fork or in a spoon and leave it on the plate.

During the course of a meal a knife, fork, or spoon that has been used should not be placed on the tablecloth, nor should it be placed gang-plank fashion from the edge of the plate to the table. A spoon is held by the handle with the thumb and forefinger, resting on the second finger very much as a pen does. (Figure 64.) Eat from the side of the spoon. In eating soup dip the spoon from you in order to avoid dripping the soup upon the tablecloth.

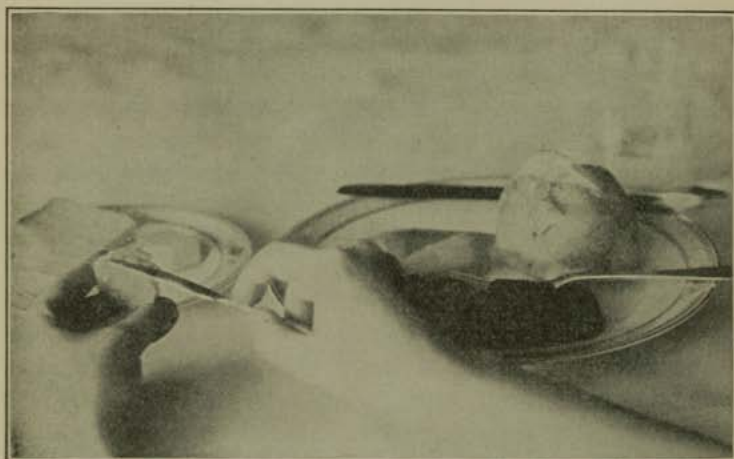


FIG. 62. USING THE BUTTER SPREADER

For coffee a spoon is used only to stir and to sample the beverage. It should never be left in the cup. When not in use it should be placed in the saucer. In other cases when not in use it should be placed on the service plate, saucer, or coaster. If a flat soup plate is used the spoon should be left in the soup plate instead of on the service plate. (Figure 65.)

A knife should be used only for cutting, or for buttering bread if an individual butter spreader is not provided. The knife is held in the right hand (unless one is lefthanded). You should hold the handle of the knife just as you would hold a screw driver. To steady it, place the forefinger along the back of the blade near the handle. (Figure 60.) One should never hold a knife or fork as a spear. When the knife is not in use it should be placed across

the rim of the plate with the handle and blade resting on the rim of the plate, the cutting edge of the blade toward the user.

When knife and fork are used together, the fork is held in the left hand exactly as the knife is held in the right hand. (Figure 60.) The tines are turned down. When a mouthful of food has been cut the knife should be placed on the plate and the fork changed to the right hand. In carrying food to the mouth, hold the fork in the right hand with the tines up. (Figure 61.) (In England it is not customary to change the fork to the right hand; there it is used in the left hand with the tines turned down as in the position for cutting.) Some tender food, such as lettuce, should be cut with the fork. In such cases use the fork in the right hand.

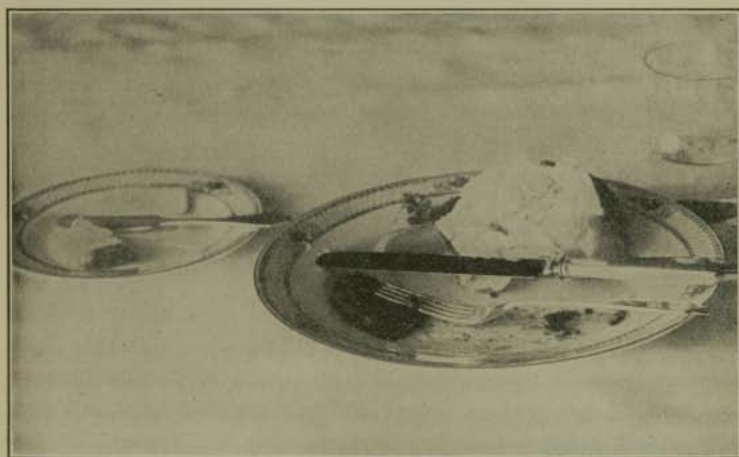


FIG. 63. POSITION OF KNIFE AND FORK WHEN EATING IS FINISHED

When the fork is not in use it is placed tines up, with the handle toward the right hand. When the course is finished the knife and fork are placed parallel with the handles resting on the edge of the plate, the knife on the far side. The cutting edge of the knife should be toward the fork; the tines of the fork are turned up. (Figure 63.)

One eats with a spoon or with a fork. When in doubt as to

whether to choose a fork or a spoon, it is usually safe to choose the fork. Vegetables, salads, pie, watermelon, and soft cake call for a fork. A spoon may be used for creamed vegetables if they are served in small side dishes. Most desserts are eaten with a spoon, but often a fork or a spoon may be used according to preference. Salad forks, ice-cream forks or spoons, orange spoons, and ice-tea spoons are especially designated for their respective purposes.



FIG. 64. EATING SOUP

Bread. Bread, crackers, and cookies are eaten with the fingers. A cracker may be broken before it is eaten. Do not spread a whole slice of bread or a whole cracker with butter or cheese. Break a small piece of bread, and butter it as eaten. (Figure 62.)

In the South, where much hot bread is eaten, it is customary to open a biscuit or muffin with the fingers (or with a fork if it is very hot) and put butter into it to melt. This bread is broken into smaller pieces to eat. If a bread and butter plate is provided all bread should be placed on it. If no separate plates are provided the bread should be placed on the edge of the dinner plate. A slice of bread may be broken and the unbuttered portion laid on the tablecloth.

Finger foods. Other foods than bread for which one uses the

fingers are olives, celery, radishes, small pickles, potato chips, corn on the cob, nuts, crystallized fruit, cookies, some kinds of cake, and fresh fruit. If the fingers become slightly soiled they should be wiped on the napkin. When fresh fruit is served finger bowls may be used.

Napkins. The napkin should be placed, partially unfolded, in the lap, and kept there, for the most part. It is permissible to lift it to wipe the lips. The napkin should never be used as a bib.



FIG. 65. SPOONS — WHEN NOT IN USE

After a meal, if one is a member of the family, or a house guest or a frequent guest one folds the napkin if the other members of the group fold theirs. It is folded in the lap. If one is a guest for only that meal, the unfolded napkin is placed on the table; this rule applies also when the meal is eaten in a hotel, restaurant, or some other public place. The hostess is the first to place her napkin on the table; this gesture indicates that the meal is over.

Important don'ts. Do not criticize the table manners of other people, especially elderly people. Customs in table manners change. Do not pick your teeth or put your fingers in your mouth. A toothpick is an emblem of rudeness and ignorance. If it is necessary to remove particles of food from the teeth use dental

floss in the privacy of your own room. Do not allow pets in the dining room, particularly during meals.

Hints for hostess, host, and guest

The hostess. When you plan a dinner party, choose congenial guests. Be ready to greet your guests when they arrive. There should be no flurry and no evidence of last-minute preparation. Chat with the guests a while. It is permissible to leave them for ten minutes before serving the meal, but not for longer.

Plan simple menus. Guests do not wish you to go to the trouble and expense of arranging elaborate menus for them. They come to your house for something beside food. The hostess should remain seated at the table during the meal. Guests would rather she did not make any troublesome effort to wait on them. A tea wagon may be used as a substitute for a maid. If there is a schoolgirl daughter in the household she may leave the table to serve.

Other rules are: The carving knife should be ready. At the table the hostess is responsible for the conversation. No apologies should be made. The host and hostess eat until the guests finish.

The host. The host may finish the carving before serving any of the plates. In serving the plates he should not touch them. The carving silver should be placed on the platter in the position of the knife and fork when they are not in use. The host may consult the preferences of the guests in the food. The plates should be served attractively. Small servings and a bit of garnish for each are effective. When the host passes a plate he should designate for whom it is served.

The guest. Punctuality is appreciated in a guest; lateness, in fact, is almost unpardonable. A dinner guest should arrive not more than five or ten minutes before the hour set for dinner. It is the responsibility of the guest to be suitably attired for the occasion. A formal invitation indicates a formal affair. A telephoned invitation is usually informal.

Enter into the spirit of things. It is better to send regrets than to cast gloom over a group if for any reason you cannot enter into the festivities. If any irregularities occur, take no notice of them. Your hostess can make adjustments without the help of an outsider.

A dinner invitation is not an invitation for the evening unless so stated. Leave shortly after dinner. The woman guest of honor leaves first, but if she carries, one of the other women present should leave. All the guests should leave at the same time. If an important engagement prevents your staying throughout the dinner, ask your hostess' permission to leave.

A courtesy is usually returned with a similar courtesy.

Calling is not so much in vogue as formerly but it is courteous to return a dinner call. Local custom in this matter should be followed.

Courtesy in the school lunchroom

Hands should be washed before eating lunch at school. Do not push or rush to get ahead of others in the line. Watch your step to avoid running into other people. It is not polite to reserve seats for friends. Books should not be placed on the tables. It is best not to bring them to the lunchroom at all.

A school lunchroom is noisy at best. Do your part to keep the noise at a minimum by not scraping the floor with the chairs and by not talking loudly. Enjoy yourself and others, but do not be boisterous. When you finish eating, clear the table for the next person. Take your tray to the proper place. The lunchroom is not a dressing room; do not use it as such. Attend to matters of personal appearance before you enter.

CLASS PROBLEMS

Every day should be a practice day for proper habits of eating. Bad manners are incompatible with a good home economics class.

1. It is most important that every lesson be a lesson in table manners. Demonstrating the correct forms and usages is not enough; practice at home and at school is necessary in order to acquire pleasing table habits.
2. Have a question box at school for receiving unsigned questions on etiquette.
3. Divide the class into two groups for the term. As a class, set up a very definite goal for the class in the matter of eating habits, with definite penalties provided for violations. The groups may compete with each other for the best record.
4. Make a list of "don'ts" for table conversation.
5. Plan a play on the subject of table manners. An effective demonstration may be given by means of shadows on a sheet.

QUESTIONS

Members of the class should make out questions on courtesy at the table. Have a question box for problems in etiquette for all occasions. See Class Problem 2 above.

HOME PROJECT

1. Each girl in the class is interested in increasing her personal charm. Take as your home project the improving of your manners in general and of your table manners in particular.
Observe others and study yourself to see what improvements are needed. Ask your family, your friends, and your teacher to point out your shortcomings in this particular.
2. Teach table manners to a small child.

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CHAPTER XXVIII

TABLE SERVICE

The importance of good usage. The table service for family meals must be well ordered if the occasional meal for which guests are invited is to be pleasing. No rôle in the home can be more becomingly assumed by the older son or daughter than that of assisting in the serving of the meals.

There are rules of authorized usage in setting the table and in serving the meal. These rules are founded on good taste, good sense, and simplicity. Every one should know and practice these accepted usages. There is some latitude, of course, for adjustments to the mode of living, to the home, and even to one's personal taste.

The rules given in this chapter represent accepted usage, though in many cases not the only accepted usage. For convenience in explaining table service the terms host, hostess, and guest are used. It should be understood that the terms as used herein indicate the family. The matter of entertaining is incidental if daily usage is good.

TYPES OF TABLE SERVICE

The type of table service varies with the formality of the meal, the amount of maid service available, and the preference of the family. There are three general types in use:

(1) **English style of table service.** This style of table service is usually termed family style. It is suited to the average family meals and requires no maid service. All of the food is served at the table by the host, the hostess, or some other member of the family. It is possible to serve the entire meal without any one's rising from the table, though frequently it is necessary for some one to leave to bring in hot or cold food or to take out soiled dishes.

This type of table service is the most hospitable, the most informal, and the most universally used. In England it is used for

breakfast, even in households where expert servants are maintained.

(2) **Russian style of table service.** This style of table service is termed formal, and is used for formal occasions rather than for family meals. All of the food is served in the kitchen. The hostess and host take no more part in the serving of the meal than do the guests. This method of serving requires one expert waiter or waitress for each four or six persons served. Special meals calling for formal service are usually served in hotels and clubs, but they are sometimes carried out in the home with the employment of extra help.

(3) **Compromise service.** This method of table service is, as the name implies, a compromise between the English and the Russian styles. It has some of the hospitality of the English service but is more formal. The first course is usually served when the meal is announced. The soup, salad, and dessert are served in individual servings from the kitchen (Russian style), while the main course, the coffee, and sometimes the salad or the dessert, are served by the host or hostess. This type of service is used, as a rule, in homes where there is a maid to assist with the meals.

Since most of us do not have maids in our homes, and since informal service is used at times even in homes where there is a maid, the English or family type of service is the method that each of us should know best and is therefore emphasized in this chapter. The occasional use made of the other types of service justifies their brief consideration.

SETTING THE TABLE

General considerations

1. A table to be attractively set should have clean linen, polished silver, glassware, china, and flowers. A very charming table can be set with inexpensive furnishings if they are in good taste and are well arranged.

2. Avoid crowding the table. Space the "covers" equal distances apart. If the table is small do not arrange to have too

many dishes served from it at one time. A tea wagon or serving table will solve the difficulty.

3. The table must be well balanced.

4. The lines on the table should be as few in number as possible, and lengthwise or crosswise, never diagonal. Lines on tables are made by the creases or the weave in the table linen, and they are also formed by the manner of placing silver, dishes, glasses, and other articles.

Table linen. For selection and types of linen appropriate for various meals see Chapter XXVI.

If a tablecloth is used it is laid over a soft pad. Luncheon cloths, breakfast cloths, and doilies and runner sets are laid on the bare table. If runners and cover doilies are used the runner may be long enough to be employed for the two end covers. If no table pad is used individual pads for hot dishes must take its place for the protection of the table. These may be asbestos pads covered with doilies, or they may be thick washable mats. A carving cloth is sometimes used. It should be placed directly in front of the host, nine or ten inches from the edge of the table. The carving cloth may be placed when the table is set, but it should be removed when the meat platter is removed.

Napkins should be simply folded. The style in napkins varies, but a conservative style is always safe. Large ones should be folded in squares with four foldings. Smaller ones may be folded in squares with two foldings, or in rectangles with three.

The individual cover. (See Figures 66, 67, 68.) All of the silver, linen, china, and glass used by one person is called a "cover." Allow twenty to twenty-four inches for each cover. The cover should not be crowded, but should be grouped compactly in order that it may look well and that each individual may know which articles are his. The outer edge of the cover must be straight. If the table edge is straight, place the cover one inch from it. If it is rounded, the cover edge does not parallel it, but is a straight line, with the outer articles in the cover one inch from the edge of the table. Note in the diagrams the covers at ends and sides of the tables. The lines must be kept lengthwise and crosswise of the table.

The plate is the center of the cover and must be directly in front of the chair. The silver is placed from the outside of the cover in the order used. Thus the silver for the first course is furthest

from the plate and that for the last course is nearest the plate. Knives, spoons, and glasses are placed on the right hand; forks, bread and butter plates, napkins, and salad plates are placed at the left. The following exceptions are made:

(1) If no knife is used forks are placed at the right.

(2) Individual butter spreaders are placed on the bread and butter plates, parallel to the edge of the table. (See diagrams.)

(3) The oyster fork may be placed at the extreme right or on the plate.

(4) The spoon for orange or grapefruit may be placed on the plate on which the fruit is served. It should parallel the other silver. Knife blades are turned toward the plate; forks and spoons are placed with tines and bowls turned up. The glass is placed at the tip of the knife; the bread and butter plate at the tip of the fork; the napkin to the left of the fork, with the lower right hand corner the open corner. Individual salt and pepper shakers

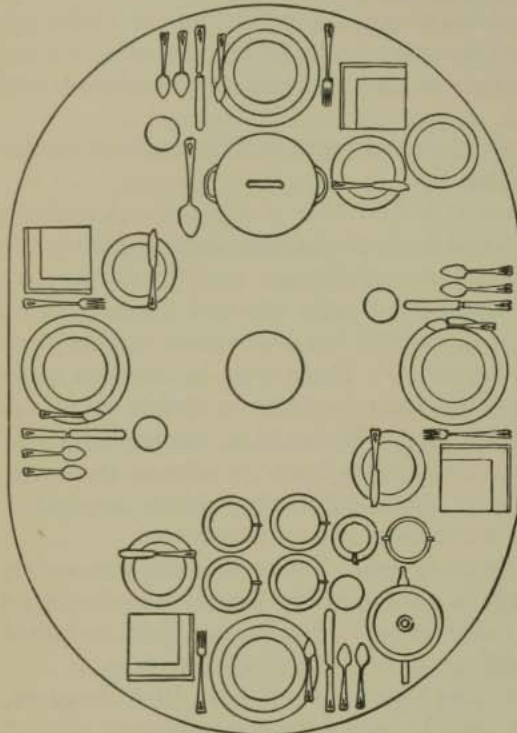


FIG. 66. DIAGRAM OF TABLE SET FOR BREAKFAST
From *Meal Planning and Serving*, by N. Beth Bailey. By permission of The Manual Arts Press, Peoria, Illinois.

may be placed above the plate in line with the glass for each cover, or between two covers.

Dishes additional to individual covers. If maid service is not available for family meals, it is sensible to lay the serving silver and extra dishes on the table or on a tea wagon or small serving table convenient to the hostess in order to avoid the necessity for getting up from the table. Serving silver for any dish may be placed to the right of the space for the dish, or it may be laid with the dish. It should be placed parallel to other lines of the table. The dishes needed vary with each meal but in general the following articles will be used and will be placed as follows:

(1) *For breakfast.* (See Figure 66.) The coffee percolator may be put at the hostess' right, with the handle parallel to her silver. The cups and saucers may be placed above her cover. It is best not to stack these, but if that is necessary, not more

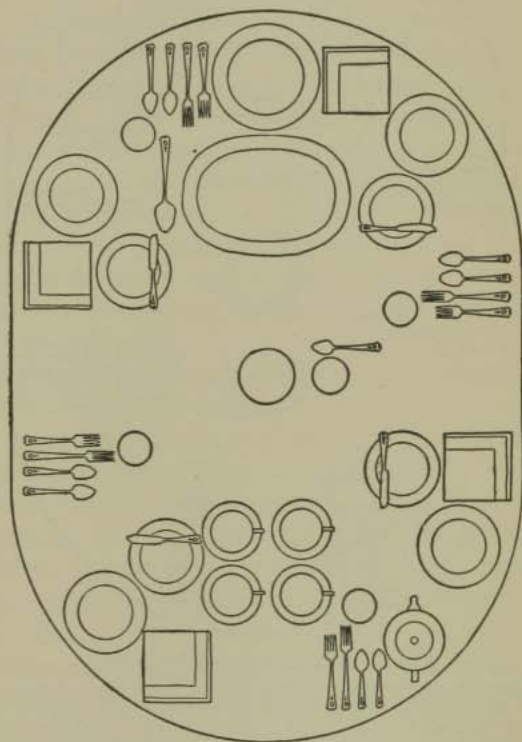


FIG. 67. DIAGRAM OF TABLE SET FOR LUNCHEON
From *Meal Planning and Table Service*, by N. Beth Bailey.
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than two should be stacked together. Handles of cups should parallel the edge of the table. The cream and sugar should be placed to the right of the cups, above the percolator.

Prepared cereal may be served in individual bowls and placed on the tea wagon or above each plate. Cooked cereal may be placed in a covered dish above the plate of one of the covers other than the cover of host or hostess. The cereal bowls should be at

the left of the dish that holds the cereal.

(2) For luncheon or dinner. (See Figures 67, 68.) Salad plates may be placed to the left of the covers, just beyond the napkin. The carving fork should be at the left of the space for the platter, the carving knife and a tablespoon at the right. The water pitcher may be placed in a plate or on a tile at the right of one cover (other than that of the host or the hostess).

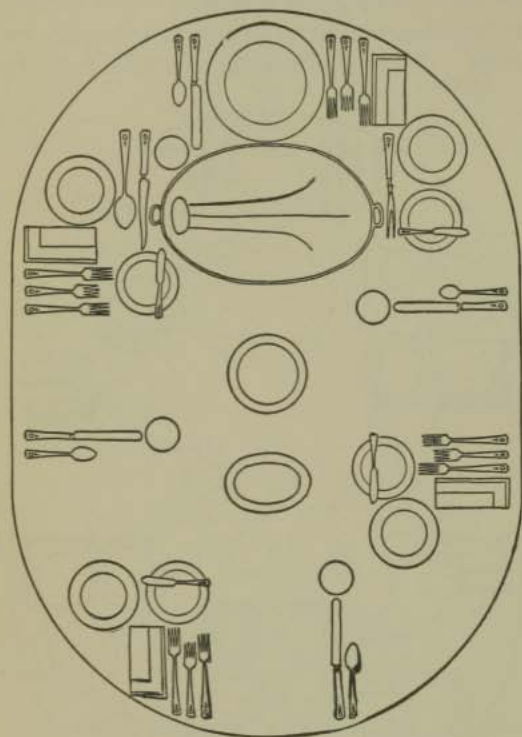


FIG. 68. TABLE SET FOR DINNER

From *Meal Planning and Table Service*, by N. Beth Bailey.
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extra dishes and silver needed for various courses. That will obviate crowding the table. The serving table is convenient for:

(1) The water pitcher, placed on a tray. A folded napkin may be placed near for use in pouring water to keep drops off the tablecloth.

(2) A small tray, needed in serving the meal.

- (3) Extra china such as cups and saucers, bowls and plates.
- (4) Serving silver.
- (5) Cream and sugar.
- (6) One complete extra cover if space permits.
- (7) Extra butter balls.

The serving table must never be crowded. There should be space left where soiled dishes can be placed temporarily while the table is being cleared.

Table decorations. Table decorations should be simple. A well-set table needs little ornamentation. A few fresh flowers, well arranged, or an attractive potted plant should be used on the table. Low bowls are best. Fruit may furnish the centerpiece for breakfast. For a party or a formal meal the flowers are usually chosen to carry out a color scheme. Flower arrangements for special occasions may be more or less elaborate. Candles make a very effective table decoration. Four candlesticks are commonly used. The candles carry out the color scheme. The prevailing mode in length of candles and height of candle holders should be followed.

Nut cups are used at formal luncheons or parties. They should be chosen with reference to the color scheme.

Plain place cards are used when a large number of guests are to be seated. In this case the card bears only the name. For special occasions, such as a bride's breakfast, a children's Easter party, a Hallowe'en supper, or a Valentine luncheon, the place card should carry out the special feature of the occasion. The position for a place card is on the napkin or above the cover.

Serving the meal. The dining room should have, at meal times, a comfortable temperature, and the air in the room should be fresh and entirely free of odors from the kitchen. The shades and curtains should be adjusted so that the light is good and at the same time not uncomfortable for any one at the table. The chairs should be so placed that a person may be seated without the chairs having to be pushed back. If the front of the seat is even with the edge of the table the chair is a comfortable distance from the table.

Immediately before the meal is announced the glasses should

be filled with water, the pitcher filled about three fourths full, and butter placed on the bread and butter plates, the fruit course, too may be placed on the table. Jelly, pickles or olives, celery, and crackers may also be placed ready when the meal begins.

During the meal the hostess should not leave the table. An older daughter or son should be able to do the serving gracefully. Thoughtfulness of the wants of others, speed without haste, and quietness are qualities of a good waitress.

If no waitress is available. A meal may be well served without a waitress. Two methods are in use:

(1) A member of the family may rise from the table and act as waitress. In this case she places her napkin, partially folded, at the left of her cover. The rules for removing, placing, and passing dishes are the same whether the service is rendered by a member of the family or by a maid.

(2) The hostess may serve a meal to a small group without any one's getting up from the table, provided no dish on the menu will be spoiled by standing. A tea wagon or a small serving table with one or two shelves is necessary. It should be placed at the right of the hostess. On the upper surface all extra silver, dishes, and some of the food, the dessert or salad, for example, may be placed. Other silver and food are placed on the dining table.

The hostess **asks** members of the group to assist by serving themselves to dishes that are convenient to them, by passing plates or dishes to others, and by passing soiled dishes to the hostess. These soiled dishes may be quietly placed on the lower shelves of the serving table or tea wagon. The host serves the meat and vegetables. The hostess serves the soup, dessert, coffee or tea. The salad may be served by the hostess or may be on the table when the meal begins. Members of the family pass those dishes that are near them — bread, butter, jelly, or vegetables. A member of the family other than the host or the hostess fills the glasses with water, brings in any hot food, and removes dishes.

Rules for waiting on the table. One person can serve eight persons if the compromise style of service is used.

The waitress should come within easy reach of the table, but not close enough to touch it.

Left-hand service seems the simplest form of service to remember and is used here. Dishes are placed, passed, and removed from the left of the guest. Beverages are placed from the right in order that there shall be no reaching in front of the guest.

It is exceedingly bad form for the waitress to reach in front of or in any way inconvenience a guest. It is more convenient for both guest and waitress for the waitress to use the hand farthest from the guest. If serving from the left use the left hand; if serving from the right use the right hand.

When two plates are removed at once — as the dinner plate and the bread and butter plate — pick up the further one (the bread and butter plate) with the left hand and the nearer one (the dinner plate) with the right hand.

In very formal service the guest is never left without a clean plate (service plate) in front of him between courses. Service plates are removed as each course is placed, and placed as each course is removed. The same set of service plates is used throughout the meal, the plates being stacked on the serving table during the course. The service plate is placed or removed with the right hand (from the left side) and the plate containing food or the soiled plate is placed or removed with the left hand.

In serving the waitress enters the dining room carrying two served plates, one in her right hand, which she places on the serving table, the other in her left hand, which she places on the main table. In removing plates it is best to remove one first and place it on the serving table. The second plate is removed and kept in the left hand. The waitress then goes to the serving table, picks up the first plate, and passes out of the dining room with two plates. Soiled dishes should never be stacked in the dining room.

The hostess is usually served first and others in succession as they are seated. Some prefer to observe the older custom of serving guests first. In this case the women at the table are served first. It does not matter much one way or the other, since no one begins to eat until all are served.

If all the silver is not placed before the meal is served, every-

thing pertaining to one course must be placed before that course is served.

If compromise service is used the host serves the plates which are placed in front of him. He states for whom the plate is intended and the waitress picks it up. The host should not touch the plate if there is a waitress to do the serving.

In clearing the table the proper order of removal is food first, then soiled dishes, glasses, and silver in order. All unused silver belonging to a course is removed when the course is removed.

In passing food see that it is held so that the guest may serve himself with ease.

The table is crumbed only when necessary. A plate and folded napkin are used.

In filling glasses, do not remove them from the table. It is best not to have ice in the pitcher. A napkin may be used to wipe the lip of the pitcher after each serving, thus protecting the tablecloth and the guest.

Seating at the table. If the hostess has no assistance in serving a meal she sits at the end of the table that is nearer the kitchen door. If there is a maid the hostess prefers to sit at the opposite end of the table where she can watch the maid as she enters the room and can easily signal to her. The host sits opposite the hostess.

If a member of the family is serving, her seat should be a position that is accessible to the kitchen door. If guests are present they are seated where they will be most comfortable. Usually a woman guest is seated at the host's right, and a man at the hostess' right.

CLASS PROBLEMS

The rules for table service are best understood and remembered if learned through demonstrations and through practice. Mock table service is suggested as a preliminary to serving meals.

1. *Breakfast menu:*

	Fruit	
Hot Cereal		Cream
Eggs		Toast
	Coffee	

Lay the table for this meal and serve it as a mock breakfast, using the English style of service.

2. *Luncheon menu:*

Cream of Tomato Soup	
Celery	Mashed Potatoes
Broiled Lamb Chops	Rolls
Peas	Stuffed Tomatoes
Charlotte Russe	

Lay the table for this meal and serve it as a mock luncheon, using:
(1) English style without a maid; (2) compromise style with a maid.

3. *Dinner menu:*

Oyster Cocktail		
Tomato Bouillon		Crackers
Olives		Celery
Roast Beef		New Potatoes
Asparagus Tips		
Lettuce Salad and French Dressing		
Frozen Apricots		
Mints	Coffee	Nuts

(a) Lay the table for this menu and serve it compromise style without a maid; with a maid.

(b) Lay the table for this menu and serve it as a formal dinner, Russian style.

4. Discuss and compare the difference in serving these menus with and without maid service.
5. Plan a meal which could be served to four persons without the hostess' rising from the table. Assume that there is a tea wagon.

QUESTIONS

1. Name and compare the three usual types of table service.
2. What rules of laying the table contribute to good balance and good lines?
3. Compare the laying of a table with a tablecloth, with doilies, and with runners and cover doilies.
4. What is meant by a cover? Give a menu for each of the three meals and sketch a cover for each.
5. State the exceptions to the rules that knives and spoons shall be placed at the right and forks at the left of the plate.
6. In a family table service tell the position of dishes and silver other than those belonging to the individual covers, for various meals.
7. If a waitress serves, describe the setting and use of the service table.
8. What type of table decorations do you consider in good taste? Name the occasion that you have in mind, and state the reasons for your choice.

9. What preparations are necessary before a meal is announced?
10. Describe two ways of serving a meal without a maid.
11. Explain what is meant by left-hand table service.
12. State the important rules for waiting on the table.
13. When is a service plate used? How does the waitress place and remove a service plate and remove and place a food plate?
14. Who should be served first at the table? Why?
15. What are the standard sizes of various plates?
16. How would you seat the following group at the table: mother, father, a man and his wife who are guests, a son, and a daughter who is to do the serving? There is no **maid**. Give reasons for the method of seating that you describe.

HOME PRACTICE

1. Set the table for your family meals.
2. Assist with the serving of meals.

HOME PROJECT

For a period of two weeks or a month assume the responsibility for serving the meals in your home. This project may involve the care of linens, silver, and dishes; setting the table; providing flowers for the table; and waiting on the table. If mother is away from home the project will include your acting as hostess.

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UNIT FIVE

MISCELLANEOUS

CHAPTER XXIX

FOOD FRILLS

CANDIES

WHETHER we should or should not eat candy the fact remains that we do. When we indulge in it, candy should be eaten at mealtime and counted as a part of the day's foods. Between meals, or in excess at any time, it is unwholesome. Why? Pure homemade candies, or plain hard candies are preferable to candies rich with chocolate and nuts.

SUGAR COOKERY

A modern confectionery shop is a dazzling array of marvels made from sugar. The confectioner's wares are the result partly of his own skill and his special equipment, and partly of his use of the few, simple principles of sugar cookery.

Principles of sugar cookery

1. Temperature. Sugar undergoes at different temperatures decided changes, and these changes cause the fundamental differences in candies. Success in sugar cookery depends upon a knowledge of the exact temperature required for a given result, and upon an accurate determination of this temperature.

One household test is made by dropping a little of the mixture in ice water. The stages are variously designated as soft ball, firm ball, hard ball, and crack. Another household test is the "thread" test. If a clear sugar solution is dropped from a fork it will form, at the soft-ball stage, a short thread or a "web" between the tines. A long thread will be formed at the firm-ball stage. At the "crack" stage there will be a long, hard thread. But at the best these tests are inaccurate.

Temperatures in candy-making

<i>Kind of candy</i>	<i>Temperature</i>	<i>Other household tests</i>
Fudge, opera creams, pinoche and similar cream candies	234° to 236° F.	Soft ball
Fondant (mints, etc.)	234° to 238° F.	Soft ball or thread
Marshmallows	238° to 240° F.	Soft ball
Caramel mixtures	246° to 252° F.	Firm ball
Taffies	254° to 270° F.	Hard ball
Butterscotch	280° to 300° F.	Crack
Brittles	290° to 310° F.	Hard crack
Boiled Frosting		
1 egg white to 1 cup sugar	238° to 242° F.	Soft ball or thread
2 egg whites to 1 cup sugar	244° to 248° F.	Soft ball or long thread
3 egg whites to 1 cup sugar	254° to 260° F.	Firm ball or long thread

2. Invert sugar. Sucrose (cane or beet sugar) is a double sugar, and may be converted into two simple sugars, glucose (grape sugar) and fructose (fruit sugar), by cooking with an acid. The process is called "inversion," and the product is often called "invert sugar." Invert sugar is good for use in candy-making since it does not crystallize or "grain" so easily as sucrose. A little invert sugar in a mixture will prevent the entire mass from graining and thus produce a smooth candy or frosting.

Although invert sugar may be produced by boiling sugar with a dilute acid it is sometimes included specifically in the recipe. Thus corn sirup, which is glucose, occurs in some candy recipes. Vinegar, lemon juice, and cream of tartar are dilute acids and are sometimes added to hasten the production of invert sugar.

3. Crystallization. The easy formation of crystals is a property of sugar. The size of the crystals is determined by the rate of crystallization. Extremely large crystals, such as those in rock candy, are produced by exceedingly slow crystallization. The

creaming of candy is due to the formation of very fine crystals. The graining of candy is due to the formation of coarse crystals.

Crystallization of an entire mass may be brought about by the presence of one crystal; hence the sides of the pan in which candy is cooking must be kept free of crystals. Heat encourages coarse crystals. Stirring or beating also hastens crystallization. A creamy candy should be cooled and then stirred or beaten. Why? A clear candy must not be beaten, and often even the scraping of the pan is disastrous. Why?

Divinity, fudge, fondant, and boiled frosting are examples of confections in which a creamy texture is desired. Three factors are important: (1) The boiling candy must be kept free of crystals. (2) In order to prevent graining owing to large crystals, the candy should be allowed to cool before it is beaten. (3) The candy is creamed by being beaten after it has cooled.

Do's and don'ts in candy-making

The following principles of sugar cookery are the basis for many of the practices in candy-making.

1. Be sure of good proportions. Use tested recipes.
2. Measure accurately.
3. Cook candy by temperature, using a chemical thermometer or a candy thermometer. Guesswork in this is a form of extravagance. The sugar spoiled by guessing at sugar temperatures would soon pay for a thermometer.
4. While the mixture cooks use a wet cloth or wet wooden spoon for wiping the sides of the pan. Boil the mixture gently.
5. If a creamy candy is desired, cool the mixture before beating, stirring, or pulling it.
6. For a clear candy, pour the hot mixture without stirring it.
7. All sugar mixtures produce better results if not stirred while cooking. If stirring is necessary do only enough to prevent burning.
8. A little corn sirup or an acid will help to produce a creamy smoothness in candy.
9. Pans and surfaces for cooling and molding candy should be buttered.
10. Clear weather is the best kind for candy-making.

Proportions and ingredients for candy

Corn sirup. One tablespoon to each cup of sugar.

Cream of tartar. One sixteenth teaspoon (a pinch) to each cup of sugar.

Lemon juice	} one fourth teaspoon to each cup of sugar.
or	
vinegar	

Sugar. Either cane or beet sugar may be used. Brown sugar may be used, but when the kind of sugar is not specified white is to be understood.

Corn sirup. Use the light or colorless corn sirup for a recipe unless the dark is specifically called for.

Molasses. Dark or light may be used according to preference.

Milk or cream. Use whole milk. If condensed milk is substituted for milk it should be diluted according to instructions on the can. Use unsweetened evaporated milk. Cream should not be substituted for milk or milk for cream. Why? If milk must be used instead of cream add one to two tablespoons of butter for each cup of milk, according to whether thin or thick cream is called for in the recipe.

Butter is the best fat to use because of its flavor. If a substitute is used, oleomargarine or cocoa butter is the preference.

Cocoa may be substituted for chocolate by the use of three to four tablespoons of cocoa and one half to one tablespoon of butter for each ounce (square) of unsweetened chocolate.

Popular homemade candies. See Recipes, pages 462-66.

Packing a box of candy. A box of homemade candy can be rendered attractive by arranging the candies so that there is a contrast in color, texture, size, shape, and kind.

Dried fruits should be rolled in granulated sugar.

Tiny pieces of candied fruit on top of each piece, in a color to match the coating, make dipped candies attractive.

Caramels look like a professional product if cut in even sizes and wrapped carefully in oiled paper. Devise a way to wrap caramels by studying the way bought caramels are wrapped.

Nuts, salted, sugared, or glacéd add interest to a box of candy.

Lace paper, oiled paper, white boxes, and careful wrapping all

make their contribution to the attractive appearance of the candy package.

A study of boxes of candy in the shops will yield many other ideas.

FANCY CAKES

1. *Decorated cookies.* Use a rich dough such as the recipe for crisps, page 443. Cookies to be decorated should be rolled thin and cut in various shapes. Brush the surface with egg white and decorate with any of these various materials:

Granulated sugar, plain or colored.

Very small candies.

Blanched almonds, in conventional designs or as petals for flowers.
Citron or angelica for leaves of flowers.

Angelica for stems of flowers.

Small pieces of candied cherry, ginger, orange peel, currants, raisins or nuts used in various ways.

Cakes may be cut in fancy shapes. Animal cookies or gingerbread men especially delight children.

2. *Rolled wafers* are appropriate, dainty accompaniments for frozen desserts, gelatin desserts, or beverages. Recipe page 443.

3. *Marguerites, kisses, and macaroons* are served with frozen desserts, custards, gelatin dishes, or with beverages at tea. For recipes and variations see page 444.

4. *Lady fingers* or *sponge drops* are shaped from sponge cake batter by means of a pastry tube and bag. With a little practice one can easily acquire the necessary skill.

Lady fingers are served especially with chocolate desserts. They are also suitable cakes for children's parties.

5. *Fancy frosting.* With a set of pastry tubes and a pastry bag, very attractive cake decorations can be made by a skilled person. The very elaborate decorations of wedding and birthday cakes are made in this way.

NUT CONFECTIONS

Salted nuts, sugared nuts, and glacéd nuts are useful as accompaniments for afternoon tea, party refreshments, buffet luncheons, and on other occasions. Recipes, page 466.

GARNISHING

(*Note:* It is not expected that special lessons will be given in garnishing. This subject should be presented with each day's lesson, but more particularly with the lessons on meal service.)

Food must please the eye as well as the palate. The ingenious cook wins hearty approval by an added touch here and there.

General rules for garnishing foods. The purpose of a garnish is to add to the attractiveness of a dish, hence it must not be made too conspicuous or used in too great a quantity.

Well-cooked food, served in attractive dishes, at a table well laid with linen and silver, needs little decoration.

Food is attractive in itself. The browned surfaces of cooked foods and the colors of such foods as tomatoes, radishes, and carrots need no adorning.

Because garnishes that come in contact with the food should be edible, such decorations as flowers or ribbons are not appropriate on the plate with food, though they may be used on a service plate or to ornament candlesticks.

Garnishes appropriate for courses or dishes

Cocktail. Catsup, parsley, celery, olives, radishes.

Soup course:

Brown crackers	Olives	Chopped parsley
Radishes	Whipped cream on bouillon or	or diced
Celery	cream soup	vegetables

Meat dishes:

Parsley, celery tops, water cress for any meat, hot or cold	Capers, chopped pickles, chopped pimento for sauces
Mint for lamb	Potato roses or Duchess potatoes for planked steak or fish
Cloves for baked ham	Vegetables cut in fancy shapes or diced
Spiced apples, or apple rings and cooked prunes for pork	Toast points
Sliced lemon for fish	
Lemon dipped in chopped parsley or paprika, or both, for fish	
Sliced tomatoes, lemon, radishes, lettuce, hard-cooked eggs for cold cuts of meat	

Vegetable dishes:

Cheese grated	Chopped parsley
Browned bread crumbs	Timbale cases or rosette wafers
Pimento	Bread cases

Salads. Salad vegetables and fruits are themselves highly decorative.

Lettuce	Pickles	Cherries; maraschino or crème de menthe
Eggs	Olives	Dressings, as Thousand Island
Radishes	Nuts	
	Cheese balls	

Desserts, like salads, are themselves highly decorative.

Sauces, as chocolate, marshmallow, caramel	
Cherries (red or green)	
Candied fruit	Candies
Fresh whole fruits, as strawberries	Nuts
Fresh crushed fruits	Whipped cream
	Fancy cakes

Beverages. Hot beverages may be improved in looks as well as in flavor by the use of whipped cream. Iced beverages are attractive with sliced orange or lemon, cherries, or a sprig of mint.

FLOWERS

Although flowers should not be placed on the same plate with food, as a table decoration they add an indispensable charm to a meal. A low bowl of flowers for the center is appropriate at all times. Flowers are helpful in carrying out color schemes.

The dessert is often served in stemmed glasses. When that is done, a small flower may be placed on the service plate. What is prettier for a spring luncheon than a stemmed glass piled lightly with a delicate green pistachio ice cream and accompanied by a spray of peach or apple blossoms on the service plate?

CLASS PROBLEMS

The class work for these lessons in fancy cookery should be incidental to some special occasion as Thanksgiving, Christmas, a class party, or a luncheon or dinner.

Candy

1. Visit a candy factory if arrangements can be made to do so.
2. Demonstrate the selection and serving of candies for various occasions

3. Demonstrate the use of a chemical candy thermometer in the cooking of candies and frostings. Compare the cold-water tests and thread tests made at the various temperatures.
4. Make candies at some special season of the year as Christmas, Valentine's Day, or Easter. Each student may furnish her own materials or pay a small fee to cover the cost of the materials purchased.
5. Members of the class may learn to make some choice candy outside the class and demonstrate it to the class.
6. Make fondant and fondant variations in class. (Recipes, page 463.)

Fancy cakes

7. Notice fancy cookies and cakes displayed at bakeries. Discuss and demonstrate decorations.
8. Make fancy decorated cookies. Use recipe for crisps, page 443.
9. Make rolled wafers. (Recipe, page 443.)
10. Make Marguerites, kisses, or macaroons. (Recipe page 444.)
11. Demonstrate the use of pastry bag and tubes.
12. Prepare salted nuts, sugared nuts, or glacéd nuts as the occasion demands.

Garnishing

13. Make use of all occasions when food is served at school for demonstrating appropriate garnishing.

QUESTIONS

Candy

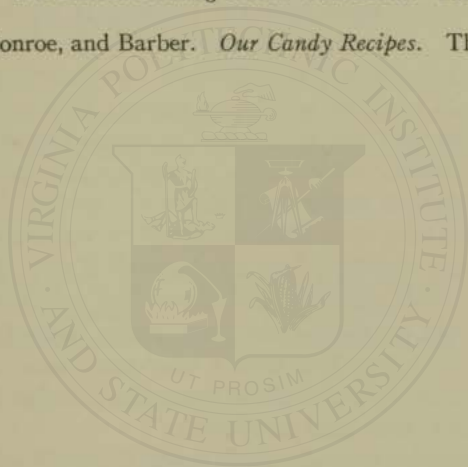
1. Do you eat candy wisely? Give reasons for your answer.
2. Discuss the use of candies as "frills" for special occasions.
3. What effects do various temperatures have upon a sugar solution?
4. What is invert sugar? Discuss its significance in sugar cookery.
5. Discuss crystallization of sugar as it affects candy-making.
6. Give reasons for the "Do's and Dont's," page 299.
7. State the temperature for and the kind of candies cooked to soft-ball, firm-ball, hard-ball, and crack stages.
8. Why is cream of tartar used in candy and frosting? What substitutes will accomplish the same result?
9. In candy recipes, how would you substitute milk for cream? Cocoa for chocolate? Condensed for sweet milk?
10. What is the object of garnishing? Give some general rules.
11. Give appropriate garnishes for various dishes, such as cocktails, soups, meats, fish, vegetables, salads, desserts.

HOME PRACTICE

1. Make mints for a party or some other occasion.
2. Make two kinds of candy that you have not yet tried to make.
3. Plan and prepare refreshments for a party.
4. Make a box of decorated cookies as a surprise for Thanksgiving, Christmas, or Mothers' Day.
5. Prepare nut confections.

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CHAPTER XXX

NOW AND THEN

INTRODUCTION

WHAT a humdrum life we should lead if there were no festival days such as Thanksgiving Day, Christmas time, New Year's Day, other special days, and vacation trips, each with its celebration in which food plays a special part.

Yuletide is no longer observed as in Ye Merrie Olde England, when the feasting began with the bringing in of the Yule log on Christmas Eve and continued through the ceremonial of burning the Christmas greens on Twelfth Night, but we still make merry at Christmas with candles, mistletoe, holly, Christmas trees, Santa Claus, and, last but not least, the Christmas dinner.

We may consider under three groupings the special occasions when food plays an important part:

I. There are feast days when the family ties are especially strong and which only intimate friends share with us. Thanksgiving, Christmas, fireside suppers, and picnics are the chief of these.

II. There are occasions when we invite other friends also to make merry with us. We may or may not choose a special day as the occasion. Some of these occasions are special luncheons, dinners, parties, teas, and receptions.

III. At times we go away from home for a vacation trip. We may eat in dining cars, hotels and restaurants, tea rooms, and various other public places.

I. OUR FAMILY FESTIVALS

1. **Thanksgiving dinner.** The term "Thanksgiving dinner" suggests a table laden with plenty. Roast turkey, cranberries, and pumpkin and mince pies are some of the characteristic dishes for Thanksgiving.

Except in the unchanging preference for turkey, the Thanksgiving menu shows many variations. Chrysanthemums, autumn leaves, and fruits are traditional table decorations.

An elaborate Thanksgiving menu

Scallop Cocktail
 Tomato Bouillon
 Crisped Paprika Crackers
 Celery Olives Salted Nuts
 Roast Stuffed Turkey
 Chestnut Dressing Giblet Gravy
 Jellied Cranberry Sauce
 Grilled Sweet Potatoes
 Onions in Cream Mashed Turnips
 Frozen Punch
 Romaine Salad French Dressing
 Cream Cheese Balls Crackers
 Pumpkin Pie Whipped Cream
 Fruit Nuts Cluster Raisins
 Café Noir

In the interests of health and economy a simple menu may be served without sacrificing any of the spirit of the occasion.

A simple Thanksgiving dinner menu

Scallop Cocktail
 Celery Olives
 Roast Turkey Jellied Cranberry Sauce
 Dressing Giblet Gravy
 Grilled Sweet Potatoes Mashed Turnips
 Lettuce Salad French Dressing
 Pumpkin Pie or Caramel Ice Cream
 Mints

2. Christmas dinner. The Christmas menu is not unlike that of Thanksgiving. Turkey is usually the main course, but roast goose also has a time-honored place on the Christmas dinner table. Sometimes a whole roast pig with a red apple in its mouth may be the main dish for the Christmas dinner.

Plum pudding with hard sauce, or fruit cake frequently displaces the pumpkin or mince pie. Ice cream is also a favorite dessert. Candies of all kinds are in high favor, and much is made of appropriate table decorations.

3. The picnic. When the outdoors beckons, anything is acceptable for a picnic supper. The possibilities of bacon, eggs, wieners, sausage and fried apples, and sandwiches need not be elaborated here.

The automobile and good roads have made picnicking popular, and many people have special picnic equipment and use the picnic as one of the ways of entertaining their friends. Elaborate equipment is not needed. Have you ever stopped to think that sandwiches are a great deal of trouble? A picnic de luxe can be prepared in less time and at no greater expense than a sandwich supper.

The following picnic menus are suggested as suitable for making a special occasion of the picnic. These menus can be prepared and taken with little effort if a refrigerator basket, dishes, and a bucket or skillet are available. If a fire is not permissible, a Sterno outfit may complete the picnic equipment. It is also a practical plan to keep the food hot for two or three hours by wrapping the vessels with much paper while they are very hot.

Menu No. 1

Meat Loaf	Barbecue Sauce	Celery
Potato Chips	Rolls	Coffee or Milk
Grapefruit or Cantaloupe or Cake with Whipped Cream		
Nuts		

Pack in the refrigerator basket the meat loaf, dressed celery, barbecue sauce in a screw-top jar, whipped cream in a screw-top jar, butter, individual bottles of milk, fruit, and cream for the coffee. Water may be carried in a bottle and poured onto ice in the ice container of the refrigerator basket. Coffee may be carried in a thermos jug or made at the picnic. The meat loaf may be sliced and heated with the sauce in a skillet a few minutes before serving.

Menu No. 2

Broiled or Smothered Chicken	Butter and Lemon Sauce
Cheese Straws	Olives
Combination Salad	
Strawberries and Cream	Coffee or Milk

Take the cooked chicken in a deep pan or bucket in which it may be reheated. Leave the gravy in the same utensil, and in reheating it add butter and a little lemon juice.

Pack in the refrigerator basket a screw-top glass jar of straw-

berries; a screw-top glass jar of whipped cream; a screw-top glass jar of combination salad (chopped tomato, cucumber, shredded lettuce with French dressing); individual bottles of milk; a bottle of cream for coffee; a bottle of olives.

When you arrive at the picnicking place, you have only to re-heat the chicken and the supper is ready.

II. WHEN THE LATCH STRING HANGS OUT

1. **The formal luncheon.** Women frequently entertain their friends at a formal luncheon or breakfast. A breakfast of this kind is almost a luncheon and is served between ten o'clock and noon. A color scheme may be carried out in the table decorations. Candles are frequently used. If more than ten or twelve guests are invited, they may be seated at small tables.

A formal luncheon menu

Color scheme: Yellow and green

Flower: Jonquil

Grapefruit

Cream of Pea Soup	Crackers
Chicken Croquettes (Parsley)	Hot Rolls Butter Balls
Spinach Timbales with Hard Cooked Egg	
Buttered Young Carrots	Iced Tea Mint
Sweet Pickled Peaches	
Orange Sherbet	Rolled Wafers
Mints	Coffee Nuts

The menu is served in Russian style. (See Table Service, Chapter XXVIII.)

2. **The party.** At a luncheon the food is one of the principal reasons for the gathering, but at a party the refreshments are incidental and should therefore be light. The hostess must put much time and thought into the entertainment for a party. Parties for special occasions are easy to plan and are effective. A Hallowe'en party, for example, is easily made a success. Why? Name some other occasions that you might select for a party.

For refreshments at afternoon parties two courses are sometimes served; a salad course and a dessert, usually a frozen dessert.

For evening parties one course is preferable. This may be either a salad or a frozen dessert.

Suggested party refreshments

Afternoon

Evening

No. 1 (Summer)

Perfection Salad Cheese Balls
 Iced Tea
 Brown Bread Sandwiches
 Frozen Apricots Angel Food squares

No. 1 (Summer)

Strawberry Parfait
 Rolled Wafers
 Mints Nuts

No. 2 (Winter)

Turkey Croquettes
 Peas Hot Rolls
 Hot Tea Salted Nuts
 Orange Ice Wafers
 Mints

No. 2 (Winter)

Chicken Salad
 Bread and Butter Sandwiches
 Salted Nuts Coffee
 Mints

The refreshments at children's parties are important, but they must be simple. Candles, favors, and small hard candies contribute to the menu but it is not usually complete without ice cream and cake. Plain ice cream and cookies that are not over-rich are preferable. The cookies may be in fancy shapes.

3. Teas and receptions. The term "tea" may indicate a very informal gathering of a few intimate friends for a fireside meal, or it may mean a rather formal gathering of a large number of people.

A reception is a formal affair. Frequently it is held in the evening and demands full dress. Engraved invitations are used. The occasion is either the visit of some distinguished guest, or the presentation to society of a *débutante*, a bride, or some other significant person. Receptions are also given as the formal entertainment of clubs, colleges, or other social groups. The country club or a hotel is more frequently used for receptions than the home.

If you want to introduce a guest to your friends, or to extend a courtesy to a large group of people, giving a formal afternoon tea is a comparatively easy plan. At a formal tea the hostess and a few of her friends whom she has requested to receive with her, form the "house party" and greet the guests as they arrive.

After passing this group the guests chat with other friends and acquaintances. Music adds to the occasion. Only elderly guests sit.

One goes to the dining room upon invitation. The tea table usually contains candles, attractive dishes of nuts, candies, sandwiches, and cakes. It is customary for one or two friends of the hostess to sit at the table and serve. The guest may be asked whether she prefers tea, coffee, or fruit punch. Sometimes young girls serve all the refreshments, but at other times each guest receives a plate and a beverage served by the person presiding at the tea table, and is expected to serve herself from the other dishes on the table. The food served at a tea should be dainty and attractive.

Invitations to a tea may or may not be written, but no written acceptance or refusal is necessary.

The informal tea is usually a fireside supper. Sunday evening is the chosen time. A tea wagon, an electric toaster, and a "tea kettle" add to the charm of the repast. The buffet supper described on pages 139-41 is really an informal tea.

III. WHEN WE JOURNEY

Let us pretend we are going on a trip to a large city. We have planned the trip for a long time and shall travel well — that is to say, we shall travel in a pullman car, eat in the dining car, and go to rooms reserved for us at an excellent hotel.

We wear tailored clothes, so chosen that the same ensemble is suitable for travel, shopping, the hotel, and the matinée. In each of our small traveling bags there is a dark silk afternoon dress, rather tailored in design and of the prevailing mode. This is for evening wear at dinner and at the theater. Hats and costume accessories have been well chosen.

The dining car. After the first few hours of comfortable riding we realize that we are hungry. Soon a waiter in a white coat comes through the car announcing, "First call to luncheon, dining car forward." After washing our hands and smoothing our hair we go forward to the dining car. The steward, or manager of the dining-car service, seats us at a table for two and leaves with us a menu card and a card and pencil for writing our order.

The bill of fare is well assorted but offers only a limited variety. We note that the prices are higher than those at any local eating place at home, but we observe that our neighbors have generous servings and have ordered only one or two dishes; that the linen, silver, and china are attractive, and that the service is excellent.

From the bill of fare we quickly select, perhaps, a combination dish that will give us both meat and vegetables, a pot pie for example, bread and butter, sliced tomatoes, and a glass of milk.

Above the hum of the train the noise of the dishes may be heard occasionally, but there is no loud talking or boisterous conduct. Every one is quiet, attentive to his own affairs, and considerate of others. Although we do not know any of the other travelers, we feel a friendly air in the dining car, perhaps because the steward has asked us if everything suits our taste and if we have any further wants.

We did not order a dessert because we were not sure that we wanted it. Our meal has satisfied us so well that when the waiter presents the card for us to choose a dessert we tell him that we do not care for anything more. The man across the aisle seems to want dessert but is undecided what to order. The waiter sees his indecision and suggests that the apple pie is very good, and the order for apple pie and coffee is given.

Our waiter has meanwhile removed all our dishes and placed a finger bowl in front of each of us. He presents the check and we pay him promptly. He returns the change on a small silver tray or a folded napkin. Perhaps we leave one or two coins as a "tip" for the waiter; in some States, however, "tipping" is prohibited by law. The waiter thanks us, pulls our chairs out as we rise, and we find our way back to our seats in the pullman or to the observation car, leaving our places in the diner to other hungry travelers.

Thus far the journey has been delightful and we feel that our vacation is to be a success.

At the hotel. Hotels are run on either the American or the European plan. An American plan hotel includes meals with the cost of the room. A European plan hotel offers meals, but the guest may eat elsewhere. Most large hotels are European

plan hotels, the smaller hotels are American plan. Our reservation has been made at a large hotel of which we have heard a great deal. Being tired from our journey, we are soon settled down in our comfortable room with little idea of the hotel except an impression that the lobby was large, the employees were courteous, and that we were made welcome as guests of the hotel.

Breakfast. The next morning the all important question is, "Where shall we eat and what shall we eat?"

The morning paper, placed at the door of the room, may have a small colored slip pasted at the top to remind the guest that "club breakfasts" are served in the coffee shop at reasonable prices.

We go to the coffee shop for breakfast. It is a business-like place with either counter or table service; at the end of the room white-capped cooks are making coffee, toast, or hot cakes in plain view. We feel at home at once.

We may be directed to a table or left to choose one for ourselves. The menu card handed to us is a series of club breakfasts at various prices. A club breakfast, we discover, is a meal with the combination of food designated, and is ordered by number. We order the combination which most resembles the breakfast to which we are accustomed, and tell the waitress our preference in beverages and whether we wish our eggs soft, medium, or hard cooked and our bacon crisp or medium.

We are served quickly and at a reasonable price. The waitress gives us separate checks. We may or may not leave a coin on the table, and pay our own check at the cashier's desk as we go out of the coffee shop.

Luncheon. At noon we return to the hotel and get ready for luncheon. We may eat a "business men's lunch" in the coffee shop or grillroom; the "fountain room" may tempt us; or we may prefer a near-by tea room.

In this hotel the fountain room — a pretty place with shaded lights — attracts us. A waitress in an attractive costume gives us a menu card. With some difficulty, because the list is so tempting, we choose an individual chicken pie, a toasted sandwich, or a delectable salad. The chances are we also order hot

chocolate with whipped cream and a hard roll, and an ice for dessert. The tastefully garnished food pleases us immensely.

Our check is larger than at breakfast, but we have had a very satisfactory luncheon in a short interval of time. Perhaps again we leave a coin on the table and pay the cashier as we go out.

Afternoon tea. In the afternoon we go to the *matinée* and after the play are again hungry. This time we choose a place that has "atmosphere" — a tea room. We must not spoil our dinner, but we must have a bite and talk over the play.

The tea room has planned for our needs, for we are given a menu card containing groups of dishes, listed after the plan of the club-breakfast card. We choose Tea No. 2 which consists of toasted English tea biscuit, marmalade, and a pot of orange pekoe tea or milk. After a very pleasant half hour we return to our hotel to rest.

Dinner. We dress for dinner, but not in formal dinner clothes. This time we choose the main dining room, which is brilliantly lighted. The head waiter, or usher, in full dress, leads us to a table. We notice that in mixed groups the ladies precede the men who accompany them. Waiters pull our chairs out for us and seat us comfortably.

We are given a large card with a smaller one attached. The large card, we soon discover, is the *à la carte* menu and is a bewildering array of dishes. The smaller card is the *table d'hôte* menu and simplifies our problem by reducing our range of choice. We must still choose between fruit and shrimp cocktail; *consommé* and noodle broth; chicken, baked ham, and roast beef; coffee, tea, and milk; and ice cream, French pastry, and other desserts. The dinner is served in formal style, and there is an orchestra, which plays at intervals.

At the end of the meal the waiter presents the check, and we pay as we did in the dining car. Since no one is waiting for our table, we linger awhile to chat and to enjoy one more selection from the orchestra. Men at adjoining tables are smoking.

Throughout the entire day, in the shops, coffee shop, fountain room, tea room, theater, and dining room we have heard no loud voices and have seen only well-mannered people. We like it all,

and when our holiday is over we are sorry. There will be other holiday trips now and then, but never one quite like this first. We go home wiser but not at all sadder.

CLASS PROBLEMS

Throughout the year various occasions for entertaining present themselves. They should be used as opportunities for carrying out class projects. Though no two years will present the same opportunities, each year will offer some special occasions for entertaining now and then. Hospitality is as much a part of homemaking as is doing the more routine affairs. Each class, throughout the year, can suggest appropriate, interesting, and attractive ways of observing special occasions.

1. Thanksgiving Day

1. Plan a Thanksgiving dinner menu.
2. Plan the table decorations and any other feature that helps make a festive occasion of the day.
3. If possible, demonstrate the dressing and roasting of a turkey and the making of oyster or chestnut dressing.
4. Make cranberry jelly. (Recipe pages 360 and 471.)
5. Prepare pumpkin or mince pie. (Find your own recipe.)

2. Christmas time

1. Make Christmas candies and nuts.
2. Plan a Christmas dinner menu, including favors and decorations. (Study December magazines for suggestions.)
3. Make fruit cake. (Recipe page 437.)
4. Christmas is a feast day in many lands. Try to find out what the Christmas menu offers in other countries and how the meal is served. Suggestions: England, France, Germany, Italy, Mexico.
5. Plan a Christmas party.

3. The picnic

1. Plan the following picnic, showing what preparation can be made ahead of time and how the lunch should be packed.

Individual Broiled Fillet Steaks (Bacon Wrapped)		
Sliced Tomatoes	Rolls	Milk
Cabbage Slaw		Sweet Pickles
	Cantaloupe	
Ribbon or Stick Candy		Salted Nuts

2. Estimate the cost and time of preparation for the foregoing picnic menu and compare with the usual type of picnic menu.
3. Show the class various types of picnic equipment: dishes, automobile lunch kit, refrigerator baskets, thermos jugs.
4. Prepare a picnic lunch as a class project.

4. *The luncheon*

1. Serve the luncheon menu on page 309 as a mock luncheon, using formal table service.
2. Plan a Valentine luncheon with appropriate color scheme and table decorations. An Easter breakfast.
3. Give a formal luncheon at school as a class project. It is suggested that some special day be the occasion of the luncheon.

5. *The party*

1. Plan a class party, including decorations, entertainment, and refreshments.
2. Plan a party for a child's birthday.

6. *The tea*

1. The class should give a tea to some group in school. Plan and execute the tea as a class project.
2. Plan an afternoon party for a group of your school friends.
3. Plan an evening party for a group of school boys and girls.

7. *Public eating places*

1. Have a question box for receiving unsigned questions involving etiquette at hotels, restaurants, dining cars, tea rooms.
2. Collect sample cards from tea rooms, restaurants, hotels, dining cars. Order mock meals from these cards. (See pages 152,153.)

Note: Members of the class may be appointed to write to various sources for these cards. Not more than one request should be made of each place. In writing explain that the card is wanted because the class in home economics is studying how to order food in public places.

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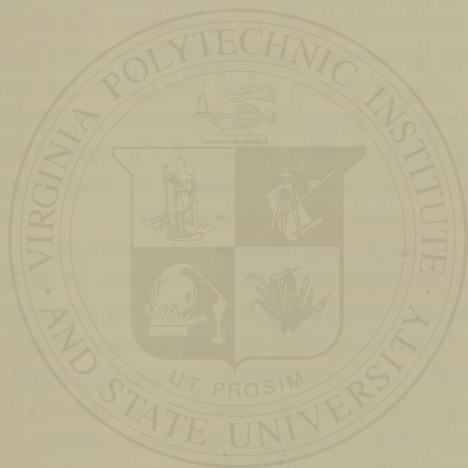
Lutes, D. T. *The Gracious Hostess*. Bobbs Merrill Co.

Post, Emily. *Etiquette*. Funk and Wagnalls. Discusses special occasions, at times in somewhat elaborate fashion.

Dennison Manufacturing Company. Main Offices in New York, Chicago, Boston, Philadelphia, and Framingham, Massachusetts. Suggestions for decorations and favors on special occasions. Do not use many suggestions for one party! Save the rest for other times.

Pamphlets from *McCall's Magazine*, New York — *What to Serve at Parties*; *Parties All the Year*; and *More Parties*.

Current magazines, especially magazines for women.



CHAPTER XXXI

FEEDING THE SICK

GENERAL CONSIDERATIONS

THERE comes a time in every household when responsibility must be assumed for preparing food for the sick. In cases of serious illness the diet is of first importance, and the physician prescribes it with as much care as he prescribes the medicine. He expects the housewife or the home nurse to attend to the details of preparing and serving it without any instructions from him. There are many minor cases of illness when the physician is not called or when he does not give specific instructions to the housewife concerning the patient's food. Although she should not presume to prescribe a diet for serious illness, a general understanding of feeding the sick is an asset to any housewife.

Tempting and appetizing dishes are essential, for a sick person seldom wants food even though it is important to his well-being. It is often necessary to give a patient food he does not like. It will be possible sometimes to disguise his food, which may solve the problem. A patient may take an egg in a beverage or a soup and never suspect it. Regard individual preferences so far as circumstances permit. If one notices how the patient receives the tray and what he eats, these preferences can soon be learned.

Do not give the same food twice in succession unless ordered. Variety is more essential in feeding sick people than in feeding well people, and it is much harder to attain. Why? Serve small portions and only a few kinds of food at a time. It adds interest to the meal and makes for convenience in eating from a tray if meals are served in courses. Only easily digested foods, prepared in simple combinations should be served. Tempt the appetite by means of pleasing garnishes, savory flavors, and attractive service.

Do not serve very sweet foods. In illness we often dislike the foods that we like best in health. Sweets are a striking example of this. They leave an unpleasant lingering taste and dull the

appetite. All food must be thoroughly cooked. Only the best should be used. In selecting, cooking, and serving sick-room meals great care must be exercised, otherwise the patient may have to suffer from disorders due to germs introduced through the food.

Typical diets for the sick. The doctor frequently prescribes merely a liquid diet, a soft diet, or a light diet. What does he mean?

<i>Liquid diet</i>	<i>Soft diet</i>	<i>Light diet</i>
Broths, beef tea	Milk toast	Liquid and soft diets
Soups, clear and cream	Soft-cooked eggs	plus an easily digested
Fruit juices — very im- portant	Well-cooked, strained cereals	meat as:
Milk and milk drinks	Broth with rice	breast of chicken or
Raw eggs	Vegetable pulp	broiled scraped steak
Cereal gruels	Custards	or white fish
Water ices (strained)	Corn starch pudding	Fruits
(Soft-cooked eggs, some- times)	Junket	Vegetables
(Toast dipped in hot milk, sometimes)	Frozen desserts (not very sweet)	Bread or toast
	Gelatin — plain	Simple desserts

Invalid cookery. Proper cooking for the sick requires an understanding of the nutritive value of foods and their relative digestibility, but it does not require any unusual skill or technique in cookery. It does require an interest in the patient and careful preparation of the food.

Most of the articles of food listed above have been treated elsewhere in this book. The cream of tomato soup served to the sick person is the same as that served to the well person, except that the invalid's soup should contain no pulp at all. A soft-cooked egg is prepared for the invalid's tray in the same way that it is prepared for the family meal.

For liquid and soft diets the same food may be served to the sick member of the family that is served to the others. It must be less highly seasoned, and it must be strained. For example, suppose spinach with egg sauce occurs in the family menu. Before the spinach is seasoned a small serving for the convalescent may be pressed through a strainer and then reheated with a little salt and perhaps a little butter.

It materially lightens the work in preparing the meals for children, the sick, and the convalescent if the family meals are so planned that the menu contains foods that are easily adapted to these special requirements.

Special invalid dishes. If a person is ill for a very few days it makes little difference whether his food meets his energy requirements or not. In cases of prolonged illness it is highly important that the food approximate the energy requirement of the patient in order to prevent the body tissues from being utilized as fuel, and so wasting away. In fever cases the energy requirement is often higher than the normal energy requirement. Furnishing the proper number of calories in a liquid or soft diet requires much thought and planning.

Clear soups and beef broths have little or no food value in themselves; they are stimulants to appetite. Extra calories can be tucked into broths by the addition of eggs or cereals or milk.

Cereal gruels are easily digested and are not irritating. Their fuel value is not high but it is higher than that of clear soups, and it may be enriched by the addition of milk or eggs.

Milk is the most valuable food for invalids. The reasons for this are clear from the discussion of milk in an earlier chapter. Precautions must be taken to have absolutely clean milk. It must be remembered that milk is the most easily contaminated of all foods and that sick people are less resistant to bacteria than well people. If certified milk is available it should be used in cases of illness. If the source of the milk is in doubt, the milk should be boiled.

Modification of milk is often necessary. (1) It is easy to modify milk for invalids by combining it with cereal gruels or by making junket dishes. (2) Buttermilk is sometimes preferred because of its flavor or because it forms no curd in the stomach. (3) The greatest difficulty encountered may be the invalid's dislike for milk; often this is caused by a lack of variety in the way the milk is served. Milk may be disguised in a variety of ways. It may be flavored with coffee, tea, cocoa, or some other flavoring that the doctor allows. Malted milk may be used. Milk may be served hot, cold, or frozen.

Raw eggs are not usually liked, but they can be disguised in

milk, broth, cereal gruels, and in fruit juice or water. In these "albumenized" drinks egg white is commonly used and the yolk is omitted. The nutritive value of any drink is improved though not greatly increased by this addition, and the beverage is often soothing to the digestive tract. One egg white adds only about fourteen calories, but one egg yolk adds fifty-six calories. Yolk is more difficult to disguise than white, but it is readily accepted in eggnog or in milk shakes.

Lactose, or milk sugar, is procurable at all drug stores and is valuable in increasing the fuel value of foods for the sick. It is readily soluble in warm liquids and does not perceptibly affect the taste of a dish. It has the same fuel value as ordinary sugar but it lacks the sweet taste, is not irritating to the digestive tract, and does not easily ferment. It may be added to various drinks, milk, soups, cereals, and to simple desserts such as ices, custards, and gelatin. It should be dissolved in the liquid used in preparing any dish. Its presence will not be noticeable.

In some illnesses of short duration, as, for example, indigestion, it may be best not to eat at all.

The invalid's tray. The invalid's tray must be attractive. The prettiest white linen in the household stock and the daintiest china, silver, and glassware should be used.

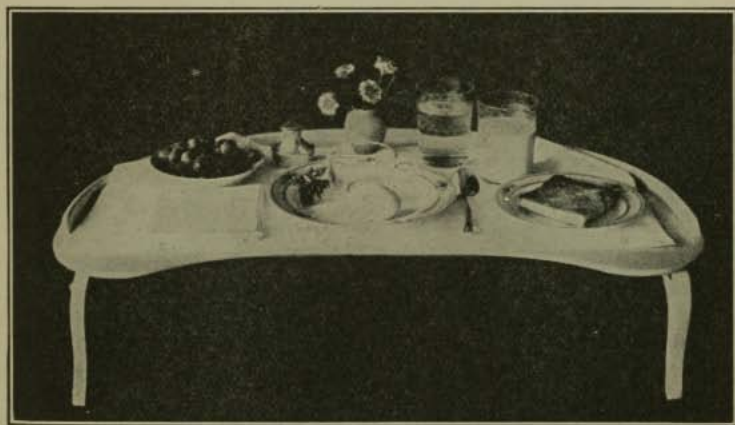


FIG. 69. A TRAY FOR THE CONVALESCENT

Do not put too many dishes on the tray at one time. It may be best to serve the meal in courses.

Serve small portions.

The tray should be covered.

Hot foods must be hot and cold foods cold.

Do not fill glasses, cups, or bowls very full.

A single flower on the tray will be sure to please.

Bent glass tubes or straws are useful for drinking beverages.

A special invalid's tray is desirable for continued illness. Two types are available: (1) a table that swings across the bed from a side support; (2) a tray (with end supports) which can be placed across the patient's body without resting on him.

Care of trays from the sick-room. In contagious diseases, even colds, or in illness that has not been diagnosed, scrupulous care must be exercised to prevent spreading of the disease.

Burn all left-over foods.

Boil the linens.

Sterilize the dishes by boiling. Separate utensils should be used for washing dishes from the sick-room.

In serious contagious diseases, when there is a special nurse and a separate bath room the dishes should be washed and sterilized in bichloride of mercury before they leave the room. A nurse will of course understand her responsibility in such cases.

Special diets. There is no specific food for any specific disease, but there are special diets for some diseases. These diseases should be diagnosed and the diet prescribed by a competent physician. A knowledge of foods and cookery insures intelligent execution of the doctor's orders.

CLASS PROBLEMS

1. Prepare beverages especially suitable for the invalid; albumenized drinks, lactose in drinks, modifications of milk.
2. Set an invalid's tray for different menus. Make special invalid dishes such as junket, gruels, custards with lactose.
3. Give a practical review of the simple dishes prepared throughout the course that are suitable for feeding the sick.
4. Set up sample menus for a day's feeding on liquid diet, soft diet, light diet. Estimate the calories in each. Plan family menus that could

be used on the same day with a minimum of special preparation for the invalid.

5. Increase the calories in the above menus by the addition of albumen, egg yolk, lactose.
6. Demonstrate methods of handling and sterilizing trays from the sick-room which could be practiced in the average home.

QUESTIONS

1. Mention general considerations in preparing food for the sick.
2. What is included in a liquid diet? A soft diet? A light diet?
3. Why is it important to have milk in the diet of the sick person?
4. Explain some ways of inducing a patient to take milk.
5. Name several dishes suitable for a liquid diet, and discuss the food value of each.
6. How does the energy requirement in sickness compare with that in health? Give suggestions for meeting this energy requirement in sickness.
7. What points would you bear in mind in preparing the invalid's tray?
8. How should dishes from the sick-room be cared for, and why?
9. Why is a knowledge of foods and cookery of value to the housewife or the home nurse in cases of illness? Illustrate.

HOME PROJECT

If there is an invalid in your family, prepare the trays for the evening meal for a period of a week. You must first know the doctor's orders and how they are carried out for the other meals of the day. Why?

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- Pattee, A. F. *Practical Dietetics*. A. F. Pattee, publisher, Mt. Vernon, N.Y. (Frequent new editions.) Chapters IV, V, VI, and recipes in Part Two.
- Willard and Gillett. *Dietetics for High Schools*. The Macmillan Company. Appendix A.

CHAPTER XXXII

FOOD FOR CHILDREN

Do children need special food? Nobody expects a child to dig a ditch or fell a tree, to run a locomotive or manage a store. Why? These jobs are for adults.

As a child gradually develops into an adult in the world of affairs, there is a gradual change in his physical ability to digest foods. For the first twelve years a child's food should be carefully selected and his eating habits wisely guided. During these early years he is not completely equipped to digest all foods. His digestive system is as young as his brain and his muscles and as incapable of adult performance. When he is seven or eight years old he has only begun to get his permanent equipment for chewing.

A child's food must be carefully selected, for it must contain the materials needed for growth, and these, if the body is to use them properly, must be in a form that is easily digestible.

Eating habits are of much importance. If a child bolts his food before he is twelve, he will probably continue to bolt it. If he develops food prejudices before he is twelve, it is likely that he will continue to exclude those foods from his diet.

The main objectives in feeding children are: (1) to select the foods that will meet their body requirements; (2) to give these foods in simple, easily digested, combinations; (3) to teach each child to like a wide variety of suitable foods; (4) to establish good habits of eating.

The importance of careful feeding in childhood. The following quotations from recognized authorities speak for themselves.

"One year of good feeding at the beginning of life is more important than ten after forty."¹

"The child's food is the foundation for his future. Health and disease, strength and weakness, usefulness and uselessness may be the result of feeding in childhood.

¹ From Dr. Mary S. Rose. *Feeding the Family* (Revised ed.), p. 132. Reprinted by permission of The Macmillan Company, publishers.

"The choice of the child's food cannot be left to chance but must be a matter of thoughtful care from early infancy, if the best growth of body and mind is to be insured."¹

Foods each child needs daily. Every child needs, each day, foods for growth — complete proteins, minerals, and vitamins; foods for energy — easily digested and non-irritating carbohydrates and fats; and foods for regulating body processes and for protection against disease — vitamins, water, minerals, and laxative substances. The following articles of food will supply the daily food requirement of children.



FIG. 70. START THE DAY WITH A GOOD BREAKFAST

I. A QUART OF MILK. Not less than one and a half pints of milk should be given, and not more than a quart is desirable. Space must be left for other foods. Milk will furnish protein, calcium, phosphorus, vitamins A and B, and water. What will it lack?

2. A FRESH FRUIT to furnish vitamin C, minerals, and laxative substances.

¹ D. R. Mendenhall. *What to Feed the Children*. University of Wisconsin Extension Circular 166, p. 3. (1924.)

3. A GREEN VEGETABLE, especially to supply vitamin C and iron. It also aids in supplying minerals, vitamins A and B, and cellulose.

4. ONE OR TWO CEREALS, in easily digested form, for fuel. If whole grains are used, iron, phosphorus, vitamin B, laxative substances and some protein will be supplied.

5. EASILY DIGESTED FAT, such as butter or cream to furnish some of the calories needed.

6. AN EGG YOLK, or a WHOLE EGG, every other day, after the first year to insure a plentiful supply of protein, vitamin A, fat, iron, phosphorus, and vitamin D.

7. WATER for regulation of body processes.

8. DIRECT SUNSHINE, or VITAMIN D, or BOTH, for prevention of rickets, a disease very common among young children. Rickets is an improper calcification of the bones.

Normal bone growth requires both a right proportion of calcium and phosphorus and the presence of vitamin D. Vitamin D is found in egg yolk, but cod liver oil is its richest source. Rickets seldom occurs in children who are out of doors in the sunlight most of the time. The direct sunlight seems to make up for an inadequate supply of vitamin D. To insure normal bone development it is safest to include cod liver oil in the diet. Babies may be given from a few drops to a half teaspoon twice each day, and children of school age may take a teaspoon of it with each meal. A green-leaf vegetable, egg yolk, and play out of doors in the sunshine are additional safeguards.

Feeding the infant of one year of age. By the end of the first year a baby should have daily:

One quart of milk.

One to three tablespoons of mild fruit juice or strained fruit pulp.

One to two tablespoons of strained green vegetable pulp or juice.

One half to one raw egg yolk.

Two tablespoons of cereal, cooked and strained.

A piece of stale bread or crisp zwieback to develop the muscles used in chewing.

In order to insure a child's eating these simple foods and continuing to eat what he needs, his appetite must not be perverted by giving him tastes of other foods.

A child arrives very gradually at the accomplishment of eating the above foods. For a detailed study of the care and feeding of the baby procure bulletins from the Children's Bureau, United States Department of Labor, Washington, D.C., and from the Bureau of Child Hygiene in your own State Department of Health.

During the first year the baby should be fed under the direction of a physician, preferably one who is a specialist in child feeding. By the end of six months the baby should double his weight at birth, and by the end of one year triple it. In the first year a child should gain four to eight ounces each week, the greater gains being made in the earlier months.

Scrupulous care must be used in handling food for children, especially for babies. The source and grade of the milk should be known. If the source of the milk is in doubt, the milk should be boiled one minute and then cooled immediately. Where the grade of the milk is uncertain physicians sometimes recommend the use of dried whole milk. Mother's milk is preferable to artificial feeding in the first few months.

Feeding the two-year-old toddler. In the second year a child should be taught to drink from a cup. No food except water should be given between the regular feeding times. Milk should still be the chief article of food. Cereals may be given unstrained unless they prove too laxative. Dry cooked cereals may be used at times.

Leafy vegetables should have preference, though at this time two vegetables may be given daily. One green vegetable and one root vegetable are a good selection. Spinach, carrots, cabbage, string beans, turnip greens, and tender lettuce are all suitable. Soups furnish a good method of combining milk and vegetables. Authorities on child feeding sometimes advise the combination of two or three vegetables in one dish with a broth as the foundation. This is a successful method of developing in the child a liking for different flavors.

Fresh fruit juice or pulp should be given daily. Apples, pine-

apple, oranges, and peaches may be used. Prunes are good, but when they are used, a little raw vegetable should be given. Why is some uncooked food needed daily? An egg yolk may be given each day or a whole egg every other day. The egg may be raw or soft-cooked. Avoid soft bread. Give hard crackers, stale bread, or zwieback. The child needs the exercise of chewing. No desserts are necessary, and a child of this age is better off without cake or candy.

Feeding the pre-school child (three to seven years). The diet of the child gradually becomes more complex. Combinations of food may be served; also some of the milk may be used with more solid foods: as for example, top milk or cream with the cereal. Unlimited choice of well-cooked cereals is permissible. Cream soups, milk toast, custards, junket, and other dishes with milk as a foundation may be served.

Fruit, preferably raw, should be used once daily. Fresh vegetables are important; they may be enriched with butter or cream sauce. Simple desserts are well liked and are useful additions to the diet. Whole-cooked eggs may be used several times each week.

During the fifth or sixth year the quantity of food is gradually increased, but the meals still should consist of milk, cereals, fruits, vegetables, bread, butter, and simple desserts. Richer combinations of food are permissible. Frozen desserts are hailed with much delight and are an acceptable combination of milk with fruit or eggs. Whole raw fruits may be eaten at this time.

Meat is now the chief addition to the diet. When first introduced into the diet, meat should be given on alternate days with eggs. Easily digested meat is preferable. Meat may be digested earlier, but when children eat highly flavored foods they lose their taste for foods of mild flavor. Since the introduction of meat often results in taking less milk, meat should be withheld until the milk habit is so well established that no other food will take its place in the child's diet.

Feeding the school child. When eight years old, the child is usually in school all day. Since school children may eat one meal away from home, it is wise to teach them what foods they should eat, and why. Children are ambitious to grow to be strong,



FIG. 71. THE CHIEF MEAL SHOULD COME AT MIDDAY

healthy adults and they can readily be taught to understand the relationship of food to health. The chapter on the school lunch deals with the food of school children. See Chapter XIII.

The daily meals for children. When should mealtime come? Younger children eat more frequently than older ones, but giving them a few fairly substantial meals rather than frequent light meals makes for good digestion.

The smaller children should have their meals at a small table and at different hours from the hours of family meals. Under such a system there is less temptation to give them foods they should not eat; there is more time to teach them to eat properly; and there is more pleasure for the older members of the family. All meals should be regular — by the clock.

1. *The infant.* The number of feedings varies from six to four for different ages.

	A.M.	P.M.
First six months, five or six feedings in 24 hours	2, 6, 10	2, 6, 10
The 2 A.M. feeding should be discontinued as early as possible		
Sixth to ninth or tenth month, five feedings	6, 10	2, 6, 10
After the tenth month throughout the second year	7, 10	2, 6

The Menu

<i>5 feedings (6 months)</i>	<i>5 feedings (9 months)</i>	<i>4 feedings (1 year)</i>
Milk, at each feeding equal amounts	6 A.M. Milk	7 A.M. Milk, 1 glass
Orange juice one hour or 30 minutes before 9 o'clock feeding	9 A.M. Fruit juice, 1 T.	9 A.M. Orange juice or other fruit pulp
	10 A.M. Cereal jelly, 1 T. Milk	Dry toast
	2 P.M. Vegetable juice or pulp, 1 T.	10 A.M. Cereal 2-4 T. Top milk
	6 P.M. Cereal jelly, 1 T. Milk	Milk $\frac{1}{2}$ glass Zwieback
	10 P.M. Milk	2 P.M. Vegetables Milk 1 glass Egg yolk $\frac{1}{2}$
		6 P.M. Milk Bread or Cereal Fruit

2. *The toddler.* The three-year-old may be fed four meals each day.

<i>Breakfast</i>	<i>Dinner</i>	<i>Lunch</i>	<i>Supper</i>
7:30 A.M.	11:30 to 12 M.	2 to 3 P.M.	5 to 6 P.M.
Fresh fruit	Vegetable soup	A glass of milk	Bread and butter
Cereal with top milk	Coddled egg	Fruit	or
Glass of milk	Green vegetable		Cereal
Toast, zwieback, or dry bread	Stewed fruit		Glass of milk

3. *The school child.* Three good meals should be served regularly to all older children.

<i>Breakfast</i>	<i>Dinner</i>	<i>Supper</i>
Fresh fruit	Soup	Milk or thin cream
Cereal, top milk	An occasional serving of meat	Lettuce sandwich (Brown bread)
Egg	Two vegetables	A simple sweet
Glass of milk	A green vegetable (raw desirable if no raw fruit is served)	
Bread and butter	A root vegetable	
	Bread and butter	
	A simple dessert	

All foods should be well cooked and pleasingly served. The heartiest meal for a child should come at noon. An early supper is advisable. The food for supper is simple and promotes quiet sleep. Regularity is of great importance in feeding children. There should be no hurry at mealtime. Children should eat what is put before them; it is not safe to trust to their whims and fancies of appetite.

A child needs water, but it should be given between meals. Because milk is a bulky food and occupies a large place in each day's meals, it is not advisable to give water at mealtime. Children like sweets, which should be given at the end of each meal if given at all. Do not give sweets between meals. Why? Food is important for health, but sunshine, a certain amount of outdoor play, and long hours of sleep with plenty of fresh air are also necessary.



FIG. 72. SIMPLE SUPPERS ARE BEST

Don'ts in child feeding. Do not give a child tastes of forbidden foods. Such a practice will pervert his taste and make him dissatisfied with the bland foods which he needs.

Do not, in the presence of a child, express food prejudices.

Give only sound ripe fruit to children. Underripe or overripe fruit is not safe.

Do not give any poorly cooked foods to children.

Avoid in their diet fat meat such as sausage, ham, goose, salmon, and all canned fish or meat.

Hot breads are not wholesome because they cannot be chewed easily. Crisp breads are preferable.

Fried foods are not suitable for children.

Tea and coffee should never be given to children.

All rich combinations of food are to be avoided.

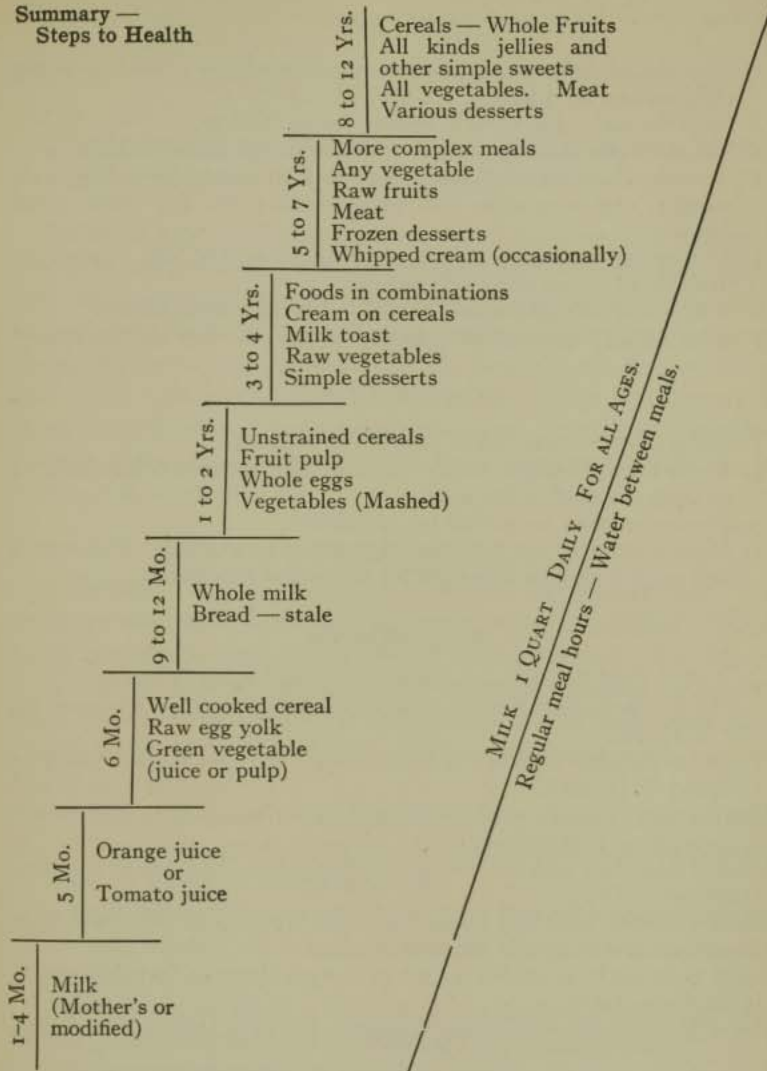
Do not pamper a child's appetite. If he is given what he should have without raising the question as to whether or not he wants it, he will usually accept it without protest.

Most of the difficulties in feeding children have small beginnings. Do not make the first mistake by inviting whims and you will save much future trouble.

CLASS PROBLEMS

1. Order bulletins on infant feeding. Study and discuss them in class. Demonstrate the feeding of a child less than six months old.
2. If possible, bring a baby to school, or go as a class to the home of the baby. Ask the mother to demonstrate the preparation of the baby's food for one day.
3. If a children's specialist is available, invite him to talk on the importance of right feeding in childhood.
4. Study the feeding of children of different ages. It will add to the interest if specific children are considered.
5. Plan, prepare, and serve a noon dinner to a group of children four or five years of age.
6. Plan and give a children's party.
7. Order a meal for a seven-year-old child from the hotel dinner menu given on pages 152-53.

Summary —
Steps to Health



These steps illustrate the additions that are made to a child's dietary for each age indicated. Each period, of course, includes all foods taken at previous ages.

QUESTIONS

1. Why should there be a difference between the types of food for young children and for adults?
2. State the main objectives in feeding young children.
3. List the foods that every child needs daily, and give reasons.
4. Give the characteristic foods in a day's food supply for a child of six months, twelve months, two years, three years, five years, seven years.
5. At what hours should children of the above ages be fed? Group the foods listed in question 4 into menus.
6. Why is cod liver oil frequently used in feeding young children?
7. Why should a quart of milk per day be used in every child's dietary?

HOME PROJECT

1. Undertake to teach a child good table manners.
2. If you have a younger brother or sister who does not drink milk, try to teach the child to like milk.
3. Prepare suppers for a child for two weeks.
4. Make a study of the food requirements of some child. Plan menus and prepare food for this child for a period of two weeks.

REFERENCES

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- Rose, M. S. *Feeding the Family*. The Macmillan Company. Chapters VI, VII, VIII, IX.
- Willard and Gillett. *Dietetics for High Schools*. The Macmillan Company. Chapters VIII and IX.
- Bulletins and Circulars from the Child Health Association, 370 Seventh Avenue, New York City.
- Bulletins from the Children's Bureau, United States Department of Labor, Washington, D.C.
- Recent Bulletins from the Bureau of Child Hygiene in your own State Department of Health in the State Capitol.
- Recent Bulletins from the State College of Agriculture or State University in your own State.
- Posters, Extension Bureau, Home Economics Division, University of Texas.

CHAPTER XXXIII

FOOD PRESERVATION — CANNING FRUITS AND VEGETABLES

BECAUSE food spoils easily, methods of keeping it have been in use from early times. Modern methods and facilities for keeping and transporting it play an important part in our everyday lives; city life is entirely dependent upon them, and they make easy the housewife's problem of furnishing her family a wholesome mixed diet. By cold storage the season is materially lengthened for many fresh foods. By canning and drying, fruits and vegetables may be had at moderate cost when fresh fruits and vegetables are scarce and expensive.

WAYS OF PRESERVING FOODS

1. **Drying.** Drying is nature's method of preservation. All seeds are dry, which accounts for their keeping qualities. Foods made from seeds, such as cereals and flour, keep well. Drying is a primitive method of saving meats. In modern times drying has been widely used for fruits, vegetables, meat, milk, and eggs. Dried foods are economical, easily transported, and may be stored in small space.

2. **Cold storage or refrigeration.** The distribution of fresh meats, eggs, fish, poultry, fruits, and vegetables is made possible by modern methods of refrigeration.

3. **Canning** is an important household and commercial method of keeping foods. It is practicable for meats, fish, fruits, and vegetables.

4. **Exclusion of air** is a household method of preserving eggs. Water glass, paraffin, and vaseline are the materials used.

5. **Preservatives** may be added to foods to improve their keeping qualities. The most common preservatives in use are:

Sugar in dense solutions — for jellies, jams, conserves, fruit butters, marmalades and preserves.

Spices — *pepper* and *other condiments* (usually used in combinations with other preservatives), as in mince meat and sweet pickles.

Acids — such as vinegar in pickles.

Salt and *salt solutions*, as in salt codfish, salt pork, olives, and other pickles.

Smoke, as in the curing of meats. (Commercially the creosote vat has replaced the smokehouse, but smoke imparts a better flavor than creosote.)

Harmful preservatives. Many substances such as salicylic acid, borax or boracic acid, benzoate of soda. These substances preserve foods, but they may be harmful in their effect upon the body. Their use is not permitted under the Food and Drugs Act unless the percentage is stated on the label. The effect of this has been to eliminate them from commercial products. They are still sold to the housewife as canning powders under trade names that do not disclose the chemical substances present. Avoid all such substances as unnecessary and as possibly injurious to health.

Why food spoils. Microorganisms such as molds, yeast, and bacteria are responsible for the spoiling of food.

Molds may be seen with the naked eye. You are familiar with this kind of substance on the surfaces of fruits, bread, and other foods. Molds grow easily on bruised surfaces and require less moisture than other microorganisms. They are readily destroyed by heat.

Yeast is discussed in the chapter on bread making (chapter XII). Yeast lives on starches and sugars and requires considerable moisture. Fruits are most frequently spoiled by yeast; the change that it produces is called fermentation. Yeast is easily killed by heat.

Bacteria are the most troublesome organisms in the spoilage of food. They are not as readily destroyed as molds or yeast and the products of their action are more harmful. The spoiling of milk, eggs, meats, and vegetables is due to bacterial action. Most bacteria can be destroyed by subjecting the material to a boiling temperature for a short period of time. Some bacteria are difficult to destroy because they form spores, which are resistant to high temperatures.

The use of canned foods. Although canned foods are not so well liked as a rule, as the same foods when fresh, the use of canned material adds variety to the menu and makes a balanced diet possible at all seasons. Canned tomatoes, asparagus, pineapple, green peas, milk, and salmon illustrate how canning serves to distribute the use of foods over seasons and in localities in which they are not available in the fresh condition.

Canned foods have the food value of fresh foods with the exception of a loss of vitamin C. Exclusive of tomatoes, and possibly other acid fruits, the vitamin C content of canned or stored vegetables and fruits is negligible. Since minerals and vitamin B are water soluble it follows that there is a partial loss of these elements if the liquid in the can is discarded.

Precautions in the use of canned foods. The ends of a tin can used for food should be flat or slightly concave. Neither end should bulge or snap back when pressed. Bulged cans indicate spoilage; such cans are called "swells." Such spoilage is easily detected.

In glass jars there should be no sign of leakage around the rubber. The metal cover should be flat or slightly concave. The liquid should be clear, and there should be no bubbles. When the jar or can is opened there should be a slight suction caused by the air entering to fill the partial vacuum in the interior. Any out-rush of gas or liquid indicates spoilage.

The contents should appear sound and the odor should be characteristic of the food contained. Any "off" odor probably indicates spoilage. Remove the contents from a tin can as soon as it is opened. The inside of a can should be smooth and clear. It should not be darkened or corroded.

The most dangerous spoilage in canned goods is that of meats and nonacid vegetables, and is due to the toxin produced by *Bacillus botulinus*. This toxin is very poisonous and is difficult to detect because it does not affect either the taste or the odor of the food. There have been many fatalities from this type of food poisoning. The toxin is volatile and if present in small quantities it may be destroyed by boiling the food.

Because *Bacillus botulinus* is a spore-forming bacterium, it

is not readily destroyed at boiling temperature. The temperature in a pressure cooker can be raised many degrees above the boiling point of water; this high degree of heat together with the pressure involved is necessary to kill *Bacillus botulinus*. This bacillus occurs more frequently in meat, corn, olives, peas, and beans than elsewhere; it may occur in any nonacid vegetable. These foods, therefore, should be canned under pressure. Botulinus toxin is poisonous to animals as well as to humans. Food spoiled in this way should be burned.

Home canning. Not only is canning a commercial industry, but it is an important home industry. Home canning is usually an economy if there is a surplus of fruits and vegetables produced at home. In cold climates it is unnecessary to can vegetables that can be kept by storing, such as pumpkins, carrots, potatoes, turnips, winter squash, mature beets. In southern climates, where the garden will yield fresh vegetables every month in the year, there is little reason for canning for family use, but canning the surplus for market may prove a profitable home industry.

Equipment for home canning

1. **Types of home canners.** (a) *Water-bath canners.* The simplest apparatus for home canning is called a water-bath canner. It consists of a deep covered vessel in which jars may be immersed in boiling water and a rack of wooden slats for holding the jars off the bottom of the vessel, thus allowing free circulation of the water and preventing the jars from being cracked through overheating or bumping together. A wash boiler is admirably suited to water-bath canning.

Fruits, tomatoes, and relishes containing vinegar are successfully canned in glass jars with an improvised water-bath canner.

(b) *Pressure cookers — or canners.* A pressure cooker is a device for obtaining temperatures above 212° F. by means of steam. Since steam under pressure exerts much force, a pressure cooker must be strongly built. Aluminum cookers made without seams are strong, light, and easily handled.

To use a pressure cooker: Always test before using to see that the top fits tightly and that steam gauge and safety valve are

working. To test, put several inches of water in the cooker, fasten the top down, open the pet cock, and place the apparatus over the fire. Steam should escape only from the pet cock. When steam has poured in a steady stream from the pet cock for a minute or more, close the cock and note the steam gauge to see if it is working.

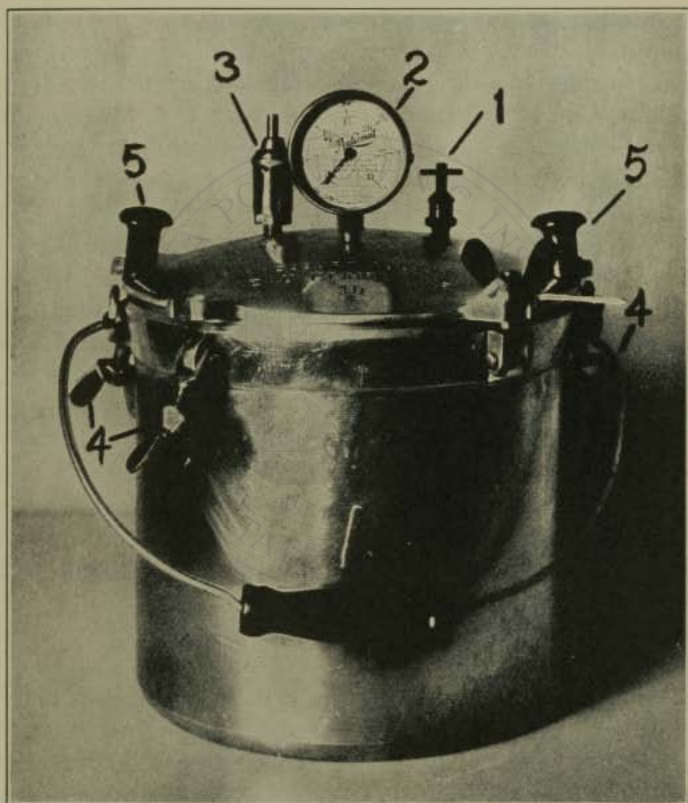


FIG. 73. PARTS OF THE PRESSURE COOKER

1. Pet cock
2. Pressure gage
3. Safety valve
4. Clamps to hold cover securely
5. Handles to cover

Courtesy, University of Wisconsin, Extension Service

The pressure should be maintained evenly. This can be done by regulating the fire and by slightly releasing the pet cock. It is necessary to see a pressure cooker demonstrated in order to understand it thoroughly.

2. Containers. (a) *Glass jars.* The various types of jars for home use are: (1) the screw-top Mason jar or modified Mason jar, used with a rubber; (2) the glass-top jar with rubber, sealed with a wire clamp; (3) the automatic or vacuum-seal jar which has a lacquered top with the sealing material in a groove in the top. A clamp is needed during processing to hold the top on the vacuum seal jar. As the jar cools the sealing material hardens and a vacuum made by condensing steam forms inside the jar; the seal is then completed. Types (1) and (2) require a new rubber each time they are used; type (3) requires a new lid each time. Why?

(b) *Tin cans.* There are two types of tin cans. The older type is the cap-and-hole can and is sealed with solder. The newer type is the sanitary or rim-seal can. The latter is used almost exclusively in commercial canning; a special sealing machine is required. Very satisfactory hand sealers are on the market for home use.

Cans have some advantages over glass jars. Since there is no danger of breaking them, they can be easily and quickly handled. Cans heat through more quickly and cool in less time than glass jars. Rapid cooling is an advantage in that it prevents overcooking. For such foods as pumpkins, squash, or beets, which corrode tin, a lacquered can is used.

Methods of canning

1. The open-kettle method. By this method the food material is sterilized by cooking it in an open vessel. It is then packed into sterilized jars and sealed immediately. Sterilizing the jars is double trouble, for there is some danger of incorporating bacteria in the food when the jars are filled.

The open-kettle method is used for jellies, preserves, conserves, fruit butters, ketchup, relishes, pickles, fruits, and tomatoes.

2. The cold-pack method. The material is packed into the

jars or cans cold. In order to pack fruits and vegetables to advantage the method is sometimes used of first shrinking them by blanching them, or by dipping them in boiling water for one minute. Hot sirup or brine is then added and the container partially sealed. It must be heated in order to exhaust the air before the final sealing and processing (sterilizing). By the cold-pack method the container and the food are processed at the same time. See Steps in Canning. Fruit and vegetables are canned by the cold-pack method.

3. *Hot-pack method.* This process combines some of the advantages of the other two methods. In a minimum of water, the food is heated through by a short period of preliminary cooking. This shrinks the food and insures a better pack. Any foods can be canned by the hot-pack method.

Steps in canning

1. *Preparation of material for canning.* Select only fresh, clean, sound vegetables or fruits in excellent condition. Can them as soon as possible after they are gathered. Wash all containers — sterilize them if the open-kettle method is used. Heat the jars if the hot-pack method is used. Grade the materials if an even product is desired. Wash the material clean of all soil. Running water is best. A wire basket is useful. Peel tomatoes and fruits. Prepare all vegetables as for cooking.

2. *Filling the containers.* Quickly pack the material into jars or cans, filling them completely. Add sirup, or boiling water and salt. For the hot-pack use the liquid in which the material had its first cooking. Remove air bubbles with a wooden paddle or a spoon.

Proportions for sirup	{	thin — 1 cupful of sugar to 3 cupfuls of water
		medium — 1 cupful of sugar to 2 cupfuls of water
		thick — 1 cupful of sugar to 1 cupful of water

3. *Exhausting and sealing.* All air must be removed from the can or jar. If the material is packed hot this precaution is not necessary, since the steam fills the jar or can. If jars or cans are filled with boiling hot materials they may be sealed at once. Why?

When the cold-pack method is used the air must be exhausted from the container. In the water bath this is done by placing the jars in the water without entirely sealing them. With screw-top jars the top should be screwed on and then loosened a half turn; for wire-clamp jars the clamp should not be tightened until after the processing; the automatic seal jar takes care of itself if the metal clamp is in place.

If cans are packed cold the air in them should be exhausted before they are sealed, by placing the can in hot water for five or ten minutes until its contents are steaming hot. Cap-and-hole cans are sealed, except for the hole, before the air is exhausted. Covers should be fastened on the sanitary cans after the process of exhausting.

4. *Processing.* Heating the material in order to sterilize it is called processing.

(a) *In water bath.* Glass jars must be hot when put into the hot water bath, otherwise they will crack, but cans are not heated first. The water must cover the jars or cans. Process according to Time-Table 1, page 467. Count time from the time the water begins to boil.

Remove the jars or cans at once. Finish sealing all jars. Invert glass jars and place them where they may cool, though not in a draft. Plunge tin cans into cold water.

(b) *In pressure canner.* Put several inches of water into the canner. The level of the water should be below the level of the rack. Bring the water to a boil and test the canner. Fill the canner with jars or cans. If jars are used see that they do not touch one another and that they sit level. Fasten the cover on the canner by tightening opposite screw clamps. Then tighten all again. This process is similar to putting a tire on the wheel of an automobile.

Allow the pet cock to remain open until the air is out of the canner — a steady stream of steam for a minute or two. Close the pet cock and allow the pressure to rise to the desired point. Maintain this pressure for the time required. See time and pressure Table 2, page 469. Count the time from the moment the desired pressure is reached.

It is best to maintain the pressure by regulating the heat. The varying of the pressure will result in a loss of liquid from glass jars. This loss does not injure the keeping qualities, however. When the processing is complete remove the canner or turn out the fire.

If glass jars are used it will be necessary, in order to retain the liquid in them, to allow the pressure gauge to return to zero without letting the steam escape. In opening the cooker be careful to open the lid *from* you, so that the steam will not escape into your face.

If tin cans are used the pressure may be reduced at the end of the processing period by opening the pet cock at once. The cans should be plunged in cold water. Watch for air bubbles, which indicate leaks. If bubbles are present, the cans should be opened and the contents packed in other cans and reprocessed.

Time-table for canning in water bath. See page 467.

Time-table for canning in pressure cooker. See page 469.

Note: Non-acid vegetables may be canned by what is known as the intermittent water-bath method. This is not recommended because if vegetables are available in quantity, it pays to buy a pressure cooker, and if they are not, the trouble is too great in proportion to the results.

Storing. All canned goods should be labeled. Allow a week or more for any spoilage to develop, then store all sound jars in a cool dark place. If a dark place is not available, those jars containing foods that lose color easily may be wrapped in paper. Tin cans do not require darkness.

CLASS PROBLEMS

1. Show the class the various types of jars and covers.
2. Demonstrate two types of canners.
3. Examine molds, yeast, and bacteria under the microscope. Use spoiled food as the source of the material for the slides. Suggestions: bread for mold; fruit juice for yeast; cooked vegetable pulp for bacteria.
4. Look up the commercial canning of tomatoes, fish, meat, peas and corn. Class reports.

5. Can in water bath some of the following according to season. Use the cold-pack method.

Tomatoes	Peaches	Beets (pickled)
Berries	Rhubarb	Cherries
Plums	Strawberries	

6. Can in the pressure cooker some of the following according to season. Use the hot-pack method.¹

Asparagus	English peas
String beans	Spinach or other greens
Beets	Sweet potatoes
Lima or butter beans	

If the materials are in season it is suggested that they be canned in rather large quantities. The product may be sold; or the plan may be followed of canning the fruit for individuals who furnish materials and containers.

QUESTIONS

1. Why does food spoil?
2. What are the ways of preventing food spoilage? Illustrate.
3. Discuss the advantages and disadvantages of using canned goods.
4. Why are acid fruits and tomatoes more easily canned than non-acid vegetables?
5. Compare the food value of fresh and canned fruits and vegetables.
6. Discuss precautions necessary in using canned goods.
7. Describe a water-bath canner and tell how and when to use it.
8. Describe a pressure canner and tell how and when to use it.
9. If you live in a high altitude how must you change the time or pressure in the tables for processing canned goods? Why? See notes, page 467.
10. Describe the types of glass jars and tin cans in use, and explain the sealing of each type.
11. Describe the three methods of canning, and state the uses and advantages of each.
12. Give the steps in cold-pack canning in the water-bath canner, using the treatment of tomatoes as an example. Give the steps in open-kettle canning, using the treatment of peaches.
13. Give the steps in hot-pack canning in sanitary-seal cans, with a pressure canner, assuming that string beans are used. How would this vary if the cold-pack method were used?

¹ Because the school year closes before the canning season, in most parts of the country, it may be necessary to procure materials for canning even though they are not cheap, as a means of demonstrating the processes and equipment.

HOME PROJECTS

1. Can twelve jars of fruit or tomatoes at home in the water-bath canner. Use the hot pack, the cold pack, and the open kettle, each on four jars. Compare time required for each method. Label and store the jars. If any spoilage occurs, check on the method used.
2. If a pressure cooker is available can a number of jars or cans of various non-acid vegetables, using the hot- and cold-pack methods.
3. Make a study of the brands and labels and contents of the canned goods you use at home.
4. If you have a surplus of vegetables that can be stored write to the agricultural college in your state for directions for storing these vegetables. Follow the directions. Also consult experienced housewives in your locality.

REFERENCES

- Collins, James H. *The Story of Canned Foods*. E. P. Dutton & Co. The History of Canning and the Canning Industry.
- Powell, O. *Successful Canning and Preserving*. J. B. Lippincott Co. An excellent book on the history of canning, the bacteriology of canning, and home canning.
- Ward, Artemas. *Encyclopedia of Foods*. Contains discussion of general canning and the canning of salmon, pineapple, and other foods.
- Canning Fruits and Vegetables at Home*. United States Department of Agriculture Farmers' Bulletin 1471 (1926). A bulletin that each member of the class should own.
- Recent Bulletins or Circulars from your State Agricultural College or State University.

CHAPTER XXXIV

FOOD PRESERVATION (*continued*)

JELLY-MAKING AND PRESERVING

CANNING of fruits and vegetables is now carried on largely outside the home. There seems little doubt that commercial and community canneries will practically eliminate canning as a household task. Canning on large scale makes possible an inexpensive, uniform product and relieves the housewife of some of her labor. Jelly-making and the making of toothsome conserves and preserves will continue to be a more generally practiced household art, for the obvious reason that commercial products of this kind usually do not equal the choice homemade products.

Jelly-Making

1. Selection of the fruit. Three ingredients are necessary for making good jelly from fruit juices: pectin, acid, and sugar. Pectin is a gum-like carbohydrate substance found in some fruits. The greatest quantity of pectin is found in fruits that are just underripe. In selecting fruit for jelly-making, some of the fruit should be underripe to insure the presence of pectin and acid. The fruits containing the most pectin and acid are apples, crab apples, cranberries, currants, plums, underripe grapes, and wild fruits peculiar to certain localities, as the mayhaw, the algerita berry (a Mexican currant found in the Southwest), wild currants, and others.

Quince and guava have pectin but lack acid. Very fine jelly can be made from both these fruits if acid is added. Lemon is commonly used to supply the acid.

2. Extraction of the juice and testing for pectin. Juice for jelly-making is always extracted by heating the fruit. Pectin in sufficiently large quantities cannot be obtained when the juice is pressed out without the action of heat. Water is not added to

juicy fruits before they are subjected to heat (see recipes). After the heating process, the juice is cleared by being strained through a flannel bag. It is then tested for pectin. The pectin test is made with a small quantity of the juice and a small quantity of denatured alcohol. Pour equal quantities (about one tablespoon) of alcohol and fruit juice together slowly into a small glass or a test tube, *without mixing or stirring* the liquid, and if pectin is present you will see a clear, jelly-like mass. The mass will not form if the mixture is stirred. A good test is obtained if approximately half to three fourths of the juice forms the clear jelly. It would be well to use apple juice (made according to directions for jelly, see page 471) as a standard of comparison.

3. The proportion of sugar for jelly. The amount of sugar used for each cup of juice depends on the amount of pectin present. If the pectin test is good, three fourths of a cup of sugar is used to each cup of juice. If it is not good, boil the juice down for five to ten minutes and test again, or use a smaller amount of sugar.

4. Making the jelly; the jelly test. Jelly is made quickly. The juice is usually boiled for four or five minutes, the sugar added, and the boiling continued until, on testing, the jelly-like mass appears. When the mixture is done it will form either in two large drops on the side of the spoon, or in one irregular mass, and it will break off *at the edge of the spoon*. Jelly is not ready when the drops elongate and thread, as they do with sugar sirup. If a thermometer is available, use it for the jelly test. Jelly is done when cooked to 222° or 224° F.

Pectin extracts and their use. The making of jelly from such fruits as ripe grapes, raspberries, strawberries, peaches, pears, and cherries, is difficult or uncertain because they do not contain the right amount of pectin. The addition of pectin extract to the fruit juice makes it possible to make jelly from these fruits.

Pectin extract may also be added to jams to make them thicken more quickly. The use of it results in a greater quantity of jam; moreover with the elimination of the long period of cooking, the product is more nearly like the fresh fruit in flavor.

Pectin extract may also be used in making jelly as a by-product from other preserving. The juice from sweet pickled peaches

348 CANNING FRUITS AND VEGETABLES

combined with pectin extract makes a very excellent jelly. Sirups that result from canning or preserving other fruits may also be used for jelly if pectin extract is added.

SCORE CARD FOR JELLY ¹

Kind of jelly. Number of samples.

POINTS	PERFECT SCORE	ACTUAL SCORE
1. Package: Glasses of good shape, suitable size, tops clean, tight, and free from tarnish; paraffin layer (if any) smooth, no bubbles nor breaks; labels suitable, attractive.	5	. . . . .
2. Color: Color natural, as determined by the fruit used, no artificial coloring used except for mint jelly. Color deepened by wise use of sugar and other sweetener, not darkened by overcooking.	10	. . . . .
3. Clearness: Transparent or translucent, not cloudy nor containing pulpy particles. No bubbles nor visible crystals. No mold nor signs of fermentation. No scum nor bubbles at top.	10	. . . . .
4. Texture (judged after glass is opened): Jelly should hold its shape when turned out on a plate, but should quiver when the plate is moved. Should cut easily with spoon, be tender, yet break with a sharp cleavage line and show sparkling faces. Not sticky, tough, gummy, nor brittle; not sirupy; not sugary; no crystals that can be perceived on tongue.	40	. . . . .
5. Flavor: Attractive, pronounced fruity flavor, yet not too sour, nor yet oversweet; not carmelized nor scorched.	35	. . . . .
Total.	100	. . . . .

Remarks:

Preserves

Preserves are made from whole small fruits such as figs, strawberries, kumquats; or from sliced large fruits such as peaches,

¹ *Home-Made Apple and Citrus Pectin Extracts and Their Use in Jelly-Making.* United States Department of Agriculture, Department Circular 254 (1923)

pears, quinces. This product is very rich. Three fourths of a pound of sugar to one pound of fruit are the required proportions. The mixture of fruit and sugar should start cooking in a thin sirup if the preserve is to be tender, plump, and light in color. A thick sirup causes the fruit to shrink and makes a tough, dark product. Some hard fruits, such as quince and watermelon rind, require parboiling. Figs should be soaked in soda water. Watermelon rind, if it is to make a clear preserve is usually soaked in lime water, and alum is added to make it crisp.

Preserves are sometimes partly cooked on one day, allowed to stand over night in the sirup, and finished the next day. This method makes the pieces more plump. They should be cooked to 222° or 224° F., and after they are cooked they should be packed in sterilized jars. Be sure all bubbles are removed. After sealing the jars, process them in a water bath, just below the boiling point, for twenty minutes.

Marmalade

Marmalade is of jelly-like consistency. It contains sliced or finely chopped fruit. Citrus fruit marmalade is the kind most commonly used — made of orange, orange and grapefruit, grapefruit, or kumquat. The product is prettier if the rind is sliced almost paper thin. The coarse blade of a food chopper may be used for slicing. This is much less trouble, but rind cut that way does not become as clear as rind cut very thin, and the resulting marmalade is not so pleasing in appearance.

Citrus marmalade may be made in one day, or the process may be carried out by cooking it on three separate days. The three-day process gives a larger yield of marmalade because more pectin is extracted.

Marmalade should be cooked rapidly if a light color and the maximum of flavor is to be obtained. The finished point is 222° to 224° F. To prevent the fruit from rising to the top of the glasses, cool the mixture slightly, then fill sterilized glasses. Cover the glasses with paraffin as jelly is covered. See recipes page 470.

Jam

Fruits containing little or no pectin, such as berries and figs, are used for jam. Jam is better if pectin is present. Three fourths of a pound of sugar to one of the cooked fruit is used. The fruit should be just underripe unless pectin extract is used, in which case ripe fruit may be used. Why?

Jam should be made in small quantities and cooked rapidly in order to get the best flavor and color. It should be stirred while cooking. The process is finished at 222° to 224° F.

Fruit butter

Fruit butter is made from the pulp of such fruits as plums and apples. Ripe fruit is used. The fruit is cooked and the pulp mashed through a colander or a fruit press. Fruit butter may be made from the pulp left from jelly-making. Add a little fresh juice or a little jelly to this pulp. Less sugar is required for fruit butters than for preserves and jams — not more than a fourth of a pound of sugar to one pound of fruit. Spice is usually added.

Conserves

Conserves are a mixture of fruits cooked to the consistency of a jam. Raisins and nuts are usually added. Conserves must be cooked rapidly, and stirring will be necessary to prevent burning.

Preserves and other such sweets in the diet. Jelly, preserves, conserves, and jams, are very rich sweets. They should be used sparingly. Why?

They are of use in making plain food more acceptable. Marmalade with toast is an example. Jelly may be thinly spread on bread for sandwiches in the school lunch. A spoonful of preserves or jam may make a rice pudding or a simple tapioca dessert acceptable. A small spoonful of jelly also makes a plain mold of cooked rice or other cereal into an acceptable dessert for children. Jelly, if tart, may be served with meat. Mint jelly is suitable for serving with lamb. If conserves are sparingly used they give variety to the diet and are not unwholesome. They should not be used in the diets of very young children.

CLASS PROBLEMS

1. Make jelly from fruits containing both acid and pectin. (Recipes, pages 470-72).
2. Test the juice of various fruits for pectin. Compare with apple juice or grape juice as a standard.
3. Make apple pectin extract and citrus pectin extract. If you live in a locality where apples or citrus fruit is plentiful more time should be devoted to this project.
4. Make jellies from fruits containing little pectin by using pectin extract. (Recipes, page 472.) Recipes may also be obtained from distributors of commercial pectin extract — such as "Certo."
5. Figure the cost of all jellies made. Score according to score card, page 348. Compare in cost and quality with commercial products.
6. In every locality there are some housekeepers noted for their preserves, jams, marmalades, or conserves. Make a collection of these recipes in your own neighborhood.
7. Make some typical preserve from fruit available in your locality. Suggestions:

Fig	Quince	Cherry	Strawberry
Peach	Rhubarb	Kumquat	Watermelon rind
Pear	(pieplant)		

8. Make jam from some typical small fruits, such as berries. Have a part of the class experiment with pectin extract in jam making. Compare costs, quantities, flavor, and quality. (Recipes page 474.)
9. Make grapefruit, orange, and lemon marmalade. Part of the class may use the one-day process and part the three-day process. In each division one group should grind the fruit and one group slice the fruit. Compare costs, quality, and quantity of the product under these varying conditions.
10. Prepare fruit butters and conserves. Collect recipes for them from people in your locality. Try dried fruits in conserves — apricots, peaches, prunes; you will find that they give rich flavors.
11. Suggest menus in which the jelly, preserves, and conserves that you have made would be delicious.

QUESTIONS

1. Discuss the place of preserves, jams, jellies, and so forth in the diet.
2. Explain why it is easy to make jelly from some fruits, but with other fruits the process is difficult and the outcome uncertain.
3. Name fruits from which jelly can be easily made.
4. What is pectin extract? How is it used?
5. Give the steps in jelly-making and give reasons for each step.

6. How may the proportion of sugar needed be determined in jelly-making? Describe a good jelly.
7. Describe the making of pectin extract from apples. From citrus fruits.
8. What makes preserves tough? Give the method of making them tender and plump.
9. Describe the following products and the methods of making them: marmalade, jam, fruit butter, conserves.

HOME PRACTICE

1. Make jelly at home from plums, cranberries, apples, or some other fruit rich in pectin.
2. Preserve fruits at home by the methods learned at school.
3. If apples or citrus fruits are plentiful make pectin extracts.
4. Make jellies or jams with commercial or homemade pectin extracts, and with part pineapple juice.
5. Make jelly from dried apples or conserves from dried apricots, prunes, or peaches.

HOME PROJECT

If fruits or vegetables are plentiful in your home, an excellent home project would be the caring for the surplus through appropriate methods of food preservation. Much of this work may be done during the summer.

If you assume the responsibility of caring for a large part of this surplus you have a real project, but if you merely repeat at home the processes learned at school by putting up a few jars or cans of food it is home practice. Why?

REFERENCES

- Powell, O. *Successful Canning and Preserving*. J. B. Lippincott Company Recipes.
- United States Department of Agriculture, Department Circular 254 (1923). *Home-Made Apple and Citrus Pectin Extracts and Their Uses in Jelly-Making*.
- Recipes from producers of citrus fruits and dried fruits (especially in California and Florida).
- Recipes in bulletins on special fruits, such as strawberries, from the United States Department of Agriculture.

UNIT SIX

THE COOK BOOK

INTRODUCTION

ALL recipes included in the Cook Book in this text serve six persons, unless otherwise stated. The small or individual recipes are offered as a convenience for use in the school foods laboratory.

The recipes given in the Cook Book are typical recipes in general use. This Cook Book is a textbook of cookery. No attempt has been made to make a complete cook book. For additional recipes refer to:

Everybody's Cook Book. Isabel Ely Lord. Henry Holt and Company.

Practical Cookery. Department of Foods, Kansas State Agricultural College.

The New Butterick Cook Book. Flora Rose. The Butterick Publishing Company.

The Boston Cooking School Cook Book. Fannie M. Farmer. Little, Brown & Company.

For students' use a card catalogue of additional recipes collected by them is recommended.

TABLE OF MEASURES AND ABBREVIATIONS

FOR USE IN THE RECIPES

t. — teaspoon	3 t. = 1 T.
T. — tablespoon	16 T. = 1 c. (4 T. = $\frac{1}{4}$ c.; 8 T. = $\frac{1}{2}$ c.)
c. — cup	2 c. = 1 pt.
pt. — pint	2 pt. = 1 qt.
qt. — quart	4 qt. = 1 gal.
lb. — pound	

See table of Approximate Measure for translation of volume into weight and weight into volume.

DIRECTIONS FOR MEASURING

1. Make it a rule to be accurate in measuring.

Special treatment of flour. Flour should be sifted once before it is measured, because after one sifting the measurement will be more accurate. It should then be handled so that it will not pack down in the measure. Pile it lightly into a cup with a spoon. If it is dipped with a cup, it will pack, with the result that a cup will sometimes hold an extra fourth of a cupful of flour packed down.

Solid fat, measured in a cup. If part of a cupful of solid fat is desired, the simplest method of measuring is to use water in the cup. Subtract the amount of fat desired from a cupful; use this amount of cold water; add fat to the water until the cup is full.

2. Level all measures, preferably with the back of a knife. Liquids are correctly measured when the measure is level full. Do not fill to overflowing.

STANDARD WEIGHTS FOR A BUSHEL OF SOME STAPLE FOODS

(Variation in weight as prescribed by law in different states of the United States)

ONE BUSHEL OF FOOD	WEIGHT IN POUNDS
Apples	44 to 50
Beets	60
Carrots	45 to 50
Peaches	48 to 50
Pears	45 to 58
Peas, green in pod	32
Potatoes, white	56 to 60
Sweet potatoes	50 to 55
Spinach	12
Tomatoes	56 to 60

BUYING GUIDE

APPROXIMATE NUMBER OF SERVINGS IN COMMON MEASURES

FOOD	NUMBER SERVINGS	FOOD	NUMBER SERVINGS
Almonds, shelled (lb.)	30 (12 nuts each)	Figs, dried (lb.)	7
Apples, fresh (lb.)	3	Fish (lb.)	3
Apples, dried (lb.)	18	Grapes (lb.)	4
Apricots, dried (lb.)	16	Ham (uncooked lb.)	6
Asparagus (No. 2 can)	5 to 7	Ham (cooked lb.)	8 to 10
Bacon (lb.)	25 slices (thin)	Huckleberries (lb.)	6 to 8
Banana, whole (lb.)	3	Ice cream (qt.)	7 to 8
sliced (lb.)	5	Ice (qt.)	7
Beef, round steak (lb.)	4 to 5	Jelly ($\frac{1}{2}$ pt. glass)	3 to 5
sirloin (lb.)	2	Lamb (lb.)	4 to 5
porterhouse (lb.)	2	Lettuce (head)	4
ground meat (lb.)	3 to 4	Lemon juice (1 lemon)	3 T.
Beets (lb.)	4 to 5 (3 beets per lb.)	Lima beans, fresh	5
Bread (one lb. loaf)	15 slices	shelled (lb.)	
(Pullman loaf)	30 slices	Liver (lb.)	4 to 5
Cabbage, raw (lb.)	10 to 12	Onions (lb.)	3
cooked (lb. raw)	5 to 6	Orange juice	$\frac{1}{3}$ cup
Carrots (lb.)	3	(1 orange)	
Cauliflower (small head lb.)	4	Oysters (pt.)	4
Cheese, American (lb.)	20 1-inch cubes	Peaches (lb.)	3 to 4
Cheese, cottage (lb.)	8	Peanuts (lb.)	25 (10 peanuts)
Chicken, broiler		Pears (lb.)	3
(1 small)	2	Peas, green in shell (lb.)	2 to 3
(1 large)	4	Pecans (lb.)	30 (12 meats each)
fryer (1)	6	Plums (lb.)	7 to 9
roasted (lb.)	2	Pork (lb.)	3
Cocoa ($\frac{1}{2}$ lb.)	60 cups	Potatoes, white (lb.)	3
Coffee (lb.)	48 to 50 cups	Potatoes, sweet (lb.)	3
Corn (canned, cup)	3	Prunes (lb.)	10 to 12
Cream, thin (pt.)	15 to 18	Raisins (lb.)	16 (1 oz.)
Cream, whipped (pt.)	25 (dipped t.) or 16 (dipped T.)	Raspberries (qt.)	6 to 8
Cream, heavy, after whipping (pt.)	40 (dipped t.) or 25 (dipped T.)	Rice (lb.)	12 to 16
Custard (pt. of milk)	4	Salad (lb.)	3
Dandelion greens (lb.)	2 to 3	Spinach (lb.)	3
Dates, 1 oz.	1	Strawberries (qt.)	5 to 6
		Tea ($\frac{1}{2}$ lb.)	175 to 250
		Tomatoes, whole (lb.)	3
		sliced (lb.)	5 to 6
		Turnips (lb.)	3
		Veal (lb.)	3 to 4

Salads may be estimated on the basis of one third of a pound per person.

APPROXIMATE MEASURE OF ONE POUND AND ONE OUNCE OF
SOME COMMON FOOD ARTICLES

PRODUCT	MEASURE		PRODUCT	MEASURE	
	I OZ.	I LB.		I OZ.	I LB.
Apples, dried	-	4 c.	Liquid	2 T.	2 c.
Baking powder	2½ T.	2½ c.	Macaroni	½ c. (scant)	6 c.
Beans, navy	-	2¼ c.	Mustard	4 T.	-
Bread crumbs	¼ c.	-	Oil — peanut, corn, cottonseed	2 T.	2 c.
Butter	2 T.	2 c.	Rice, brown or white	2 T.	2½ c.
Cinnamon	4 T.	-	Sugar, brown	2⅔ T.	2⅔ c.
Cloves	4 T.	-	Sugar, white	2 T.	2 c.
Cocoa	4 T.	4 c.	Tea	⅜ c.	6 c.
Coffea, ground	4 T.	4 c.	Vanilla	2 T.	-
Cornstarch	-	3½ c.	Walnuts	¼ c.	4 c.
Flour	¼ c.	4 c.			
Figs	-	2½ c.			
Lard	-	2 c.			

DISH-WASHING HINTS

Soak sticky utensils used in sugar solutions in hot water; soak or rinse others (except greasy dishes) in cold water.

Clean out greasy utensils with paper, fill them with water, add 1 T. salsoda and boil. (Salsoda will darken aluminum.)

Scour aluminum utensils with a powder such as Dutch Cleanser, or boil them with acid such as rhubarb, before washing.

Clean off dishes that have been used on the table with some soft material such as a piece of bread or a small wad of paper.

Drain and wrap garbage in paper before placing it in can.

Fresh, hot, soapy water should be used for washing dishes. If a cake of soap is used, it is easiest to pour a little boiling water over the cake, allow it to stand for one or two minutes and then, after adding hot water, remove it; 1 T. washing powder may be added.

A soft brush, steel wool, and an abrasive powder (such as Bon Ami or Dutch Cleanser) are convenient aids for special cleaning of cutlery and pots and pans.

Glassware is easy to polish if dried without rinsing.

If china is allowed to dry without the use of towels it must be first rinsed with boiling water, so that it will dry rapidly.

Order of washing dishes: cooking utensils should be washed first; then glassware, silver, cutlery, and china in a second water.

FRUIT

(See Unit One, Chapter II)

SOME WAYS OF SERVING FRESH FRUIT**BANANA**

A banana is ripe for eating if all green has disappeared from the blossom end. Prepare immediately before serving. Slice and serve with lemon juice and sugar, or with cream and sugar.

ORANGE OR GRAPEFRUIT

To Shred Orange or Grapefruit: With a sharp knife, begin at stem end and cut off skin as in paring an apple, taking care to leave pulp exposed. Save all of juice. Cut into center on each side of the membrane that separates the sections, and remove each section whole. Squeeze out any juice left in refuse part of orange. Fruit is prepared in this way for salad, and gelatin, or arranged on a fruit plate for breakfast.

To Prepare Orange or Grapefruit in the Skin: Cut fruit in halves crosswise; remove center and seeds by cutting them out with scissors or a sharp knife. With a small sharp knife or a grapefruit knife, loosen each section from the membrane around it. To do this, begin at center between the pulp of the section and the membrane surrounding it; follow the membrane around the section toward the rind and back to the center. Sprinkle with sugar if desired. Red cherries or two or three tiny mint leaves make an attractive garnish.

Sliced Oranges: Pare orange as for shredding. Slice in thin slices crosswise; serve on a fruit plate, lightly sprinkled with powdered sugar.

TO SKIN GRAPES

Loosen skin by putting in cold water and bringing to boiling point, or by pouring hot water on them. Peel with a sharp knife.

FRESH PINEAPPLE

Cut off both ends of the pineapple. Pare and remove "eyes" with a sharp-pointed knife. Cut in slices, and cut small wedge-shaped pieces from core of each slice, or cut the core from the

center of whole slices. Serve pineapple for breakfast ice cold and sprinkled with powdered sugar. Serve it ice cold with French dressing or whipped cream mayonnaise for salad.

COOKED FRESH FRUIT

Fresh fruit cooks to pieces in water. It can be made to keep its shape by cooking it carefully in the oven or in sirup.

BAKED APPLE

6 apples 1/3 to 1/2 c. granulated sugar; or
 1 t. lemon juice, if desired half brown and half granulated sugar

Wash and core the apples, leaving the blossom end. Cover the bottom of a pan or baking dish about one fourth inch with water. Put in apples, fill cavities with sugar and add a few drops of lemon juice if desired. Bake in a moderate oven (325°-350° F.) until soft, or about 30 minutes.

For Baked Apple with Raisins, mix about 2 T. of raisins with the sugar before filling cavities. A few broken nut meats may be sprinkled over the apples when served.

Small recipe, one sixth of amounts given.

BAKED BANANAS

2 T. lemon juice 6 T. water
 6 bananas 2 T. sugar

Peel and scrape bananas. Cut in halves lengthwise. Place in buttered baking dish, sprinkling with sugar and lemon juice. Pour the water over bananas. Bake in a moderate oven until they are translucent (clear and partially transparent).

Small recipe, one sixth of amounts given.

APPLE SAUCE

4 apples 1/4 to 1/3 c. sugar
 1 or 2 slices lemon 1 or 2 whole cloves if desired

Wash, pare, and quarter apples. Put in a pan with lemon and cloves and almost cover with water. Cook until very soft. Add sugar, and continue heating until sugar dissolves. Remove lemon and cloves, and serve hot or cold. May garnish with candied apple balls.

CANDIED APPLE AND SPICED APPLE

Prepare whole crab apples, or halves or quarters of apples, or apple balls. Cook the fruit in a sirup made in the proportion of 2 c. (1 lb.) sugar to 1 c. water, or cook it with one cup sugar poured over each pound of cut apples. Add red coloring if red apples are desired. Cook slowly until apples have transparent appearance of all preserved fruit.

For Spiced Apples, add to candied apples 2 to 4 T. lemon juice or mild vinegar, 4 whole cloves, and a one-inch stick of cinnamon for each pound of cut apples. Color red if desired and cook as for candied apples. Spiced apples are an attractive and inexpensive accompaniment for meat or heavy salads. Small red cinnamon candies may be used in place of spices and coloring.

FRIED APPLES

4 apples
2 T. butter or bacon fat

½ to ⅔ c. sugar

Wash apples, cut in halves, and in half-inch wedge-shaped slices. Heat butter in frying pan; add apples; cover and cook slowly for 5 to 10 minutes. Add sugar, and cook until soft and transparent, stirring only occasionally. Serve hot. Fried apples with crisp bacon is a favorite dish for breakfast or luncheon.

DRIED FRUITS

The usual way for cooking dried fruits (except apples¹), is to soak them and then either cook them in the same water over the direct heat, or in a little water, or none, in the double boiler.

PRUNES, STEWED OR STEAMED

Wash prunes, or soak 15 minutes and wash. Soak 2 hours or more in cold water to cover them. Cook slowly in the same water with 1 or 2 slices of lemon over the direct heat or in the double boiler until tender. If sugar is added, use about one fourth cup per pound of prunes; add just before removing prunes from the heat.

¹ Dried apples take up water more readily than other dried fruits. Soaking darkens them.

STEAMED RAISINS

Wash raisins thoroughly. Put in top part of double boiler without extra water. Cook until swelled and tender.

For dried fruit with cereals, see Cereals.

CRANBERRY SAUCE

4 c. cranberries

2 c. sugar

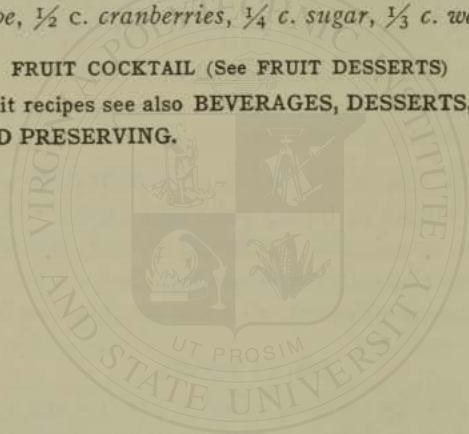
1 c. water

Pick over and wash the cranberries. Cook cranberries, water, and sugar in a covered saucepan until the skins burst; this requires only about ten to fifteen minutes. Skim if necessary, and cool. Overcooked cranberries are bitter.

Small recipe, $\frac{1}{2}$ c. cranberries, $\frac{1}{4}$ c. sugar, $\frac{1}{3}$ c. water.

FRUIT COCKTAIL (See FRUIT DESSERTS)

For other fruit recipes see also BEVERAGES, DESSERTS, SALADS, and CANNING AND PRESERVING.



BEVERAGES

(See Unit One, Chapter IV)

Hot beverages should be served in cups heated with hot water or heated in a warming oven.

HOT CHOCOLATE OR COCOA

$\frac{1}{2}$ c. water	4 c. (1 qt.) milk
3 T. powdered cocoa	3 T. sugar
or 1 sq. (1 oz.) chocolate	Few grains salt
$\frac{1}{3}$ c. (6 T.) whipped cream if desired	

Cook water and cocoa or chocolate together until smooth. The chocolate may be grated first. Add milk, sugar, and salt, and heat to boiling. Beat with a dover beater and serve immediately, adding 1 T. of whipped cream to each cup. If the beverage must stand after prepared, keep hot in double boiler.

Small recipe, one fourth of given amounts.

HOT COFFEE

PERCOLATED COFFEE

8 T. ($\frac{1}{2}$ c.) ground coffee	4 c. boiling water
--	--------------------

Put water in the lower part of percolator and coffee in upper part. Heat and allow to percolate for 5 to 8 minutes, as desired. Remove grounds from the percolator and keep the coffee hot until served.

The coffee grounds themselves act as a strainer and keep the beverage clear, so that the egg used for boiled coffee is not needed here. If percolated too long, the coffee will become bitter with tannin and the coffee flavor destroyed by the heat.

Small recipe, one fourth of given amounts.

DRIP COFFEE

Use pulverized coffee in the amounts given for percolated coffee. Put coffee in the coffeepot strainer (the pot should be of enamel ware or earthenware) and pour over it 1 c. of boiling water. In about 3 minutes after placing the pot in a pan of boiling water, pour over the second cup of boiling water, and 3 min-

utes later, the third. The beverage may be removed and poured over the grounds a second time if desired. Serve.

This coffee has less of the tannin flavor and more of its own than either boiled or percolated coffee has.

Small recipe, one fourth of given amounts.

BOILED COFFEE

Use ingredients for percolated coffee plus 2 t. egg white and $\frac{1}{2}$ c. cold water. Use coffeepot preferably of enamel ware or enamel pan with lid. Mix $\frac{1}{4}$ c. cold water and egg white with ground coffee; add boiling water and boil 3 to 5 minutes or allow to steep 5 to 7 minutes without boiling. Remove from fire. Settle by adding $\frac{1}{4}$ c. cold water and allowing to stand 3 minutes. Serve immediately, or strain from grounds and keep hot and covered until served.

Small recipe, one fourth of given amounts.

HOT TEA

- 4 c. freshly boiling water
- 2 t. tea, green or black, for strength usually desired
- 4 t. tea for very strong tea

Use enamel-ware, earthen, or pyrex teapot (or enamel pan with lid). Pour boiling water over tea leaves and allow to steep for 1 or 2 minutes; strain and serve.

If lemon is used with tea, cut it into slices or wedge-shaped pieces (quarters or eighths).

One or two cloves, candied cherries, or small pieces of candied ginger may be used in each cup for afternoon tea. Orange pekoe tea or special Chinese teas (for example, one variety containing jasmine flowers) are used for afternoon tea, and rock sugar (broken rock candy) is sometimes used as sweetening instead of loaf sugar. Slices of orange, and sometimes sprigs of mint, are served with the sliced lemon for afternoon tea.

Small recipe, one fourth of given amounts.

ICED CHOCOLATE, COCOA, COFFEE OR TEA

For Iced Coffee or Tea, make the hot beverage, using only half the liquid. Cool, and add remaining liquid cold. Serve with

generous quantities of crushed ice, preferably in tall glasses. One teaspoon of vanilla may be added to iced coffee which is usually served with plain or beaten cream. Slices of lemon and tiny sprigs of mint are ordinarily served with iced tea.

Small recipe, one fourth of given amounts.

For Iced Cocoa or Chocolate, make paste as in hot cocoa, remove from heat and add liquid cold.

Small recipe, one fourth of given amounts.

MILK SHAKES OR EGG NOGS

4 c. (1 qt.) milk 2-4 eggs
 2 t. vanilla or 4 T. orange juice or other flavoring
 $\frac{1}{8}$ t. nutmeg — used if desired with vanilla
 4 T. to 6 T. sugar. (If maple flavoring is desired,
 use half maple and half granulated sugar.)

For Flavoring Cocoa Shake, make a paste of cocoa and water. (See Hot Cocoa, page 361.)

For all milk shakes, mix about $\frac{1}{2}$ c. milk, cracked ice, sugar and eggs. Stir, but do not beat, until thoroughly mixed. Add remaining milk, more cracked ice, and flavoring. Beat with dover beater and serve.

Small recipe, one fourth of given amounts.

FRUIT BEVERAGES

LEMONADE

ORANGEADE

<p>3 $\frac{1}{2}$ c. cold water $\frac{2}{3}$ c. lemon juice (3 to 4 lemons) $\frac{2}{3}$ to 1 c. sugar</p>	<p>3 c. cold water $1\frac{1}{2}$ c. orange juice (about 4 oranges) 2 to 3 T. lemon juice (1 lemon) $\frac{3}{4}$ c. sugar Sprigs of mint if desired</p>
--	--

Make a sirup of the sugar and $\frac{1}{3}$ the water. Cool and add remaining water and fruit juice. Serve with generous quantities of crushed ice. For a **Pineapple Beverage**, add $\frac{2}{3}$ c. shredded pineapple to Lemonade.

For Lemon Whey, use the whey from freshly soured milk in place of water in making lemonade. This is a refreshing cold beverage, and it contains much of the minerals and vitamin B of milk.

For Ginger Ale Cup, use equal parts of lemonade and ginger ale. Combine just before serving.

ORANGE JUICE, GRAPE JUICE, OR LEMON JUICE FOR INVALIDS

(Albumenized Beverages)

For each glass of juice:

$\frac{1}{2}$ c. fruit juice	$\frac{1}{2}$ c. cold water
1 egg white	crushed ice
Sugar — 2 T. for orange juice, 4 T. for lemon juice	

Stir water, sugar, and egg white until thoroughly mixed. Add fruit juice, and serve with cracked ice.

Always serve fruit juice daintily to an invalid, for example, in a thin glass set on plate, with a small napkin or paper napkin.

FRUIT PUNCH

(Serves about 25 people)

1 $\frac{1}{2}$ qt. cold water or tea	2 c. (1 lb.) sugar
1 No. 2 can shredded pineapple, or	1 c. lemon juice (about 6 lemons)
1 fresh pineapple cut in small pieces	1 pt. any fruit in season
	1 $\frac{1}{2}$ qt. water or carbonated water or ginger ale

Make a sirup of 1 qt. water (or tea) and sugar. Cool, and if there is time before serving, allow the rind of 4 lemons to stand in the sirup for 4 hours. Add lemon juice and fruit. Add iced water or carbonated water or ginger ale just before serving. Serve in a punch bowl around a small (5 lb.) block of ice (or with a quart brick of hard-frozen lemon or mint sherbet), or in tall glasses filled at least one third full of crushed ice, and with slices of orange.

Small recipe, one twelfth of given amounts. Orange juice may be substituted for the pineapple (1 $\frac{1}{2}$ c. orange juice for 1 can pineapple).

ORIENTAL PUNCH

(Inexpensive; 20 servings)

1 pt. tea	4 c. (1 qt.) orange juice (about 12 oranges)
2 c. (1 pt.) water	2 c. (1 pt.) lemon juice (about 10 lemons)
4 c. (2 lb.) sugar	2 T. grated orange rind
12 ($\frac{1}{10}$ oz.) whole cloves	3 to 4 drops oil of peppermint
1 T. chopped crystallized ginger	Mint leaves
2 to 3 one-inch pieces of stick cinnamon	Green coloring (paste)

Tie spices in a piece of cheesecloth. Cook tea, sugar, water and spices together for 10 minutes. Cool. Add fruit juice and a few sprigs of mint. Just before serving, add peppermint oil and color the punch green. Serve as for fruit punch.

Small recipe, one twelfth of given amounts, using all water instead of tea and water.

INVALID BEVERAGES

CEREAL GRUELS. See CEREALS, page 368

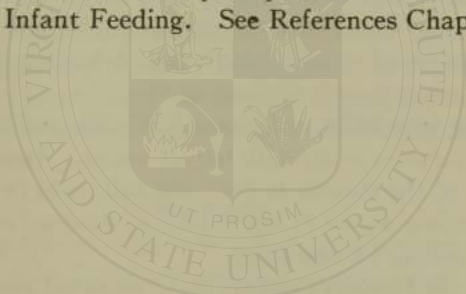
BEEF TEA. See SOUPS, page 384

Egg yolks may be added to soups, cocoa, milk, and fruit drinks. Each egg yolk yields approximately 50 calories.

Egg white may be added to water or fruit drinks. Each egg white yields about 14 to 17 calories.

MODIFICATION OF MILK FOR INFANTS

Follow formula furnished by a specialist. See also bulletins and books on Infant Feeding. See References Chapter XXXII.



CEREALS

(See Unit One, Chapter V)

TABLE FOR COOKING CEREALS

KIND AND AMOUNT	SALT	WATER	TIME IN DOUBLE BOILER	TIME AND PRESSURE IN PRESSURE COOKER	PERSONS SERVED
Cream of Wheat, 1 c.	1½ t.	4 c.	40 min.	15 min. at 20 lb.	8 to 10
Corn Meal, 1 c.	1½ t.	4 c.	3½ hr.	25 min. at 20 lb.	8 to 10
Rice, 1 c.	1 t.	3 c.	20 min.	15 min. at 10 lb.	6 to 8
Hominy (coarse), 1 c.	1 t.	5 c.	3 hr.	25 min. at 20 lb.	10 to 12
Hominy (fine), 1 c.	1½ t.	4 c.	2 hr.	25 min. at 20 lb.	8 to 10
Rolled Oats, 1 c.	1 t.	2½ c.	1 hr.	10 min. at 20 lb.	5 to 8

The above is the minimum. You cannot cook cereals too long.

I. Use of the Double Boiler in Cooking Cereals: Have the required amount of water salted and boiling in the top part of the double boiler over the direct flame. Add the cereal slowly so that boiling will not stop. Boil cereal and water for five minutes. Place over boiling water in lower part of double boiler. Keep the lower part one third to one fourth full of boiling water. Cook cereal the required length of time; serve.

For Cooking with Milk, substitute half milk and half water for all water, or substitute all milk for all water. Heat the milk in the top part of the double boiler; add salt; add cereal and stir. Place over boiling water in lower part of double boiler; increase the time of cooking by one third.

II. Use of the Fireless Cooker: Have required amount of water salted and boiling in a pan that will fit cooker. Add cereal as for cooking in double boiler, and let boil 8 to 10 minutes. Place in fireless cooker (with heated stone if necessary) and let remain 6 to 10 hours. Reheat and serve.

III. Use of the Pressure Cooker: Reduce the amount of water about $\frac{1}{3}$ c. for each 3 c. of water used. Have water salted and boiling in a pan that will fit in pressure cooker. Add cereal as for cooking in double boiler, and allow to boil for 5 minutes. Prepare the pressure cooker by pouring in one pint to one quart of water and putting the rack in place. Place vessel containing cereal in cooker and close cooker except for pet-cock. Heat until a straight

stream of steam comes through pet-cock; close pet-cock; cook for required length of time at required pressure. (See pp. 338-339.)

IV. The Boiling of Cereals: Whole grain cereals, such as rice, may be boiled. Have ready a large quantity of boiling salted water; at least 8 times as much water as cereal to be boiled. Use 2 t. salt for each cup of cereal. Slowly pour in the cereal and allow to boil, without stirring, until the grains are soft when pressed between the thumb and finger (about 20 minutes for rice). Turn into a strainer and when drained cover with a cloth. Set over a pan of hot water; or turn into a shallow pan, cover with a lid and place in a warm oven for 5 to 10 minutes. Treated in this way the grains swell and are kept separate.

CEREALS IN MOLD

Rice and cream of wheat and other well liked cereals make attractive cold desserts for children and for others who like simple food.

Pour the hot cereal into small smooth molds; custard cups are good. Let it cool and stiffen. When ready to use, loosen edges with a knife and turn the cold shape into a small dish. Take out a teaspoon of cereal from the top and put in its place a teaspoon of jelly or fruit sauce.

MACARONI

Macaroni, spaghetti, and other Italian pastes are cooked the same as rice. (See Table for Cooking Cereals, page 366.)

CEREAL WITH DRIED FRUIT

Dried fruits are used with cereal for breakfast occasionally and for simple desserts.

For one cup of cereal use one half pound of dried fruit cut in small pieces. The fruit may be cooked with the cereal (stirred in when the cereal is cooking over hot water) or stirred into the cooked cereal.

If fruit is cooked with it, the cereal is somewhat darkened and sweetened and is flavored throughout with the fruit flavor. Dried figs, raisins, or dates are most often used.

Serve this cereal hot with milk or thin cream for breakfast.

Mold it and serve cold with thin or whipped cream for a simple dessert. For dessert, nuts may be added just before molding. Use $\frac{3}{4}$ to 1 c. broken nut meats to each cup of cereal.

FRIED MUSH

Mold the cereal to be fried in a thin layer in a shallow pan. Cut in $2\frac{1}{2}$ to 3-inch squares. Cook in 1 T. of fat in frying pan until golden brown on one side; turn and brown on the other side. Serve hot with sirup or with jelly.

CEREAL GRUELS (ONE SERVING)

$\frac{1}{8}$ c. water	2 T. whole milk
1 T. cereal — rice, barley, oatmeal	Dash of salt

Heat liquid to boiling, add cereal and allow to boil 25 to 30 minutes. Strain, add salt, and serve.

LEFT-OVER CEREALS

Left-over cereals may be used in griddlecakes, waffles, or muffins; left-over rice may also be used in soups, puddings, croquettes, and stuffed vegetables.

QUICK BREAD

(See Unit One, Chapter VI, and Unit Two, Chapter XII)

TOAST

Toast is used for breakfast as the main bread stuff; as an accompaniment with soups, salads, and creamed vegetables; and for tea.

Bread for toasting should be a day or more old. Cut in slices from $\frac{1}{2}$ to $\frac{1}{4}$ inch thick according to preference; remove crusts if desired. Toast should be evenly browned. Toast will have a crisp surface but a soft interior if made rapidly. If crisp dry toast is desired it should be made in a slow or moderate oven. Whole-wheat, nut, and raisin-bread toast are delicious. Serve toast hot. It may be buttered at the table, or buttered just before serving and left in oven a few minutes.

Toast Accompaniments: marmalade, jelly, or other sweets.

Sweet Toast may be served with fruit salads; **unsweetened toast** with any kind of salad.

Croutons and Toast Sticks are made from thick slices (half-inch) of whole wheat or white bread cut in three-fourths-inch strips, or in half-inch squares, or in other shapes and small sizes. Butter the pieces lightly before toasting and sprinkle with a tiny bit of paprika. Croutons and toast sticks are served with soups.

Cinnamon Toast. Butter before toasting, thin half slices of whole-wheat or of plain bread. Spread with a mixture of $\frac{1}{2}$ c. sugar and 1 T. cinnamon, using $\frac{3}{4}$ T. of mixture to each half slice. Heat in a hot oven for 1 to 2 minutes and serve immediately.

Milk Toast. Butter thick slices (three eighths to one half inch) of whole-wheat or plain toast and place in cereal bowls. Pour over them hot milk, using about 1 c. milk for each two slices of toast. Sprinkle with salt and serve immediately.

French Toast. Beat one egg with 4 T. milk or water; dip into it slices of bread three eighths inch thick. Cook in 2 T. fat in a hot frying pan. Cook brown on both sides. Serve immediately, lightly dusted with powdered sugar. Serve jelly, or sirup with French toast. Raisin bread and whole-wheat bread make good French toast.

FLOUR MIXTURES

TABLE OF TEMPERATURES AND TIME FOR BAKING FLOUR MIXTURES¹

FOOD	BAKING	
	Temperatures (Degrees Fahr.)	Time (Minutes)
Baking powder biscuits.....	450 to 460	12 to 15
Bread.....	350 to 400	45 to 60
Butter cakes (loaf).....	360 to 400	40 to 60
Butter cakes (layer).....	380 to 400	20 to 30
Cake, angel.....	300 to 360	50 to 60
Cake, fruit.....	275 to 325	3-4 hours
Cake, sponge (loaf).....	300 to 350	40 to 60
Cookies (thin, rolled).....	380 to 390	10 to 12
Cookies, molasses.....	350 to 375	18 to 20
Cream puffs.....	300 to 350	45 to 60
Meringues.....	250 to 300	40 to 60
Muffins (baking powder).....	400 to 425	20 to 25
Pie crust (large pies).....	400 to 500	20 to 40
Popovers.....	350 to 450	35 to 40
Rolls.....	400 to 425	20 to 25

PROPORTIONS FOR QUICK BREADS:²

	LIQUID (usually milk)	FLOUR (sifted soft wheat)	FAT*	EGGS	BAKING POWDER	SUGAR	SALT	FLAVOR- ING
Popovers.....	1 cup	1 c.	1-2 t.	1-1½			⅓ t.	
Waffles.....	1 cup	1⅓ c.	2 T.	1-2	2 t.	1 T.	½ t.	
Griddlecakes.....	1 cup	1½ c.	1-2 T.	1	2 t.	0-1 T.	½ t.	
Fritter batter:								
No. 1, cover... 1 cup	1¼ c.	1 t.	1	1 t.			⅓ t.	
No. 2, binding. 1 cup	1¾ c.	1 T.	1	2 t.			½ t.	
Muffins.....	1 cup	2 c.	2-4 T.	1	2 t.	1-2 T.	½ t.	
Baking powder biscuits.....	1 cup	3 c.	4-6 T.		4 t.		1 t.	

* These quantities are for fat containing no water. When butter or other fats containing water are used, about one sixth more should be allowed.

¹ Used through the courtesy of New York State College of Home Economics at Cornell University.

² *Home Baking*. United States Department of Agriculture Farmers' Bulletin 1450 (1925).

POPOVERS

See table of Proportions for Quick Breads, page 370.

Grease and heat popover cups or muffin tins. Melt the fat; mix ingredients and beat well for a few seconds. Fill hot, greased popover cups half full of mixture. Place in hot oven (about 400° to 450° F.). After 15 minutes, begin decreasing heat and finish at the end of 40 minutes with a moderate oven. Popovers should be well puffed, well browned, and fairly dry on inside of shell. Serve very hot for breakfast, and butter them as soon as they come to the table.

Small recipe, half of given amounts.

WAFFLES, SWEET-MILK

(About 6 waffles)

Use proportions for waffles from table of Proportions for Quick Breads, page 370.

Mix and sift dry ingredients; add egg yolk and milk which have been thoroughly mixed; and fold in stiffly beaten egg whites. Pour onto the center of a hot and well-greased waffle iron from a pitcher or cup, allowing about one third cup of mixture for one waffle. Bake until evenly browned and crisp. Serve with butter or melted butter and sugar or sirup. The waffle iron should be turned once during each cooking and reheated between times.

Small recipe: $\frac{2}{3}$ c. flour, $\frac{3}{8}$ c. milk, $\frac{2}{3}$ t. baking powder, $\frac{1}{6}$ t. salt, 2 t. fat, 1 egg, 1 t. sugar.

WAFFLES, SOUR-MILK

See amounts for sweet-milk waffles. Use buttermilk in same amount as sweet milk, decrease baking powder to 1 t., and use $\frac{1}{2}$ t. soda. Mix according to directions for sweet-milk waffles. Add soda dissolved in a little water.

Small recipe: $\frac{1}{2}$ c. milk, $\frac{2}{3}$ c. flour, $\frac{1}{6}$ t. soda, 1 T. fat, 1 egg, $\frac{1}{3}$ t. baking powder, 1 t. sugar, $\frac{1}{3}$ t. salt.

Variations in Waffles

Sour Cream: Substitute sour cream or clabber for sweet milk; decrease baking powder to $1\frac{1}{2}$ t., and add $\frac{1}{4}$ t. soda.

Rice or Hominy Waffles: 2 c. cooked rice or hominy grits, 1 c. flour, 3 eggs, 1 T. butter, 2 c. milk, 2 T. baking powder. Mix as for waffles.

Cornmeal Waffles: Substitute fine white cornmeal for one half to three fourths the flour in the sour-milk waffle recipe. Use buttermilk, sour milk, or sour cream.

CREAM WAFFLES FOR ELECTRIC WAFFLE IRON

2 c. flour	4 eggs
1 c. thick cream	1 ½ t. baking powder
1 c. milk	½ t. salt
¼ c. melted butter	

Mix and sift dry ingredients. Beat yolks and add milk and cream. Add gradually to dry ingredients, beat until smooth. Add melted butter and fold in stiffly beaten whites of eggs.

Heat electric waffle iron for five minutes. Slightly oil iron for first waffle, but do not grease again. Bake 4 T. batter about 2 minutes for each waffle.

GRIDDLECAKES, SWEET-MILK

For amounts, see Proportions for Quick Breads, page 370.

Mix and sift dry ingredients; add egg and milk mixed together; add melted fat. Beat mixture well for about half a minute. Have griddle well greased and hot. Drop batter on griddle by spoonfuls, allowing for spreading. When puffed and bubbles have broken on top, it should be evenly browned on the under side, and is ready to be turned with a spatula or cake turner. Serve griddlecakes hot with butter and sirup or sugar.

Small recipe: ½ c. flour, ⅓ c. milk, 1 t. fat, ½ egg, 1 t. baking powder, ⅙ t. salt.

GRIDDLECAKES, SOUR-MILK

See amounts for sweet-milk griddlecakes. Use sour milk instead of sweet milk, add ½ t. soda, omitting baking powder, and decrease flour to 1⅓ c. Mix soda with dry ingredients, and mix cakes as for sweet-milk griddlecakes.

Small recipe: ⅓ c. sour milk, ⅜ c. flour, ½ T. fat, ½ egg, ½ t. sugar, ⅙ t. salt, ⅙ t. soda.

SIRUP FOR WAFFLES OR GRIDDLECAKES

Maple Sirup

1 c. brown sugar $\frac{1}{2}$ c. water $\frac{3}{4}$ c. maple sugar

Mix and heat sugar and water until sugar is dissolved. Serve hot or cold.

Sugar Sirup

$\frac{1}{2}$ c. water 1 c. brown sugar 1 t. butter

Mix and heat ingredients until sugar is dissolved. Serve hot.

MUFFINS

Standard Recipe (12 muffins)

Use amounts for muffins in table of Proportions for Quick Breads, page 370.

Mix and sift dry ingredients; add milk and egg well mixed together; add melted fat. Beat well for a few seconds only. Fill buttered muffin tins half to two thirds full. Bake in a moderately hot oven (400° F.) for 20 to 25 minutes.

Small recipe, $\frac{1}{4}$ of amounts, using 1 T. beaten egg.

For Bran Muffins, substitute 1 c. uncooked wheat bran and $1\frac{1}{8}$ c. flour for flour in standard recipe.

For Cornmeal Muffins, substitute $\frac{7}{8}$ c. cornmeal (or corn-bread crumbs) and 1 c. flour for flour in standard recipe.

For Oatmeal Muffins, substitute 1 c. oatmeal and 1 c. flour for flour in standard recipe.

For Potato Muffins, substitute $\frac{7}{8}$ c. milk for milk in standard recipe, and substitute $1\frac{1}{8}$ c. hot freshly mashed potato (not packed hard in measuring) and 1 c. flour for flour in standard recipe.

For Berry Muffins, add $\frac{1}{2}$ c. fresh berries, drained canned berries, or chopped raisins to standard recipe. Fresh or canned blueberries are especially good. If sour berries are used, double sugar in recipe.

BISCUIT

Baking-Powder Biscuit or Sour-Milk (Soda) Biscuit may be made of white or whole-wheat flour; and may be either rolled out or dropped from spoon for baking.

Sweet-Milk Biscuit: Use amounts in table of Proportions for Quick Breads, page 370.

Sour-Milk Biscuit: Same as sweet-milk biscuit except that 2 t. baking powder and $\frac{1}{4}$ t. soda are used for leavening.

Method: Mix and sift dry ingredients. Cut fat into dry mixture with two knives. Add enough milk to make a soft dough. Knead lightly until smooth. Roll out on lightly floured board to one fourth inch thickness, then cut. Bake on unbuttered pan in hot oven (450° F.) for 12 minutes, or until delicately browned.

For Drop Biscuit, add 2 to 3 T. more liquid and drop the mixture from a teaspoon onto a buttered pan. Bake in hot oven until brown.

Small recipe, one fourth of given amounts.

Variations of Biscuit

Shortcake: Use 6 or 7 T. fat in biscuit recipe; mix and roll out as for biscuit. For individual shortcakes, cut rounds with large biscuit cutter and place two together, one on the other, before baking. For larger cakes, cut two large squares, placing one on top of the other for baking. Bake in a hot oven (425° to 450° F.) until delicately browned. Split and fill with crushed fruit, or whole berries or sliced fruit (strawberries, raspberries, fresh cherries, sliced peaches, orange slices) that has been slightly sweetened with powdered sugar. Put top crust on and cover with fruit. Serve with plain cream or cover with whipped cream and serve.

Crust for Meat or Chicken Pie: Use ingredients for shortcake. Pat or roll the dough to three eighths inch thickness. Place materials for pie in baking dish, cover with crust and bake in a moderately hot oven (400° to 425° F.) for 15 to 18 minutes. The sides of the dish may be lined with crust if desired. The top crust may be made of circles cut with doughnut cutter; these indicate individual servings.

Cinnamon Rolls: Roll out biscuit dough; spread or dot with butter; sprinkle with a mixture of $\frac{1}{2}$ c. sugar to 1 or 2 T. cinnamon. Dot the dough with raisins if desired. Roll the dough; cut roll in slices; place with cut side up on greased pan and bake in hot oven (425° to 450° F.).

Dumplings: Use only 2 T. fat in biscuit recipe and use $\frac{7}{8}$ c. to 1 c. milk. Drop by spoonfuls on top of meat stew or boiling water. Cover well and cook for 15 minutes.

Apple Dumplings: Roll shortcake dough very thin (about one eighth inch thick). Cut in strips and wrap around large apples, cored and pared. Fill center with sugar in which a little nutmeg is mixed. Brown sugar or cinnamon may also be used. Dot the dumplings with butter; bake in moderately hot oven (400° F.) for 30 minutes.

Meat Turnovers: Use amounts for shortcake (see page 374). Roll dough $\frac{1}{8}$ inch thick. Cut in circles with a saucer and paring knife. Moisten edges slightly with egg white. Place meat mixture (recipe following) in center of one side and double other side over to make a semi-circle. Pinch edges together with a fork or fingers. Bake in a moderately hot oven (400° F.) for 20 minutes. Tops of baked turnovers should be brushed with milk or egg when half done. Serve with brown sauce.

Filling for Turnovers: $1\frac{1}{2}$ c. ground cooked meat, 2 T. butter or margarine, $\frac{1}{2}$ c. meat stock, $\frac{1}{2}$ c. mashed potatoes, 1 t. chopped parsley, 1 egg.

SPOON BREAD

1 c. cornmeal	1 t. baking powder
2 c. buttermilk	$\frac{3}{4}$ to 1 t. soda
$\frac{1}{2}$ t. salt	1 $\frac{1}{2}$ T. butter
2 eggs	

Beat eggs well, add milk, sift in meal, baking powder and salt; add soda, mixed with a tablespoon of water. Heat butter in a baking pan, taking care to butter the pan well with it. Pour butter into the batter, then turn mixture into the pan, and bake in a moderate oven 20 to 30 minutes.

Small recipe, one fourth of given amounts.

BOSTON BROWN BREAD

1 c. flour	2 c. sour milk, or
1 c. cornmeal	1 $\frac{1}{4}$ c. sweet milk
1 c. graham flour	$\frac{1}{2}$ c. molasses
1 t. soda	$\frac{1}{4}$ c. sugar
$\frac{3}{4}$ t. baking powder	

Mix milk and molasses and add to sifted dry ingredients. Beat well about 1 minute. Fill greased molds about two thirds full. Cover tightly, putting 2 layers of oiled paper under the tops. Steam for 3 hours; remove covers and dry bread in oven 15 minutes.

This mixture will fill about 4 one-pound baking-powder tins.

Small recipe, one fourth of given amounts. Put only about 2 inches of batter in greased tin, steam 45 minutes, and bake in a hot oven (with the lid off) for 20 minutes.

NUT BREAD

2 $\frac{1}{4}$ c. flour	$\frac{3}{4}$ c. sugar
2 $\frac{1}{2}$ t. baking powder	$\frac{2}{3}$ c. milk
1 t. salt	1 egg well beaten
1 c. chopped roasted peanuts	

Sift flour and baking powder; add salt, sugar, and nut meats. Beat egg well, add milk and mix with dry ingredients. Put in a pan and allow to stand 20 minutes. Bake in moderate oven (375° F.) 40 to 50 minutes.

DOUGHNUTS

1 $\frac{1}{2}$ c. flour	1 t. flavoring	2 T. fat
$\frac{1}{4}$ t. salt	1 egg	2 T. milk
1 $\frac{1}{2}$ t. baking powder	$\frac{1}{3}$ c. sugar	

Cream butter, sugar and eggs. Add flavoring and salt. Stir this into flour and baking powder sifted together. Add milk, if necessary, to make a dough. Roll the dough $\frac{1}{4}$ inch thick, cut, fry in deep fat, and drain on brown paper. Dust with powdered sugar.

SOUTHERN CORNMEAL MUFFINS OR CORNMEAL STICKS

2 eggs	1 t. salt	$\frac{1}{2}$ t. soda
2 c. fine white cornmeal	2 c. thick buttermilk or clabber	

Beat eggs into milk. Sift together dry ingredients and beat thoroughly into the milk. Bake as soon as mixed, in a hot oven in hot, well greased muffin or breadstick pans.

To be successful with cornmeal batter breads the pans must be well greased and the oven hot. Muffin pans made of iron are best

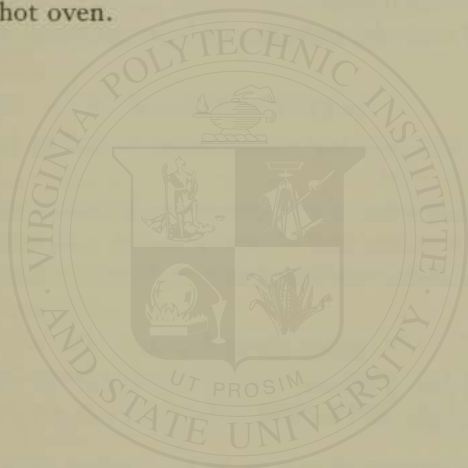
for corn bread. Ten minutes before filling, the pans should be placed on top of range or stove to heat. Put 1 t. of lard in each ring and allow to heat smoking hot. Fill each ring half full of batter. Bake brown in a hot oven.

Small recipe, one fourth of given amounts.

SOUTHERN CORN DODGERS OR CORN PONE

4 c. fine white cornmeal	½ t. salt
2 c. buttermilk	1 T. lard

Mix salt with meal and rub in lard. Add milk. Shape into small oblong cakes or pones with the hands and bake on a greased griddle in a hot oven.



EGGS

(See Chapter VII, Unit One)

To Break an Egg: Hold the egg in the left hand and with a knife strike a sharp blow in the middle of it. Insert the two thumbs in the crack and break the shell by pulling it apart.

To Separate White from Yolk: Slip the egg from one half shell to the other, catching the yolk but allowing the white to slip into a dish or cup.

It is safest to break each egg separately into a dish or cup, to make sure of its freshness.

For uses of eggs in cooking, and preservation of eggs, see Chapter VII.

SOFT-COOKED EGGS

1. Put eggs into cold water and bring to boiling point. Serve immediately.
2. Pour boiling water over eggs, cover, let stand 5 to 7 minutes.
3. Put eggs into top part of double boiler. Pour boiling water over them and into outside of double boiler. Keep covered 5 minutes.

HARD-COOKED EGGS

Use method No. 3 above. Keep the vessel on the fire for 30 minutes. The eggs will be firm but not as tough as when boiled.

VARIATIONS IN USE OF HARD-COOKED EGGS

1. Creamed Eggs

3 hard-cooked eggs
1 ½ c. white sauce No. 2 (page 396)

toast, 6 small slices

Slice hard-cooked eggs into white sauce. 1 to 2 T. chopped parsley may be added. Season to taste; serve on toast.

Small recipe, one third of given amounts.

2. Eggs à la Goldenrod

Same ingredients as for creamed eggs. Separate the whites of the hard-cooked eggs from the yolks. Chop the whites; add them to the white sauce; season with salt and pepper; pour over

the toast. Put yolks through strainer or potato ricer and decorate the covered toast with it.

Small recipe, one sixth of given amounts.

3. Scalloped Eggs

3 hard-cooked eggs	1 T. butter
2 c. No. 2 White Sauce	$\frac{3}{4}$ c. cooked material — cracker
$\frac{1}{2}$ c. bread crumbs	crumbs, ground ham, flaked fish
	or crab, chopped chicken

Arrange alternate layers of sliced eggs and other cooked material in a buttered baking dish. Pour white sauce over the mixture; cover with bread crumbs, dot with butter, and brown in a moderate oven. Serve in the baking dish as a main dish for luncheon or supper.

Small recipe, one sixth of given amounts.

POACHED EGGS

Butter the bottom of a shallow pan. Add enough boiling salted water (1 t. salt to 1 qt. water) to cover the eggs. Slip eggs, one at a time, into pan; cover; move to the back of stove or turn flame very low to prevent boiling. Cook 3 to 10 minutes, according to degree of firmness desired.

Serve on buttered toast; season with salt and tiny dots of butter. Use very small sprigs of parsley for garnish. A pretty variation is obtained by cutting the toast round and using greased muffin rings to hold the eggs in shape.

Small recipe, one egg.

For **Eggs Poached in Milk**, use milk in the pan instead of water. Pour the milk over the toast before serving the eggs.

EGGS IN MOLDS (CODDLED OR BAKED)

Butter individual molds or cups, which may then be powdered with chopped parsley. Slip an egg into each cup; sprinkle with salt; put a few drops of cream over each yolk. Set molds in vessels of hot water and cook on top of stove or in a slow oven until eggs can be turned out.

Serve on toast. White sauce No. 2 or tomato sauce may be used. Eggs may be cooked together in a deep plate and served without being removed from the plate.

SCRAMBLED EGGS

4 eggs
 $\frac{1}{3}$ c. (6 T.) milk

$\frac{1}{2}$ t. salt; pepper to taste if desired
 1 t. butter or margarine

Beat eggs until mixed; add seasonings and milk. Heat omelet pan with butter in it; add eggs, and cook until creamy, scraping from the bottom of pan as the mixture cooks. Serve on thin toast.

Scrambled Eggs with Cheese: Have $\frac{1}{2}$ c. grated cheese added when eggs begin to thicken.

Swiss Eggs: Have one small chopped onion and 1 c. tomatoes cooked with the fat until tender before eggs are added. $\frac{1}{2}$ c. grated cheese may be added as the eggs begin to thicken. These amounts are for 6 eggs.

Small recipe, 1 egg, $\frac{1}{2}$ slice onion, 2 T. tomato, 1 T. cheese.

FRIED EGGS

Heat an omelet pan with enough butter or bacon fat to cover well the bottom of the pan. Slip eggs into pan one at a time; season with salt. If desired turned, use a spatula or cake turner. Cook slowly to desired firmness.

OMELETS

GENERAL RULES FOR OMELETS

1. Select large eggs. Allow 1 egg to each person and 1 T. liquid to each egg.
2. Have omelet pan smooth. If it is not perfectly smooth, clean with salt by heating salt in pan and rubbing with paper.
3. An inexperienced cook should never use more than three eggs for an omelet. A large omelet is difficult to handle. If more than six persons are to be served, it is best for even an experienced cook to make more than one omelet.

Omelets are of two kinds — puffy and creamy.

PLAIN OMELET

LARGE	SMALL
6	1
6 T.	1 T.
$\frac{3}{4}$ t.	$\frac{1}{8}$ t.
dash	dash
1 T.	$\frac{1}{2}$ t.

eggs
 water, milk or
 white sauce
 salt
 pepper
 butter

CHEESE OMELET
 Add 6 T. ($\frac{1}{3}$ c.)
 grated cheese to
 large omelet

Variations: Chopped cooked bacon, meat or ham, parsley, or bread crumbs may be folded into the mixture before it is cooked. White sauce used instead of liquid makes the omelet less likely to fall.

For **Cheese Omelet**, sprinkle grated cheese over omelet just before serving.

For **Jelly Omelet**, use plain omelet recipe, omitting pepper and adding 1 t. sugar for each egg. Before folding omelet spread with jelly, jam, or marmalade. Fold, turn, and sprinkle with powdered sugar.

For **Bacon Omelet**, use plain omelet recipe. Fold into the uncooked mixture crisp bacon broken in pieces. Garnish with whole slices of broiled bacon.

For **Orange Omelet**, substitute orange juice with 2 t. lemon juice for the liquid in the plain omelet. Add 2 T. of powdered sugar to the yolk mixture. Cook as plain omelet.

Shred 3 oranges and place slices of shredded orange well sprinkled with powdered sugar over half the omelet. Turn the omelet out of pan. Garnish with other part of orange. Sprinkle with powdered sugar and serve at once.

PUFFY OMELETS

Method of Mixing: A puffy omelet consists of egg yolk mixed with some liquid (1 T. to 1 yolk) and with seasonings, folded into well-beaten egg whites and cooked slowly, first on top of the stove and then in the oven.

Separate yolks from whites. Beat yolks until thick and lemon colored; add seasoning and hot water. Heat omelet pan and butter bottom and sides. Beat whites stiff and dry; cut and fold them into yolk mixture until they have taken up the mixture. Turn into pan; spread evenly. Cook slowly on top of stove until well puffed and brown on bottom. Place in the oven to brown top. An omelet is done if it does not cling to the fingers when touched.

Some cooks add a little baking powder to the omelet to hold it up ($\frac{1}{2}$ t. to each 2 eggs).

CREAMY OMELET

A creamy omelet is similar to scrambled eggs. Care must be taken not to break the mixture, while it cooks. See directions for French omelet.

FRENCH OMELET

6 eggs	½ t. salt	1 T. butter
6 T. milk or water	Pepper	

Beat eggs just enough to mix whites and yolks. Add liquid and seasonings. Turn into hot omelet pan in which butter has been melted. Cook over a slow fire. As mixture cooks, lift with spatula. Cook to a creamy consistency. Place over hotter flame to brown quickly on bottom. Loosen from pan and roll onto a hot platter. Serve at once.

Small recipe, one egg.

SPANISH OMELET

Serve French omelet with tomato sauce made from unstrained tomatoes. Add cooked vegetables to the tomato sauce; suggestions: peas, mushrooms, finely chopped green pepper, onions. Pour around the omelet.

Small recipe, one sixth of the above amounts.

SOUFFLÉS

See section of recipes, Main Dish for Luncheon or Supper, page 401.

EGG CROQUETTES

See Main Dish for Luncheon or Supper, page 407.

STUFFED EGGS

See Salads, page 428.

See also Sauces, Soufflés, and Beverages.

SOUPS

Cream soups and vegetable soups are usually served for luncheon, and clear soups are served for dinner.

CREAM SOUPS

General Proportions: Use 1 c. cooked vegetable or cooked and strained vegetable pulp to 1 or 2 c. of white sauce No. 1. One quart of soup is about 6 servings. For starchy vegetables use only $\frac{1}{2}$ T. of flour to thicken each cup of milk.

PROPORTIONS FOR WHITE SAUCE NO. 1

1 c. milk 1 T. flour 1 T. butter $\frac{1}{4}$ t. salt

For method of combining white sauce, see page 396, Sauces.

The Seasoning of Cream Soups: The usual seasonings are: 1 t. salt for each 2 c. of soup; 2 t. chopped parsley for each pint, both for flavoring and for garnishing such soups as cream of celery or potato; two or three drops of onion juice or $\frac{1}{4}$ t. finely chopped onion with each pint; $\frac{1}{8}$ t. pepper with a pint of cream of corn soup; an extra tablespoon of butter in any soup; sugar (1 T. to 1 pt. soup) with cream of pea or cream of corn. A good seasoning for any cream soup is a thin slice of onion scalded in the milk and removed before the milk is thickened.

Cream Soups Made with Strained Vegetable Pulp: tomato; pea; potato; spinach; bean.

Cream Soups Made with Cut Vegetables or Vegetable Pieces: celery; mushroom; corn; asparagus.

Combination of Cream Soups: Have vegetable or vegetable pulp and white sauce hot. Combine just before serving and beat well.

Special Direction for Cream of Tomato Soup: Add $\frac{1}{8}$ t. of soda for each c. of tomato. Add soda after tomatoes have been cooked.

Serving Cream Soups: Serve hot in cups or bowls, allowing $\frac{2}{3}$ c. per person. Serve as an accompaniment crisp crackers, croutons, or toast.

For Croutons, see Quick Breads, page 369.

Small recipe for cream soup, $\frac{1}{2}$ c. white sauce, $\frac{1}{4}$ c. strained vegetable pulp, season to taste.

VEGETABLE SOUPS WITH MEAT STOCK

(One quart of soup is 5 or 6 servings)

Vegetable soups are stock soups containing about 1 c. diced vegetables to each 3 c. stock. One cup of water in which vegetables have been cooked may be used in place of 1 c. of meat stock. (See Clear Soups, below, for meat stock.) Cook stock and vegetables together until vegetables are tender.

Good combinations for vegetable soup are:

- | | |
|--|---------------------|
| 1. 1 c. cooked tomato, strained
or unstrained | ¼ c. diced carrots |
| ½ c. chopped celery or cabbage | 2 T. cooked onion |
| ¼ c. diced turnip | ¼ c. diced potatoes |
| 1 T. salt | 4 c. (1 qt.) stock |
2. No. 1, without tomato
 3. ¼ c. diced turnip ½ c. peas
 ½ c. diced carrot 4 c. (1 qt.) stock
 2 T. finely chopped onion 1 T. salt
 4. No. 3 with boiled rice or barley in place of turnip, or in place of part of turnips and part of carrots.

CLEAR SOUPS (STOCK SOUPS)

Beef Tea is beef juice extracted from beef by heating. It is prepared only for invalids.

Meat Stock is made from meat and vegetables, seasoned to taste, and served without meat or vegetables. Brown stock is made from meat, part of which has been browned. White stock is made from meat that has not been browned.

Bouillon is made from lean beef delicately seasoned, and usually served clear.

Consommé may be made from two or three kinds of meat, is lightly seasoned, and is cleared before serving.

To Clear Soup: After fat is removed from cold soup stock, heat the stock slightly and season it. Allow ½ to 1 egg white and 1 eggshell for each quart and mix thoroughly while soup is only warm. Let simmer 15 minutes or boil 5 minutes. Set aside to cool for 15 minutes, then strain through a double thickness of cheesecloth.

BEEF TEA

Cut up 2 lb. lean beef into half-inch cubes and put it in glass fruit jar. Cover jar and place in a pan of hot water. Let stand for about three hours, or until meat has lost its red color. Pour juice from meat. This broth will keep on ice for 12 to 24 hours. It needs little seasoning and should be served hot.

BROWN SOUP STOCK, OR BOUILLON

4 lb. shin of beef	$\frac{1}{4}$ c. diced celery
($\frac{3}{5}$ meat and $\frac{1}{5}$ bone)	3 or 4 celery tops
2 qt. water	1 small sprig parsley
$\frac{1}{4}$ c. diced carrots	2 T. chopped onion
$\frac{1}{4}$ c. diced turnips	2 pepper corns
	2 T. salt

Cut meat into 1-inch cubes. Cook one third of meat in a hot greased frying pan until well browned. Soak all meat and bone in cold water for 30 minutes; heat and simmer for 4 hours. Add vegetables, and cook 1 hour. Strain and add water to bring quantity to two quarts.

White Soup Stock, or Bouillon: Use veal instead of beef. Prepare as Brown Stock without browning the meat.

Consommé: Use half beef and half veal knuckle or chicken and veal. Cook as for brown soup stock. Strain, cool, and clear. A few pieces of diced vegetable or a little cooked rice may be served in consommé; consommé is served in bouillon or coffee cups. In hot weather consommé or bouillon may be served cold (jellied) with a slice of lemon.

NOODLE SOUP, OR SOUP WITH RICE OR BARLEY

To bouillon, brown or white, or to chicken broth add cooked noodles, boiled rice, boiled barley, or boiled macaroni cut in 1-inch pieces. Use 1 c. of the material preferred to each quart of soup.

EMERGENCY BOUILLON, OR CONSOMMÉ

3 bouillon cubes	Vegetables as for brown soup stock
2 qt. water	or
	Tomato catsup (to taste) for tomato bouillon

Cook vegetables in water for 1 hour; add bouillon cubes; add salt if necessary; strain and serve.

OYSTER STEW

1 qt. hot milk or cream

1 T. salt

1 pt. oysters

 $\frac{1}{2}$ t. pepper4 T. ($\frac{1}{4}$ c.) butter

Oyster crackers to serve with stew

Add oysters to hot milk and heat until they are plump and their edges curl. Add butter, salt, and pepper, and serve with crisp crackers.



VEGETABLES

(See Unit Two, Chapter X, and Unit Three, Chapter XX)

VEGETABLE TIME-TABLE *

	BOILED	STEAMED	BAKED
Artichokes, French	40 Min.	45-60 Min.	
Asparagus, tied in bundles with base of stem in water (covered)	30		
Beans, lima, depending on the age	20-40	60	
Beans, string	15-45	60	
Beets, young with skins on	45	60	70-90
Cabbage, chopped or cut in sections	20	25	
Cauliflower, stem down	20-30	30	
Carrots, cut across or lengthwise	30-45	40	
Chard	60	90	
Celery, cut in lengths ($\frac{1}{2}$ inch)	30	45	
Corn, green, young from garden (in tender leaves)	5-10	15	20
Cucumbers, peeled and cut in halves	20	30	40
Eggplant, whole	30	40	45
Onions	45	60	60
Parsnips	60	75	75
Peas, green	20-40	35-50	
Peppers	20-30	30	30
Potatoes, depending on the size	10-40	60	45-60†
Potatoes, sweet	40	40	45-60†
Pumpkin (in cubes)	30	45	60
Salsify	25	45	
Spinach	20	30	
Squash in cubes, depending on the type	20-40	50	60
Tomatoes, depending on the size	5-15		15-20
Turnips, depending on the size and age	30-60		

*Adapted from *Vegetable Cookery* (1924), University of Wisconsin, Extension Circular 182.

†The baking of potatoes may be hastened by first boiling them in their skins for 15 to 20 minutes. About 15 minutes' baking will then be required.

One Serving of Vegetable: From one fourth to one third of a pound may usually be considered one serving.

PREPARATION OF VEGETABLES FOR COOKING AND FOR THE TABLE

Most vegetables are washed thoroughly (scrubbed if very dirty) and cooked in their skins; or pared or peeled and cooked.

String Beans are cooked whole or in 2-inch pieces after the ends and strings have been removed.

Lima Beans (butter beans) and peas are washed and then shelled for cooking.

Beets are washed and then boiled or baked in their skins, with 2 inches of top and the root left on to prevent loss of color or "bleeding." White or sugar beets are cooked in their skins. When beets are almost tender dip them in cold water and then break the skin with the fingers and slip it off.

Cabbage is washed, inspected for insects, and sliced, shredded, or cut in wedge-shaped pieces. It is freshened for 15 to 30 minutes in cold water, if necessary.

Cauliflower has leaves removed, is washed, and cooked whole, head down, or broken into four or five pieces and cooked.

Carrots are scrubbed and cooked whole or in lengthwise or crosswise slices. Old carrots are scraped to remove the tough outer skin.

Celery should be scrubbed under running water with a vegetable brush.

Celery Prepared for the Table, Club Style: Wash and scrub each bunch. Cut the stalks in quarters lengthwise and serve on crushed ice or very cold. The tough outer stalks must be removed before preparing celery club style.

Green Corn has the husk and silk removed. Remove the silk with the point of a sharp knife. The husk may be used as a cover during roasting.

Eggplant is washed and left whole for baking; it is pared, cut across in half-inch slices and soaked in salted water (2 T. to 1 qt.) for frying. Often it is also pressed by having a weight placed on the raw slices which have been sprinkled with salt.

Greens are washed by dipping up and down in three or four fresh waters, or cleansed leaf by leaf under running water.

Lettuce (For leaf lettuce, see Greens.) To wash head lettuce, cut off stem end and cut stem out of head for about three fourths inch to 1 inch deep. Let water run into the hole, turn the head upside down and drain; repeat the process four or five times.

Parsnips and Turnips are pared and sliced or diced.

Peppers are cut open at stem end (around the stem), or are cut in halves, and seeds removed.

Potatoes are scrubbed and boiled either in skins or in pieces after paring. They are baked in their skins to retain steam, which helps to make them "mealy." Pare potatoes as thinly as possible.

Spinach. See Greens, page 388.

Tomatoes are not peeled for baking, broiling, or frying but are peeled for stewing. To peel a ripe tomato (1) either rub it all over with the back of a knife (2) or dip it in boiling water for a half minute and then in cold water. Slit the skin at blossom end and peel toward stem end. Cut out the stem.

METHODS OF COOKING VEGETABLES

BOILING OR PARBOILING VEGETABLES, WITH VARIATIONS¹

Boiling Strong-flavored Vegetables, such as cabbage and onions. Cook in boiling water in an uncovered vessel for 10 or 15 minutes; pour off the water and add fresh boiling water and salt; cook until tender. This method removes some of the strong flavor and makes the vegetable more palatable to many people. Some vitamin B and minerals are lost in the process.

Boiling Other Vegetables: Cook vegetable in boiling water from the start (without first extracting juices in cold water). The boiling of vegetables in the skin saves some minerals and vitamins. Either boil them whole in the skin, or pare, cut in pieces, and boil until tender. Add 1 t. salt for each pound of vegetables when almost tender. Test tenderness with a fork.

Buttered Vegetables are boiled (or steamed) and seasoned with 2 T. butter and $\frac{1}{4}$ t. salt to each pound of vegetable or to taste.

Mashed Vegetables are boiled (or steamed) and mashed with a fork, a spoon, or some other masher, or by being put through a potato ricer (fruit press). After mashing the vegetable, season with salt and white pepper, adding 2 T. butter for each pound of vegetable; to potatoes and winter squash also add whole milk or cream, beating with a fork until light. Avoid adding enough liquid to make the vegetable heavy.

¹ Vegetables may be boiled with salt pork or with bacon.

White potatoes, sweet potatoes, winter and summer squash, and turnips are mashed.

Vegetable Puffs are mashed vegetables into which 1 or 2 egg whites have been beaten and the mixture then baked 15 or 20 minutes in a moderate oven (350° to 375° F.). Grated cheese may be sprinkled over a potato puff before it is baked. White potatoes, sweet potatoes, winter squash, left-over peas, and parsnips all make good puffs. Before making puffs heat left-over vegetables in top of double boiler (or a substitute), to prevent lumpiness.

Creamed Vegetables are boiled (or steamed), diced or cut in small pieces, and combined with white sauce No. 2. See Sauces, page 396, for proportions and the making of the white sauce. One cup of white sauce is sufficient for 4 to 5 servings of vegetable. Carrots, peas, potatoes, turnips, string beans, onions, cabbage, chard, salsify, celery, asparagus, and cauliflower are creamed.

Scalloped Vegetables are creamed, placed in a buttered baking dish, and baked with a layer of buttered crumbs on top. Bake in a moderate oven (about 375° F.) until the crumbs are brown.

Sliced onions, sliced cabbage, asparagus, and string beans are especially good scalloped. See special recipes for scalloped potatoes and scalloped tomatoes, page 392.

Creamed au gratin, or Scalloped au gratin Vegetables are creamed or scalloped vegetables to which grated cheese has been added. Use $\frac{1}{4}$ to $\frac{1}{2}$ c. grated cheese for each pound of vegetable or for four to six servings.

Cauliflower, asparagus, and eggplant are good in this form. (See page 392 for special recipes for au gratin potatoes.)

Stuffed Vegetables (except tomatoes) are usually boiled, steamed, or baked until tender, then stuffed, usually covered with buttered bread crumbs, and baked. Scoop out the center of the vegetable to be stuffed and mix this pulp with seasoning and equal parts of bread crumbs. Cooked rice may substitute for bread crumbs; put mixture in shell and bake until browned. Stuffed onions may have nuts in the filling. Crisp, flaked bacon is a good addition to stuffed eggplant.

Stuffed Green Peppers are prepared by removing the tops and

seeds and then parboiling the peppers for 1 to 2 minutes and filling them with a mixture of crumbs (or boiled rice), tomato juice and pulp and 1 t. butter to each pepper. Hot water may be added if the mixture is too dry. Stuffed peppers or tomatoes may contain ground meat in place of some of the bread crumbs. If stuffed with meat, they would be a main dish and not a meat accompaniment. Cooked ham or bacon are especially tasty in stuffed tomatoes or stuffed peppers. Cover top with buttered crumbs and brown in oven.

Eggplant, onions, green peppers, small summer squash, turnips and tomatoes are good vegetables for stuffing. (See special recipe for baked stuffed potato, page 313.)

Glazed Vegetables are first boiled whole for about half the length of time required to make them tender, then sliced and either (1) cooked in sirup until partially transparent and tender, or (2) placed in buttered pan, covered with sugar or a heavy sirup, and cooked until partially transparent and tender. For small amounts (1 to 2 lbs.) of vegetable, use a sirup made in proportions of 2 c. sugar to 1½ c. water; for larger quantities use 2 c. sugar to 1 or ¾ c. water.

Carrots, sweet potatoes, and onions are often glazed. Use half or all brown sugar for sweet potatoes.

THE COOKING OF SPINACH AND OTHER GREENS

For the preparation of greens, see Preparation of Vegetables for Cooking, page 387. When the vegetable is clean, place it in a covered kettle without other water than that on the leaves. Heat slowly, stirring frequently, until the greens are well cooked down and are tender. Remove from kettle, chop fine, add 1 t. salt, ⅛ t. pepper, and ½ T. butter for each pound of fresh greens, and 1 T. lemon juice or mild vinegar if desired. Reheat and serve garnished with slices of hard-cooked egg.

Creamed Spinach: Cook spinach according to directions given above and after chopping fine put through a potato ricer (fruit press). Season, omitting lemon juice and vinegar; add ½ c. cream for each c. cooked spinach; heat and serve with mock Hollandaise sauce or egg sauce. See Sauces, page 396.

SCALLOPED TOMATOES

2 lb. fresh tomatoes or	$\frac{1}{2}$ bay leaf
1 No. 2 can of tomatoes	2 whole cloves
2 c. fresh bread crumbs (fresh bread crumbled or cut in half-inch cubes)	2 T. sugar
	2 t. salt
	$\frac{1}{8}$ t. pepper
	2 to 3 T. fat

Peel fresh tomatoes, cut in pieces and cook until soft. Add seasoning to canned or cooked tomatoes and boil for five minutes. Remove bay leaf and cloves. Put alternate layers of bread crumbs and tomatoes in buttered baking dish; pour over it the melted butter and cook in moderate oven about 10 to 15 minutes.

Small recipe, one sixth of given amounts (1 tomato or $\frac{1}{3}$ c. canned tomato).

SCALLOPED POTATOES

1 $\frac{1}{2}$ lb. white potatoes	1 T. salt
2 to 3 T. butter	$\frac{1}{4}$ t. white pepper
2 T. flour	1 c. milk

Pare and slice potatoes and put in buttered baking dish, sprinkling each layer very lightly with flour, salt, and pepper. Pour milk and melted butter over potatoes; bake in moderate oven about 25 minutes, or until potatoes are tender.

Small recipe, one sixth of given amounts (or one half potato).

POTATOES AU GRATIN

Add $\frac{1}{2}$ c. grated cheese to each pound of potatoes used for potato puff, or put a layer of grated cheese over scalloped potatoes when tender. Bake only long enough to melt the cheese.

STEAMED VEGETABLES

Steamed vegetables are similar to boiled vegetables. Vegetables are prepared for steaming as for boiling, but are placed on a rack above boiling water and cooked in the steam. The process is longer than boiling, but valuable minerals are retained, and more vitamin B is retained than in boiling.

Potato balls and other vegetables that are to be kept in shape are best steamed.

BAKED VEGETABLES

See Stuffed Vegetables, in Variations of Boiling and Parboiling Vegetables. To bake vegetables, wash them and cook in a moderate oven (350° to 400° F.) until tender. (See Time-Table.)

To Serve Baked Potatoes: When ready to serve take potatoes from oven and slit them in the middle, then burst the skin open by squeezing with the hands. One teaspoon butter and a dash of paprika may be put into the opening. Potatoes are more mealy and less soggy if split when removed from the oven.

Baked Stuffed Potatoes: Bake 3 medium-sized potatoes weighing about $\frac{1}{3}$ lb. each, cut in halves lengthwise and scoop out potato. Add 1 t. salt, 2 T. butter, 4 T. cream or milk, and 1 stiffly beaten egg white, or $\frac{1}{2}$ whole egg. Beat well with fork, return to shells and bake in oven until delicately browned.

BROILED OR SAUTÉD TOMATOES

Select firm tomatoes. Cut them, without peeling, in half-inch slices. To protect the surface against penetration by the hot fat, dip slices in beaten egg to which has been added 2 T. water or milk for each egg, and crumbs seasoned with 1 T. salt and $\frac{1}{4}$ t. pepper for each cup of crumbs. Pan broil or sauté in a frying pan.

FRIED POTATOES

Slice potatoes one half inch thick and cut the slices in half-inch strips for *French fried potatoes*; slice in very thin crosswise slices for *potato chips*; or slice with special cutters for *waffle potatoes*. Soak sliced potatoes for 5 minutes in cold water. Drain and fry a few slices at a time. Fry in deep fat and drain on brown paper; sprinkle with salt, and serve hot. *Sweet potato chips* are very good. Potatoes may also be sautéd; cook them in a skillet in a small amount of hot fat. See Deep Fat Frying, page 406.

HASHED BROWN POTATOES

1 $\frac{1}{2}$ lb. potatoes, chopped fine	1 t. salt
1 $\frac{1}{2}$ T. flour	2 T. fat

Heat fat in frying pan. Stir flour and salt into potato and press it down firmly into pan. Brown the potato slowly, allow-

ing 30 minutes for cooking. Turn it out from pan as an omelet is turned, and serve hot.

For Vegetable Soufflés, see SOUFFLÉS, page 401

For Corn Fritters, see FRITTERS, page 407

MISCELLANEOUS VEGETABLE RECIPES

DRIED VEGETABLES

Pick over and wash dried vegetables. Cover well with cold water and soak overnight. Boil as for fresh vegetables, page 389.

DUCHESS POTATOES

2 c. hot mashed potatoes	3 or 4 T. milk or cream
2 eggs	1 t. salt
2 T. butter	Dash of pepper or paprika

Cream potatoes with all ingredients except egg whites. Beat egg whites stiff and dry and fold into the mixture. Force the mixture through a pastry bag and use it for a garnish for planked fish or steak, or shape in pyramids and bake.

SWEET POTATOES WITH MARSHMALLOWS

6 sweet potatoes (medium)	4 T. sugar (white or brown)
3 T. butter or cream	12-18 marshmallows
Milk if needed	

Use baked or boiled sweet potatoes. Remove from the skins and cream with a fork. Add cream or butter, sugar, milk if necessary to soften, and marshmallows cut in pieces. One half cup of chopped pecans may be added if desired. Fill a baking dish with the mixture. Place six or more marshmallows on top, and brown in a slow oven.

VEGETABLES IN RAMEKINS

Any scalloped, au gratin, or creamed vegetables may be cooked in individual porcelain baking dishes called ramekins. The food is served hot in the ramekins.

Mushrooms, cauliflower, eggplant, asparagus, baked beans, onions, and tomatoes make good ramekin dishes. Crisp broiled bacon may be flaked and mixed with any one of these.

POTATO BALLS

Scoop from raw white potatoes small balls, using a tool designed for this purpose (French vegetable cutter). Steam or boil until done. Serve with melted butter in which there is chopped parsley. White sauce may also be used.

CORN PUDDING

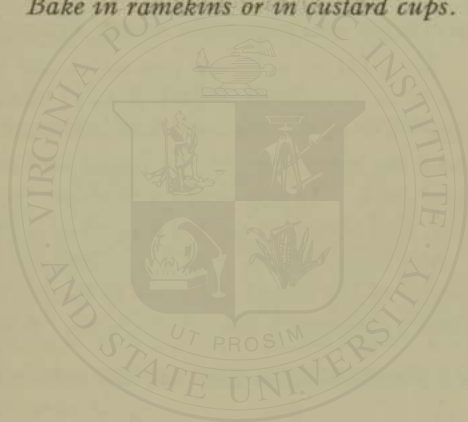
2 c. corn pulp
2 eggs

2 c. milk
1 $\frac{1}{2}$ T. sugar

$\frac{1}{2}$ t. salt

Beat eggs, add salt, sugar, milk, and corn pulp. Bake in buttered dish in a moderate oven until firm (20 to 25 minutes).

Small recipe, $\frac{1}{2}$ c. corn pulp, $\frac{1}{2}$ c. milk, 1 t. sugar, 2 T. egg, a pinch of salt. Bake in ramekins or in custard cups.



SAUCES

WHITE SAUCES

WHITE SAUCE	LIQUID	THICKENING MATERIAL	FAT	SEASONING	USE
No. 1, thin	1 c. milk	1 T. flour	1 T.	$\frac{1}{2}$ t. salt	Cream soups
No. 2	1 c. milk	2 T. flour	$1\frac{1}{2}$ T.	$\frac{1}{2}$ t. salt	Creamed or scalloped dishes or gravy
No. 3	1 c. milk	3 T. flour	2 T.	1 t. salt	Soufflés
No. 4, thick	1 c. milk	4 T. flour	$2\frac{1}{2}$ T.	1 t. salt	Croquettes

The fat should be either butter or margarine, so that the sauce will be flavored.

METHODS OF COMBINING WHITE SAUCES

Method 1. Melt fat in a frying pan or in the top part of a double boiler; remove from heat and stir flour in to make a smooth paste. Add one third of the hot milk and stir until the mixture is smooth. Add the remainder of the liquid and salt, and cook until smooth and thick. The process takes about 10 to 15 minutes over direct heat, and about 25 to 30 minutes in a double boiler.

Method 2. Mix flour with $\frac{1}{4}$ c. of liquid and stir until smooth. Add the remainder of the liquid and cook in double boiler or over direct heat, stirring constantly until it thickens. Add fat and salt.

GENERAL PROPORTIONS FOR SAUCES AND GRAVIES

LIQUID	FAT	FLOUR
1 c. water	2 T. butter or drippings	2 T. white flour or starch
stock		or
milk		$2\frac{1}{2}$ T. browned flour
tomatoes		
or a mixture		
of these		

These ingredients may be combined in either of two ways to make a suitable mixture. The flour may be added to the melted fat, or the flour may be mixed with a little of the cold liquid and added to the hot mixture.

BARBECUE SAUCE FOR MEATS. See page 423.

TARTAR SAUCE. See SALAD DRESSINGS, page 433.

BROWN SAUCE

2 T. fat	2 c. water or stock
$\frac{1}{4}$ c. flour	$\frac{1}{2}$ t. salt
2 T. chopped parsley	$\frac{1}{8}$ t. pepper

Brown the flour by stirring over a hot fire in a dry skillet. Add to melted butter. Add stock and seasonings, and cook until thick. Add 1 t. of Worcestershire Sauce if desired. Strain if not smooth.

MUSHROOM SAUCE

For Brown Mushroom Sauce, use 1 c. brown sauce; for White Mushroom Sauce, use 1 c. white sauce. Add $\frac{3}{4}$ c. sliced mushrooms; heat for about 1 minute. Serve brown mushroom sauce with meats, broiled steaks, or meat loaf.

CHEESE SAUCE

In 1 c. white sauce No. 2, melt $\frac{1}{2}$ c. grated cheese. Serve hot.

TOMATO SAUCE FOR MEATS

Use ingredients for white sauce No. 2, substituting strained cooked or canned tomatoes for milk, and cooking in the tomatoes (for 1 c. sauce) 2 whole cloves, $\frac{1}{8}$ bay leaf, few drops thyme, 1 sprig parsley, 1 T. chopped onion. After cooking tomatoes and seasonings for 5 to 8 minutes, make sauce as white sauce is made. Two teaspoons of catsup may be used in tomato sauce in place of the seasonings.

Tomato Sauce for Eggs and Other Dishes, where high seasoning is not desired. Use ingredients for white sauce No. 2, substituting strained cooked tomatoes for milk. Cook in the tomatoes 1 t. finely chopped onion for 8 minutes, and make sauce as white sauce.

MOCK HOLLANDAISE SAUCE

1 c. hot white sauce No. 2, 1 T. lemon juice or vinegar, 2 egg yolks, 2 T. butter. When white sauce is cooked, remove from heat and beat in lemon juice gradually, then egg yolks and butter. Cook slightly to thicken yolks. Beat well and serve immediately. Serve with vegetables, such as boiled cauliflower or asparagus, or with fish. For proportions for white sauce, see page 396.

EGG SAUCE, FOR FISH OR VEGETABLES

1 c. white sauce No. 2, 2 sliced hard-cooked eggs, 2 T. lemon juice if desired, 1 t. parsley if desired. When white sauce is cooked, remove from fire and beat in lemon juice (if used) gradually; add eggs and parsley. Eggs may be mashed to a paste and mixed with sauce.

BUTTER SAUCES

Maitre d'Hôtel Butter or Green Butter. 4 T. butter, 1 T. lemon juice, 2 t. chopped parsley, $\frac{1}{4}$ t. salt, $\frac{1}{8}$ t. paprika. Cream butter with a wooden spoon, and cream in lemon juice, parsley, and seasonings. Form into tiny balls and serve with fish or meats.

Drawn Butter Sauce. 4 T. butter, 2 T. water, $1\frac{1}{2}$ T. lemon juice ($\frac{1}{2}$ lemon), $\frac{1}{4}$ t. salt. Heat, mix well, and serve hot with vegetables or meats.

MINT SAUCE FOR LAMB

1 c. hot vinegar $\frac{1}{4}$ c. sugar 8 sprigs mint, finely minced

Pour vinegar over sugar and mint. Let stand 30 minutes to 1 hour.

CUCUMBER SAUCE FOR FISH

1 medium cucumber ($\frac{1}{4}$ lb.) 1 t. salt
2 T. mild vinegar $\frac{1}{8}$ t. white pepper

Pare and grate or chop cucumber; mix with vinegar and seasonings.

PUDDING SAUCES

LEMON SAUCE

2 T. cornstarch 1 c. boiling water
 $\frac{1}{2}$ c. sugar Grated rind 1 lemon
3 T. lemon juice

Mix cornstarch and sugar with 3 T. cold water and stir into hot water in double boiler. Cook until thick (20 to 30 min.). Add grated lemon rind and juice, and cook 5 to 10 minutes.

Small recipe, half of given amounts.

HARD SAUCE

$\frac{1}{2}$ c. butter $\frac{1}{2}$ t. flavoring 1 c. powdered sugar

Cream butter; add sugar and flavoring gradually.

CUSTARD SAUCE

See Soft Custard, page 451, for proportions and method of making. Flavor with vanilla.

CHOCOLATE SAUCE

1 oz. chocolate or 3 T. powdered cocoa 1 c. sugar
 $\frac{1}{2}$ c. water $\frac{1}{2}$ t. vanilla
 1 T. butter $\frac{1}{8}$ t. salt

Cook chocolate or cocoa with the water until smooth; add butter, sugar and salt, and heat until sugar is dissolved. Add vanilla and serve. Use for ice cream or puddings.

CARAMEL SAUCE

1 $\frac{1}{4}$ c. sugar 1 c. hot water 1 T. butter

Caramelize $\frac{1}{4}$ c. sugar by heating until melted and a light brown. Add water to dissolve sugar. Add the remaining sugar and butter, and heat until sugar is dissolved.

STRAWBERRY SAUCE

1 pt. berries $\frac{1}{2}$ c. sugar 1 t. lemon juice

Crush berries, add sugar and lemon juice, and stir until sugar is dissolved.

BUTTERSCOTCH SAUCE

$\frac{1}{2}$ c. granulated sugar 4 T. butter
 $\frac{3}{4}$ c. brown sugar $\frac{1}{8}$ t. salt
 1 c. hot water

Caramelize 1 T. of granulated sugar by heating until melted and a light brown. Add water to dissolve sugar; add brown sugar, remaining granulated sugar, butter and salt, and heat until sugar is dissolved. This sauce may be thickened with $\frac{1}{2}$ T. corn-starch.

FOAMY SAUCE

$\frac{1}{2}$ c. butter 1 egg
 1 c. powdered sugar 2 t. vanilla, or 3 T. orange juice

Melt butter over hot water and add sugar; add beaten egg and

beat the mixture with dover beater. Cool slightly and add vanilla. Serve with steamed puddings or cake puddings.

BUTTER BALLS

Cream butter, and measure in $\frac{1}{2}$ T. lots. Make into rough balls, using spatula. Drop into ice water. Scald and then chill the butter paddles. Shape balls with paddles. If a mold is used instead of paddles, treat it in the same way. When balls are finished drop into ice water or place on crushed ice.

WHIPPED CREAM

Chill cream. Put into a deep bowl or glass jar and whip with dover beater until stiff. Double cream is required for whipping.

USE OF EVAPORATED, OR DRIED MILK

In recipes calling for sweet milk, either of these products may be substituted for sweet milk, and where sweet milk is difficult to obtain, one or the other should be used liberally and regularly in cooking. Three to 4 T. of powdered milk are used for each cup of water, and 4 to 5 T. of evaporated milk are used for each $\frac{3}{4}$ c. of water.

MAIN DISH FOR LUNCHEON OR SUPPER (ENTRÉES)

(See Unit Two, Chapter XIV)

SOUFFLÉS

STANDARD RECIPE

3 eggs	1 c. material for flavoring, such as grated cheese, ground ham, finely chopped or mashed vegetable, chopped or mashed fruit
1 c. white sauce No. 3	

Make white sauce No. 3. (See Sauces for proportions and method of making, page 396.) Add egg yolks and material used for flavoring (vegetable pulp, cheese, fish, etc.) and cook until thick. Remove from stove and cool. When ready to bake, fold in the stiffly beaten whites of eggs. Turn into a greased baking dish, and bake for 30 minutes, or until firm, in a moderate oven (350° to 375° F.). Serve the soufflé in the dish in which it is baked; do not remove it from oven until ready to serve. Cheese soufflé is a favorite.

OMELETS, page 380

See Eggs. **Spanish Omelet** is especially good for luncheon and for supper.

For other luncheon dishes made with eggs, see recipes in section on Eggs. Suggested dishes are scalloped eggs, eggs creamed on toast, goldenrod eggs, scrambled eggs, scrambled eggs with cheese, egg croquettes.

CHEESE DISHES

WELSH RABBIT¹

1 lb. cheese cut in small cubes	¼ t. paprika
1 c. milk or thin cream	2 eggs
1 t. mustard	2 T. butter
2 t. salt	Dry toast or crisp crackers

¹ Sometimes, but erroneously, spelled "rarebit." The following quotation, as to the origin of this incorrect spelling, is from the Century Dictionary: "Owing to an absurd notion that *rabbit* in this phrase is a corruption of *rare-bit* (as if 'a rare bit'), the word is often so written." The term, however, is "of jocular origin, formed after the fashion of *Norfolk capon*, a red herring; an *Essex lion*, a calf, etc."

Put butter in double boiler; add cheese and stir while melting. When it is almost melted add milk mixed with eggs and seasoning. Continue heating until cheese melts and egg thickens. Serve on small slices of toast or on crisp crackers.

A good variation of this dish can be made by using cooked or canned tomatoes instead of milk.

MACARONI AND CHEESE, OR RICE AND CHEESE

$\frac{3}{4}$ c. rice or 1 c. macaroni	2 T. flour
1 c. to 1 $\frac{1}{2}$ c. grated cheese	1 t. salt
1 c. milk	$\frac{1}{4}$ t. paprika or $\frac{1}{8}$ t. white pepper

Boil rice or macaroni (broken in 2-inch pieces) according to directions for boiling cereals (see cereals, page 366). Into a greased baking dish put a layer of one third the rice or macaroni, sprinkle with flour, salt, and pepper, and add one third of the cheese; make the second and third layers in the same way. Pour the milk over the whole and bake in a moderate oven (350° F.) for about 15 minutes.

Small recipe, one fourth of amounts given, 3 T. rice or $\frac{1}{4}$ c. macaroni.

AU GRATIN DISHES

Au gratin dishes are dishes to which cheese has been added. See Vegetables au gratin, on page 390.

VEGETABLE DISHES

Stuffed vegetables are stuffed either with meat or with bread crumbs and vegetable pulp. Creamed vegetables and scalloped or baked vegetables are good hot dishes for luncheon or supper. (See Vegetable recipes, pages 387-395.)

CHICKEN À LA KING

1 $\frac{1}{2}$ c. cooked chicken cut in cubes	1 minced green pepper or pimento
1 $\frac{1}{2}$ c. white sauce No. 2 (page 396)	3 chopped mushrooms
Salt and pepper to taste	

Add chicken and other material to white sauce and heat for 10 minutes. Serve on toast, in toast cases, or in timbale cases. Garnish with parsley.

ACCOMPANIMENTS FOR CREAMED DISHES

Creamed dishes may be served on toast, in toast cases, or in timbale cases.

Toast Cases. Cut stale bread in 2½-inch cubes. Trim off all crust. Hollow out center, leaving sides of box half an inch thick. Toast in a hot oven until delicately browned but not dried; or fry in deep fat and drain on brown paper. Fill cases with creamed vegetables, creamed eggs, creamed meats as crab flakes, chicken à la King, or sweetbreads.

Timbale Cases: ¾ c. flour, 1 egg slightly beaten, ¼ t. salt, ½ c. milk, 1 T. melted fat or oil. Mix ingredients and beat only until smooth. Dip timbale iron, previously heated in hot fat, about two thirds into a cup of batter. Lift iron, inverting to prevent batter from dripping, immerse it in deep, hot fat and fry until the batter is brown. The mixture will slip off of iron before iron is lifted from batter if the fat is either too hot or too cold. Test the fat first by frying a small case. Wipe fat from iron before putting into the batter. If the case rises above top of iron, it was dipped too deep in the batter.

Drain timbale cases on brown or unglazed paper. Just before serving, fill three fourths full of creamed mixture of vegetables or meats.

CASSEROLE DISHES

AMERICAN CHOP SUEY

2 medium onions sliced thin	½ lb. pork or chicken, cut small
1 c. celery, sliced	¼ c. rice
½ c. mushrooms if desired	1 c. stock
½ medium green pepper, shredded	1½ t. salt

Brown meat and onions together slightly in frying pan, using 1 to 2 T. fat with the chicken. Add pepper, sliced mushrooms, and celery; add rice, salt, and stock, and cook for 10 minutes. Place in baking dish and cook in moderate oven (350° to 375° F.) for one hour. Serve hot.

ITALIAN BAKED RICE

3 c. cooked rice (or 1 c. uncooked)	1½ c. tomato juice
½ c. grated cheese	2 t. salt
¼ c. chopped pimento	½ t. pepper

Mix ingredients well together and pour into a baking dish. Cover the top of the dish with the pulp left from straining the tomatoes. Bake for 30 minutes in a moderate oven and serve hot.

Small recipe: $\frac{1}{2}$ c. cooked rice (3 T. uncooked), 1 T. grated cheese, $\frac{1}{2}$ T. chopped pimento, $\frac{1}{4}$ c. tomato juice, $\frac{1}{3}$ t. salt.

For Meat Pie, see Meat Extenders, page 418

BAKED BEANS

2 c. dried beans	2 t. salt
1 qt. water	$\frac{1}{4}$ c. molasses
$\frac{1}{8}$ lb. fat salt pork	$\frac{1}{2}$ c. hot water
$\frac{1}{4}$ t. mustard	

Soak beans overnight in cold water to cover; drain and add 1 qt. cold water. Heat and allow to simmer two hours, or until skins are tender and loose. (Instead of simmering process, beans may be cooked in pressure cooker at 20 lb. for 20 minutes.) Add salt, mustard, and molasses to beans, pour into greased bean pot or baking dish with a lid; press sliced pork in at top and pour boiling water over it. Cover and bake slowly for 3 to 5 hours. (If a quick cooking is desired, cook in a pressure cooker 30 minutes at 10 lb., then in a moderate oven for 30 minutes to 1 hour.)

LUNCHEON LOAVES

MEAT OR SALMON LOAF

3 c. ground meat or salmon (meat may be cooked or uncooked)	1 c. bread crumbs
1 or 2 eggs	1 c. milk
1 T. chopped parsley	1 T. salt
1 slice onion, finely minced	$\frac{1}{4}$ t. pepper
	2 slices bacon, chopped fine, or
	2 T. butter

Mix thoroughly; press into a greased bread pan. Bake in moderate oven (350° F.) for 30 to 40 minutes.

Serve salmon loaf with 1 c. white sauce No. 2 containing chopped parsley or chopped hard-cooked egg. Serve meat loaf with or without tomato sauce.

OYSTER LOAF

Cut top off of a loaf of bread. Pull out middle and toast the loaf and its top in oven. Pour melted butter over the inner sur-

faces and return to oven to brown. Fill toasted loaf with layers of fried oysters, olives, sliced pickles, and celery. Season the layers with catsup. Replace top. Serve hot and whole, and slice into $1\frac{1}{2}$ to 2-inch slices for individual servings.

CREAMED DISHES

Creamed dishes of vegetables, cooked meat, hard cooked eggs, or sweetbreads are good luncheon dishes. Use $1\frac{1}{2}$ c. diced material to $\frac{1}{2}$ c. white sauce No. 2 for six servings. Serve on toast or in toast cases. See directions for toast cases on page 403.

Sweetbreads are prepared as follows for cooking. Separate them into sections and peel off as much of membrane as possible with a sharp knife. Let simmer in hot salted water for about 20 minutes, or until firm. A very small amount of cooked green pepper may be added when sweetbreads are creamed.

CHOWDERS AND GUMBO

FISH CHOWDER

1 lb. fish	1 t. salt
3 c. hot fish stock or hot water	Dash pepper
1 c. hot milk	$\frac{1}{2}$ T. flour
$\frac{1}{8}$ lb. salt pork, diced	$1\frac{1}{2}$ c. diced potatoes
2 slices onion	

Use a fish that has white flesh. Wrap fish in cheesecloth and cook it 20 minutes in boiling salted water (1 t. salt to 1 qt. water). Remove from water and save water for fish stock; after removing bones and skin cut fish in small pieces. In kettle to be used for chowder, fry salt pork for 3 to 5 minutes with onions. Sprinkle fish with salt, pepper, and flour and mix fish and diced potatoes; place in chowder kettle and pour over it the fish stock. Cook slowly without stirring for 40 minutes. Add hot milk just before serving, and serve hot in soup plates with crisp crackers.

CHICKEN GUMBO

$1\frac{1}{2}$ lb. chicken meat	2 T. finely chopped red or green pepper
Bacon fat	$\frac{1}{2}$ c. strained tomato
Flour	$\frac{1}{4}$ t. salt
1 slice onion	$\frac{1}{4}$ c. rice
$1\frac{1}{2}$ c. okra (or canned corn)	

Cut chicken in small pieces; cook in water to cover until almost tender. Remove chicken from broth and save broth. Roll chicken in flour and brown with finely chopped onion in bacon fat. Add okra, finely chopped pepper, tomato, salt, and rice. Add broth, with hot water, if necessary, to make $2\frac{1}{4}$ cups. Boil 25 minutes, or until both chicken and rice are tender.

FOODS FRIED IN DEEP FAT

GENERAL RULES FOR DEEP FAT FRYING

The fat used for cooking may be olive oil, cotton-seed oil, cottonseed oil, beef drippings, lard, or a mixture of several fats.

To keep the food from absorbing fat, cover it with crumbs and egg, or mix egg with it.

Place the articles to be cooked in a bath of fat deep enough to float them. The kettle should be of iron; a frying basket may be used. The kettle should be only two thirds full, in order to avoid spattering fat.

Foods already cooked or needing little cooking require a higher temperature than batters. The temperature of the fat for frying oysters, croquettes, fish balls, and other food already cooked may be tested by browning a cube of bread in forty seconds. When the bread browns in sixty seconds the fat is the right temperature for all batters.

All the articles cooked must be drained on brown unglazed paper.

Only small quantities may be fried at a time. When one quantity has been taken out the fat must be reheated and tested before a second lot is added.

In the absence of a frying basket, a wire spoon may be used to remove the food from the fat.

Fat which has been used for frying should be cooled and clarified by cooking a few slices of raw potato in it for ten minutes, then strained through several thicknesses of muslin, and covered when cold. Fat may be used several times for frying and then made into soap.

Since fish imparts a flavor to fat, separate fat should be kept for cooking fish, or else that in which fish is cooked should be clarified with great care as soon as it has been used.

CROQUETTES

General Proportions (6 croquettes)

1 c. white sauce No. 4*	1 ½ c. of chopped material as grated
2 t. salt	cheese, ground meat, finely
⅛ t. pepper	chopped or mashed vegetables,
	or chopped eggs

Season meat croquettes with ½ t. minced onion, finely chopped parsley, or dash of celery seed. Season fish croquettes with lemon juice.

Small recipe: ⅓ c. white sauce No. 4; ⅓ c. chopped meat; 3 drops onion juice; ½ t. chopped parsley; ½ t. lemon juice. This small recipe makes 2 croquettes.

Steps in Making Croquettes

a. Make white sauce No. 4, or boil rice, or prepare mashed potatoes.

b. Prepare chopped, mashed, or ground material and combine with it seasonings and binder (white sauce or a substitute).

c. Allow to cool and stiffen.

d. Shape into balls, cones, or rolls. Allow 1 heaping T. for each croquette.

e. Roll in crumbs, egg, and then in crumbs again. These steps are taken to prevent the grease from entering the product as it cooks. It also makes possible a crisp, golden-brown crust. Raw egg is used. It may be beaten slightly and mixed with 2 T. of cold water.

f. Fry in deep fat and drain on brown paper. See Rules for deep fat frying, page 406.

FRITTERS

See general proportions for fritters, page 370. Melt the fat and mix the ingredients; beat well. Cut apples, pineapple, or bananas into large pieces and dip in batter. If other material is to be added, mix with batter. Then drop by spoonfuls into hot fat; remove when brown and drain on brown unglazed paper. Serve with Lemon Sauce.

* Cooked rice or mashed potatoes, plus an egg may be substituted for the white sauce, especially in fish croquettes.

SHELL FISH FOR LUNCHEON OR SUPPER

SCALLOPED OYSTERS

Wash oysters and fill a baking dish with alternate layers of cracker crumbs and oysters. To every pint of milk add 1 t. salt and $\frac{1}{4}$ t. pepper. Pour milk over oysters and crumbs, dot with butter and bake 30 minutes in hot oven. Never put more than two layers of oysters for escalloped oysters. If there are three layers the middle one will be underdone when oysters in other layers are cooked.

Small recipe, $\frac{1}{4}$ c. oysters, $\frac{1}{4}$ c. cracker crumbs, $\frac{1}{4}$ c. milk.

OYSTER STEW. See section on SOUPS.

OYSTERS IN RAMEKINS

(8 servings)

4 hard-cooked eggs	$\frac{1}{2}$ c. cream or milk
2 raw eggs	2 T. butter
2 doz. oysters	Salt, pepper, parsley
	Cracker crumbs

Place butter in skillet, add milk, and when milk is scalded drop in chopped oysters. Season. Add beaten eggs and some cracker crumbs. When nearly done, remove and add chopped eggs. This may be served on crackers as a chafing dish recipe or covered with crumbs and browned in oven in individual dishes.

Small recipe, one fourth or one eighth of given amounts.

FRIED OYSTERS OR FRIED SHRIMP

1 $\frac{1}{2}$ pt. oysters	2 to 3 c. dry bread crumbs and cornmeal
2 eggs	Kettle of deep fat
4 T. water	

Wash and drain oysters. They may be marinated for 20 minutes in French dressing ($\frac{1}{4}$ t. salt, $\frac{1}{8}$ t. pepper, 1 T. lemon juice, 2 T. salad oil, well blended). Roll in fine crumbs, or white cornmeal, or in a mixture of white cornmeal and flour sifted together and salted. Dip in egg mixed with water and in crumbs again. Fry in deep fat 1 minute and drain on brown paper. The mixture of cornmeal and crumbs gives a good flavor and a crisp texture.

LUNCHEON AND SUPPER SANDWICHES

CLUB SANDWICHES (for six)

Approximately 1 lb. cooked sliced chicken	Sliced pickles, if desired
12 slices crisp bacon	1 c. to 1½ c. mayonnaise dressing
½ lb. tomatoes, sliced very thin	Lettuce
18 slices fresh, soft thin toast, cut in halves to form 3-cornered pieces	Butter, if desired

Make each half sandwich with 3 layers of toast. Put sliced chicken and tomato and mayonnaise between two of the slices; bacon, sliced pickles, and lettuce and mayonnaise between the other two. Fasten slices together with toothpicks if desired, but remove toothpicks before serving. Heat quickly in hot oven (about 30 seconds) and serve immediately.

TOASTED SANDWICHES

Many sandwiches may be toasted, and toasted sandwiches are especially acceptable at luncheon or supper. The sandwich should be toasted as a whole, rather than made of toast.

Favorite Toasted Sandwiches are American cheese sandwiches, the cheese sliced or grated, the sandwich toasted until the cheese melts; combination sandwiches (see Yeast Bread, page 414); marmalade sandwiches, cottage-cheese sandwiches; meat-salad sandwiches; sandwiches made with crisp bacon.

Do not toast sandwiches that contain a large proportion of mayonnaise.

OPEN SANDWICHES

To make an open sandwich use a foundation of one slice of toast. Place on the toast a generous serving of sandwich filling, or pour a creamed food over it. Garnish attractively with toast points (small triangles of bread toasted), with olives or small pickles, and with lettuce or parsley. Cold sliced chicken, lettuce, tomato, and Thousand Island dressing make a good open sandwich.

YEAST BREAD, ROLLS, AND SANDWICHES

(See Unit Two, Chapter XII)

PLAIN LIGHT BREAD

PROPORTIONS FOR EACH LOAF

1 c. hot liquid — all milk, or $\frac{1}{2}$ milk and $\frac{1}{2}$ water.

Yeast — for 6-hour process, $\frac{1}{4}$ cake compressed yeast; for overnight process, $\frac{1}{8}$ cake compressed yeast or $\frac{1}{2}$ cake dry yeast; if the process is to be shortened to 3 hours or less, $\frac{1}{2}$ to 1 cake compressed yeast for each loaf.

3 to 4 c. flour (enough to make a light dough that can be handled on a bread board with very little flour).

1 T. sugar

1 t. salt

1 T. fat

STEPS IN MAKING BREAD

Straight-Dough Method

Sponge Method

(Preferable for dried yeast)

- | | |
|---|---|
| 1. Scald liquid | 1. Scald liquid |
| 2. Add shortening, sugar, salt to half of hot liquid | 2. Add sugar, shortening, salt to half of hot milk liquid |
| 3. Cool to 95° F. or below | 3. Cool to 95° F. or below |
| 4. Add yeast mixed with remaining liquid which was cooled before being mixed with the yeast | 4. Add yeast mixed with remaining liquid which was cooled before being mixed with the yeast |
| 5. Add flour to make a soft dough (all the flour required except that for use on the bread board) | 5. Add enough flour to make a medium batter |
| 6. Knead dough until smooth | 6. Beat batter smooth |
| 7. First rising. Set in greased bowl to rise until double its bulk | 7. Allow sponge to rise to double its bulk |
| 8. Knead or punch down | 8. Add sponge to rest of flour and make into a dough, kneading until smooth and elastic. |
| 9. Second rising (same as first) | 9. Allow dough to rise until double its bulk, in warm place, in covered, greased bowl |
| 10. Knead and shape | 10. Knead and shape |
| 11. Allow to rise in greased pans | 11. Allow to rise in greased pans |
| 12. Bake | 12. Bake |
| 13. Remove from pans | 13. Remove from pans |

Procedure: There are the above two processes of making bread: (1) the straight-dough method, and (2) the sponge method. The only essential difference between the two methods is that in the

straight dough method all the flour is used at the start and a dough is made at once, and in the sponge method only enough flour is used at first to make a stiff batter, and the remainder is added after the batter has been allowed to rise.

REASONS FOR THE VARIOUS PROCEDURES

1. The milk is scalded to kill any undesirable bacteria and to melt the fat and dissolve readily the sugar and salt.

2. The liquid is cooled before the yeast is added because high temperature kills yeast plants.

3. The dough is kneaded to develop the gluten. Bread may be kneaded by a bread mixer or may be turned out onto a clean floured board and worked quickly with the palms of the hands. It is easy to demonstrate kneading but difficult to describe it adequately. Watch an expert kneader and then try to imitate the action.

4. The bread may rise either once or twice. A finer texture is produced by the double rising, but the double process is not necessary.

5. Pans are greased to prevent the dough from sticking. It is not well to use butter for this because it burns easily. The surface of the loaf should be greased also. The rising in the pans should be at room temperature or slightly above. Why? The length of time for rising varies with the amount and vitality of the yeast and with the strength of the gluten. A good rule is to allow the mass each time to double its bulk. Test it by touching the dough lightly with the finger. If a slight depression remains on the surface, the dough has risen enough.

6. Bread should be started baking in a hot oven from 400° to 415° F., according to the size of the loaf. A good-sized loaf will require about an hour for baking but a smaller loaf less time (50 minutes). After the first 20 minutes the temperature should be reduced. At the last a slow oven may be used.

7. If the bread is ready to leave the oven it will give a hollow sound when rapped lightly with the knuckles. After removing from the oven, place it to cool, uncovered, on cake racks. Store it in a ventilated and very clean bread box.

VARIATION OF YEAST BREAD

Graham or Whole Wheat Bread may be made by using graham or whole wheat flour instead of part or all of the bread flour in the plain light bread recipe. The dough should be stiffer than that of plain white bread, not sticking together so well when kneaded.

For **Potato Bread** use 1 c. hot, freshly mashed potato (best put through a ricer when hot) in place of one of the cups of flour. Decrease the liquid 2 T.

For **Oatmeal Bread, Nut Bread, Raisin Bread, and Nut and Raisin Bread**, use 1 c. of any of the above materials desired. Add this cupful to the sponge before adding the flour, and decrease the amount of flour about 1 c. The dough should be a trifle stiffer than plain dough, not sticking together quite so well when it is kneaded.

For **Nut Bread**, see also recipe in **Quick Breads**.

ROLLS

The ingredients listed for one loaf of bread will make a dough yielding 24 rolls. White, graham, or whole wheat flour may be used.

Mix as for bread, but let rise and knead three times instead of twice. One tablespoon of butter may be added if desired, when kneaded the third time. When the sponge is made for sweet rolls one to two eggs and 2 to 3 T. sugar may also be added. The dough may be made into a great variety of rolls.

Shaping: From a rolled "stick" or from balls make *plain rolls*, setting them in the pan far enough apart to bake separately, or placed against one another; *clover-leaf rolls* (3 tiny balls in a greased individual muffin tin); *bread sticks* in a bread-stick pan.

Parker House or Pocketbook Rolls: Roll and cut the dough as for biscuits. Butter top of each "biscuit" with melted butter and double one side over on the other. Place them on a baking sheet with an inch space between each two rolls.

Cinnamon Rolls: Roll dough one fourth inch thick. Sprinkle with sugar and cinnamon (4 parts sugar to 1 part cinnamon), dot with butter. Roll the dough, then slice the roll into one half inch slices and place slices in baking sheet to rise.

Candied Cinnamon Rolls: Grease the pan. Sprinkle over the bottom a shallow layer of granulated and brown sugar mixed in equal proportions. Dot with bits of butter. Sprinkle with few drops water. Shape rolls and place in pan close together. Bake in hot oven. When well browned turn out, bottom side up.

Baking: After they are shaped, rolls are allowed to rise until their size is doubled, and they are then baked in a hot oven until light and delicately browned. The oven should be about 400° F. Rolls are attractive if the surface is buttered very lightly before they are served.

For toast, see **Quick Breads**, page 369.

SANDWICHES

The bread should be 24 hours old and cut in thin, even slices. If fancy shapes are desired, shape slices before spreading with butter; cream butter. The following mixtures are recommended for filling:

With white or brown bread (the following amounts make about 6 whole sandwiches):

1. **Olives** or **celery** chopped fine and mixed with salad dressing, $\frac{3}{4}$ c. dressing to $\frac{1}{2}$ c. olives; $\frac{1}{2}$ c. dressing to $\frac{1}{2}$ c. chopped celery.

2. **Sliced Tomatoes** and **Mayonnaise**, $\frac{1}{2}$ lb. tomatoes, sliced thin (slice from blossom end to stem end) $\frac{1}{2}$ c. mayonnaise. Lettuce may be added.

3. **Chopped Celery** and **Chopped Crisp Bacon** with mayonnaise, $\frac{1}{4}$ c. celery and $\frac{1}{4}$ c. bacon to 1 c. mayonnaise.

4. **Chopped Green Pepper** and **Chopped Crisp Bacon** with mayonnaise, same proportions as for celery, bacon, and mayonnaise sandwiches.

5. **Cream Cheese** or **Cottage Cheese** mixed with any of the following ($\frac{1}{2}$ c. cheese to $\frac{1}{2}$ c. other material with 3 or 4 T. milk or cream to soften): nuts; olives; olives and nuts; raisins; drained shredded pineapple; dates; figs and nuts; marmalade or jelly. If raisins, dates, or figs are used, add a few drops of lemon juice.

6. **Butter** ($\frac{3}{8}$ c.) and **Chopped Peanuts** ($\frac{1}{2}$ c.) creamed together.

7. **Dates** ($\frac{3}{4}$ c.) and **Preserved Ginger** ($\frac{1}{4}$ c.) chopped and blended.

8. **Chicken, Ham, or Other Meat** ($\frac{1}{2}$ c.), cooked and chopped, with **Chopped Celery** (2 T.) **Olives** (2 T.), one **Hard-Cooked Egg**, and $\frac{1}{2}$ c. mayonnaise.

9. **Raisins** ($\frac{1}{3}$ c.), **Dates** ($\frac{1}{4}$ c.), and **Nuts** ($\frac{1}{2}$ c.), few drops of lemon juice.

10. **Jelly**: 1 glass jelly beaten with 1 unbeaten egg white makes 12 to 16 whole sandwiches.

With Nut Bread: Good fillings are: creamed butter; lettuce and mayonnaise; and cream cheese.

Rolls: Flat rolls, either finger or round shaped, are used for sandwiches. They are hollowed out and filled with almost any filling. Suggested fillings: chicken or meat salad; tuna fish; broiled steak (picnics). Hamburg steak patties may be made into sandwiches with sliced tomatoes, thinly sliced pickles, and dressing; 1 lb. ground steak for 8 to 10 patties and 1 lb. tomatoes for 12.

TOASTED SANDWICHES

It is better to toast the whole sandwich than to make toast separately for sandwiches. Any sandwich may be toasted. Some specials are:

1. **American Cheese**: Thin slices of cheese between thin slices of bread; $\frac{1}{4}$ lb. cheese makes about 5 or 6 sandwiches.

2. **Combination Sandwiches**: $\frac{2}{3}$ c. devilled ham, $\frac{1}{3}$ c. sour cream, 1 T. lemon juice.

3. **Bacon and Club Sandwiches**: See Main Dish for Luncheon, page 409.

MEAT¹

(See Unit Three, Chapter XVIII)

GENERAL RULES FOR MEAT COOKERY

Meat must be weighed, trimmed, and either wiped with a damp cloth or washed under running water before it is cooked.

Only tender cuts of meat should be broiled, pan-broiled, or roasted. In cooking meat by any of these methods first sear it and then lower the temperature. Searing hardens the albumin on the outside of the meat and keeps the juices in, with the result that the meat cooks in its own juices.

Salt draws the juices out, hence meat should be salted after it is seared.

The protein of meat is coagulated by moderate heat and toughened and hardened by high heat.

TENDER MEAT COOKERY

Roasting: Skewer meat into shape. Lay on a rack in a meat pan and put pieces of the meat fat in the bottom of the pan. Place in a hot oven on the upper grate for ten minutes to sear meat; season with salt and pepper. Remove to the lower grate of oven; baste occasionally until done. (See Time-table, page 416.) Add hot water, if necessary, for basting.

Broiling: Remove any extra fat from the meat and grease the broiler with some of it. Broil the meat over a clear fire. Sear it on both sides and cook it half of the required time on one side and half on the other. See Time-Table, page 416.

Pan-broiling: Heat a frying pan very hot and grease it, by rubbing with a little fat. Sear meat on both sides, then cook more slowly until done. Season. Keep pan free from fat. See Time-Table, page 416.

Sautéing or Pan Frying: Remove any extra fat and dip the meat in crumbs, egg, and crumbs again (or use a mixture of cornmeal and crumbs); cook 25 to 30 minutes in a small amount of fat in a

¹ The time-tables for meat cookery are used by permission of the National Live Stock and Meat Board, Chicago, from *Ten Lessons on Meat for Use in High School*.

frying pan, browning first on one side then turning, seasoning with salt and pepper, and browning on the other. Example: breaded veal chops.

TIME-TABLE FOR BROILING AND PAN-BROILING

Kind of Meat	Time in Minutes	Accompaniments
Beefsteaks		Butter
1 inch thick	Rare or medium 8-10	Mushroom sauce
1½ inch thick	Rare or medium 10-15	Maitre d'hôtel butter
2 inches thick	Rare or medium 18-25	Parsley as a garnish
Pork chops, thin	8-10	Apple rings
Lamb chops		
Rib	6-8	Butter
Loin or shoulder	8-10	Mint sauce
Mutton chops		Butter
1-2 inches thick	15-20	Currant jelly
Veal		
Cutlets very thin	6-8	Green peas
Chops	10	Chopped, cooked mushrooms

BROILED STEAK

Select a tenderloin, sirloin, porterhouse, or top round. Steak should be cut not less than 1 inch thick nor more than 2½ inches. Wipe steak with a cloth wrung out of cold water or wash it under running water. Trim off superfluous fat and grease broiler with it. Place steak on broiler and sear and broil according to the directions for broiling. Remove to hot platter, spread with butter, and sprinkle with salt and pepper. See page 398, for maitre d'hôtel butter, which may be served with broiled steak or chops.

BREADED VEAL CHOPS

Select loin chops, or cut a steak from the round into individual pieces. Remove extra fat and dip the meat in crumbs, egg, and crumbs again. Cook according to general directions for sautéing, or pan frying.

TIME-TABLE FOR ROASTING

Kind of Meat	Time
Beef	For a roast under 8 pounds allow 8-10 minutes per pound, with an additional 10 minutes; for one 8-12 pounds, allow 12-15 minutes per pound with an additional 12 minutes; for a roast

over 12 pounds allow 15-18 minutes per pound with an additional 15 minutes. To cook rare allow the lesser time in each case.

Veal	25-30 minutes to the pound with 25 minutes additional
Pork	30 minutes to the pound with 15 minutes additional
Lamb	15 minutes to the pound and 10 minutes additional
Mutton	20 minutes to the pound and 15 minutes additional. If the roast is very large allow 30-40 minutes extra.

The time may be decreased 3 to 5 minutes for each pound if the meat is held together with metal skewers.

COOKING ROAST IN FIRELESS COOKER

Prepare as for ordinary roast. After searing in oven or in a skillet, season with salt and pepper. Place in fireless cooker and cook with two moderately hot radiators, one below, one above.

BAKED HAM

1 ham (8 to 12 lb.)	1 c. granulated sugar
3 c. bread crumbs, or cornbread and bread crumbs mixed	$\frac{1}{2}$ oz. whole cloves
2 c. brown sugar	$\frac{1}{2}$ t. cinnamon

Soak ham overnight if necessary. Boil in water for four hours. Cider and spices may be added to boiling water if desired. Remove from boiling water and place in roasting pan. Mix sugar, bread crumbs and cinnamon together and cover ham with a thin layer of the mixture. Dot ham with whole cloves placed one to two inches apart. Bake in moderate oven (350° F.) for two hours, or until very tender. Do not baste ham. That is unnecessary and will detract from its good appearance.

Sauces for Tender Meats: Maître d'hôtel; mint (with lamb or mutton); drawn butter; mushroom sauce; brown gravy. See Sauces, for method of making.

TOUGH MEAT COOKERY

For Soups from tough meat, see Clear or Stock Soups, page 384.

In the cookery of tough meat special means are employed for making the meat tender, as:

Pounding or grinding.

Long cooking at a low temperature, often with moist heat.

The use of acid in cooking, as Spanish steak.

SWISS STEAK

1 ½ lb. round of beef about 1 inch thick	
Flour	1 t. salt
Bacon fat	⅜ t. pepper

Pound flour, salt, and pepper into both sides of steak with the edge of a saucer. Sauté steak in bacon fat until brown. Cover with water or meat stock; cover the pan; let simmer on top of stove or in oven for one hour or until meat is tender.

Small recipe, one sixth pound steak.

CREOLE SPANISH STEAK

1 ½ lb. round of beef about 1 in. thick	2 slices onion
2 T. bacon grease	½ t. salt
2 c. cooked or canned tomatoes	⅜ t. pepper
3 whole cloves	⅜ bay leaf

Sear steak in pan greased with bacon fat. Pour tomatoes over it and add water to cover; add spices, and cook on stove or in oven 1 hour.

MEAT EXTENDERS**MEAT AND VEGETABLE STEW**

1 lb. beef or veal, cut in 1-inch cubes	3 slices onion
¾ lb. potatoes, diced	½ c. diced turnip
¾ c. diced carrots	1 t. salt
3 to 4 T. flour	¼ t. pepper
Bacon fat	

Roll the meat in flour and brown in bacon fat; cover with water and boil 1 to 2 hours, or until it is almost tender; add vegetables and seasonings and cook until vegetables and meat are tender.

Small recipe, one eighth pound beef.

MEAT PIE

Make meat stew; pour into baking dish; cover with crust for meat pie (see Variations for Biscuit, page 374) or cover with crust of mashed potatoes into which 1 egg white or 1 whole egg has been beaten.

MEAT AND DUMPLINGS

Make meat stew. Mix dumplings (see Variations for Biscuit, page 375). Drop by spoonfuls on top of stew. Cover kettle tightly and cook dumplings 15 to 20 minutes.

MEAT TURNOVERS

See Variations for Biscuit, page 375.

CASSEROLE OR ITALIAN HASH

$\frac{3}{4}$ lb. macaroni
2 c. chopped cooked meat

$\frac{3}{4}$ c. grated cheese
1 c. tomato or brown sauce (see Sauces)

Cook macaroni in boiling salted water until tender. Drain off the water. Butter a casserole or baking dish. Put macaroni in dish, pushing it to the sides. Fill center with chopped meat. Sprinkle with grated cheese. Pour over the whole a highly seasoned tomato or brown sauce. Brown in oven.

LIVER AND BACON

Calf liver sliced in half-inch slices is preferable. Trim outer skin and blood vessels. Scald liver to clot the blood; let stand a few minutes. Mix salt, pepper, and flour and coat each slice with the mixture. Cook slowly in bacon fat. Serve with broiled bacon.

LIVER AND ONIONS

Prepare liver as described above. Brown sliced onions in bacon fat, then add liver and cook. If gravy is desired, remove liver when cooked, and add hot water or milk to the hot fat and cook until it is thick.

BROILED BACON

Use thinly sliced bacon from which the rind has been removed. Place the strips close together for cooking, because bacon shrinks.

I. *Pan Broiled*: Place bacon in hot omelet pan or skillet and cook to the desired brownness over a moderate fire. Turn meat as it broils, and as the fat cooks out, pour it off. Drain broiled bacon on brown paper.

II. *Cooked in the oven*: Place bacon in shallow pan and cook in oven to desired brownness. Remove from the fat and drain on brown paper.

III. *Cooked on broiler*: Place the bacon on the wire broiler in the dripping pan. Broil under the flame or in the oven to the desired degree of brownness. Turn the meat to prevent its burning.

POULTRY AND FISH

(See Unit Three, Chapter XIX)

POULTRY

REMOVAL OF FEATHERS

Chickens are scalded for picking, but ducks, turkeys, and geese are picked dry. Remove the pinfeathers by pressing with a knife. Ducks may be skinned instead of picked. Wild ducks and sage chickens are often skinned before they are cooked. The hairs are singed over a low flame — a low gas flame or the flame from burning paper.

THE DRAWING OR CLEANING OF FOWL

The removal of the entrails and vital organs of a fowl is called drawing. The method to be used will depend upon the size of the bird and the manner in which it is to be cooked. The feet and neck are cut off first and the oil sack is always removed from the end of the back. Slit the skin at the back of the neck from the base toward the head, and pull it loose from neck and crop. Cut off the neck at its base and pull out the crop and windpipe, cutting them off as far down as possible.

For Broiling: Very young chickens are split open down the side of the back with scissors or a sharp knife; the contents of the cavity are removed. Save the giblets — the heart, liver, and gizzard. The chicken is flattened for cooking, with the tip of each wing folded between the wing and the body.

For Frying: Cut choice pieces — 2 drumsticks, or legs; 2 second joints, or thighs; 1 wishbone, or “pulley bone”; 2 sides of breast. Cut less choice pieces — 2 wings, 1 back, 1 shoulder, 1 neck.

The drumsticks, second joints, and wings are removed first. The carcass is then split on each side of the back where the thighs are removed. Loosen and pull out the entrails; save the giblets. The wishbone is cut out next and the shoulder separated from the breast; the breast is usually cut in two pieces.

For Baking or Roasting: The incision may be made either under one leg or between the legs from the vent toward the breast bone. Loosen the entrails well, and pull them out gently. Save the giblets.

Giblets: The liver, gizzard, and heart are termed giblets and are considered choice. Remove the green gall bladder whole from the liver because if its contents should come in contact with the meat it would give it a bitter flavor. To clean the gizzard remove all fat, then cut through thick outer muscle and turn the gizzard inside out, discarding the inner sack. To clean the heart remove the fat and cut arteries and veins from it.

TRUSSING

A bird is trussed for baking or roasting in order that the legs and wings may be held in place during cooking. Metal skewers are sometimes used but are not necessary. They shorten the time of cooking slightly by making it easier for the heat to penetrate the bird.

If stuffing or dressing is used, fill the cavity loosely with it in order to allow space for swelling. Sew up the cavity. Fold the tip of each wing under the wing joint, or cut off the tip and fasten the wing flat with skewers. Pull the legs down to the tail and tie them with a cord. Tie the wings down (allowing no strings to cross the breast) and pull back the skin of the neck and either sew it to the back or fasten it there with tooth picks.

METHODS OF COOKING FOWL

A high temperature is used at first to sear and keep the juices in; then the temperature is lowered for cooking, as with other meats. For tough chickens, long slow cooking with moist heat (stewing) or cooking under pressure in the pressure cooker must be used. Young chickens are broiled, and slightly larger chickens are either smothered or fried.

Fowl is baked or roasted; boiled for salad or croquettes; stewed with dumplings; or made into chicken pie. For roasting it is sometimes advisable to boil or steam the fowl 3 to 4 hours before cooking it in the oven. Have the chicken trussed but not stuffed if it is to be boiled before it is roasted.

Giblets may be cooked with the chicken in any of the above ways, but are often cooked separately in boiling water (30 to 50 min.) in order that their flavor may be kept, and also, in cooking

young chickens, because the giblets must be cooked longer than the meat.

BROILED CHICKEN

Prepare for broiling according to directions. Rub surface with butter or chicken fat and a little flour seasoned slightly with salt and pepper. Broil over hot coals, under direct gas flame, or in moderate oven (375° F.) until tender, basting occasionally (every 5 to 10 min.) with melted butter mixed with an equal amount of hot water. Broiled chicken is also delicious if 1 to 2 T. lemon juice are mixed in each half cup of basting liquid.

FRIED CHICKEN

Prepare chicken according to directions for fried chicken. Salt, pepper, and flour it. Fry in hot fat in iron pans, covered. Brown well. Do not cook with high fire, for chicken requires long cooking to be well done. The use of bacon fat for frying gives a good flavor.

BAKED OR ROAST CHICKEN OR OTHER FOWL

Prepare and truss according to directions. With tips of fingers, rub skin with fat and a little flour seasoned slightly with salt and pepper. Place the fowl in the roasting pan with about ½ c. boiling water; sear; cover; cook in moderate oven (350° to 375° F.), basting occasionally with juices or with hot water and melted butter. Remove cover when meat is tender in order to brown chicken well. Turn chicken on its breast long enough to brown the back. Remove the skewers, cord, and thread before serving the fowl.

DRESSING OR STUFFING FOR CHICKEN AND TURKEY

For a three-pound bird:

2 c. cubes of stale bread	⅓ t. pepper
or stale bread and cornbread	Dash powdered sage
crumbs, or hot mashed potatoes	1 t. salt
and bread crumbs	½ c. melted butter

Mix well; moisten slightly with water if desired. Fill cavity loosely with stuffing or cook dressing in roasting pan with bird.

For *roast duck*, add 2 T. (currant) jelly to this stuffing.

Oyster Stuffing or Dressing

For a three-pound bird:

1 c. crumbs of stale bread	1 ½ t. salt
1 c. cracker or cornbread crumbs	¼ t. pepper
½ c. melted butter	2 T. water or oyster liquor
1 c. (½ pt.) oysters	

MILK GRAVY FOR POULTRY

Pour off most of fat from pan in which roast, broiled, or fried chicken has been cooked. Add white flour (2 T. or ⅛ c. for each c. of gravy desired) and stir until browned. Add ½ to ¾ c. milk and stir until it thickens; add remaining milk, or liquor from giblets, and cook until thickened.

Giblet Gravy

Add chopped cooked giblets and hard-cooked egg to milk gravy.

STEWED CHICKEN FOR PIE OR WITH DUMPLINGS

Cover chicken with boiling water and let simmer until tender. Thicken broth with white flour. Add 2 t. salt and ¼ t. pepper for each 3 lb. chicken. Make dumplings (see Variations for Biscuit, page 375). Cook dumplings with the chicken. For chicken pie place stewed chicken in a baking dish and cover with crust (see Variations for Biscuit, page 374). Cook 20 to 30 minutes.

BARBECUED CHICKEN

Prepare chicken according to directions for broiling. Broil in covered pan or over direct fire until tender, basting every 3 to 5 minutes with barbecue sauce. To baste when broiling, wrap a newly cut stick or a long-handled fork with cheesecloth, dip in sauce and rub over chicken. Keep sauce hot so that the butter will stay melted.

BARBECUE SAUCE

¼ lb. butter	1 T. Worcestershire sauce
½ c. catsup	3 T. lemon juice
½ c. water	

Melt butter and mix well with other ingredients. Use this sauce for basting broiled chicken or meat, or heat slices of meat loaf in sauce.

FISH

For Shellfish, see page 408.

Fish cooks more quickly than meat. The protein in it is coagulated by heat and hardened by high heat, as is the protein of meat. When fish is cooked, the connective tissue is partly dissolved and the fish is flaky — that is, it flakes apart when lifted with a fork.

One third to one half pound of fresh fish will serve one person.

PREPARATION OF FISH FOR COOKING

If the scales have not been removed, remove them by immersing the fish in water and repeatedly drawing the back of a knife from the tail toward the head. The scaling is done while the fish is held under the water to prevent scattering of the fish scales.

To Clean a Fish: Hold the fish in the left hand, backbone against your hand, and the tail toward your elbow. With a sharp knife slit the fish from the small vent near the tail to the gills under the head. Cut the gills loose where attached to head and to body. Beginning at tail end of cavity, and using a small knife, lift out entrails and gills with one motion. With a sharp knife make sure that the backbone is clean. Wash cavity with cold water. The head is usually cut off just above the gills; if left on, the eyes are removed.

BROILED TROUT, OR OTHER SMALL FISH

Wash and clean fish. Rub with a small amount of fat and dip in a mixture of crumbs or of flour and white cornmeal, seasoned with 1 t. salt and $\frac{1}{4}$ t. pepper to each cup. Broil for 25 to 30 minutes in a hot greased pan, or on a hot greased grill over hot coals, or in an oven. Let the fish brown on both sides. Cover to keep from drying, and baste occasionally with melted fat.

BOILED FISH

A large piece of fish is used for boiling. Wrap in cheesecloth and simmer until it flakes apart (about 30 minutes) in hot water, adding $\frac{1}{2}$ t. salt and 1 t. vinegar or lemon juice for each quart of water. Remove skin and bones and use boiled fish for creamed dishes, for scalloped fish, for fish hash, and for salads.

Creamed Fish: 1 c. boiled fish, 1 c. white sauce No. 2, 1 T. chopped green or red pepper (or 2 T. catsup). Serve on toast or in toast cases.

Scalloped Fish: Make creamed fish; put in a large baking dish or in individual baking dishes; cover with buttered crumbs and bake until crumbs are brown. Garnish with parsley or slices of hard-cooked egg.

Fish Hash: 1½ c. boiled fish, 1½ c. hot mashed potato, a few drops onion juice (or 1 T. finely minced onion), 1 t. salt and ⅛ t. white pepper. Beat together with a fork, spread in well-greased pan and cook until well browned on bottom. The hash may be stirred and then browned again.

FRIED FISH

Prepare small fish as for broiling. Roll in seasoned cornmeal, or in cornmeal and crumbs, or in egg and flour. Drop into hot fat and cook about 3 to 5 minutes, or until brown.

CODFISH BALLS

1 c. salt cod or flaked fish	½ T. butter
2½ c. diced potatoes	⅛ t. pepper
1 egg	Parsley, if desired

Wash and soak fish in cold water. Divide them into small pieces and cook them with potatoes in boiling water until potatoes are soft. Drain. Mash potatoes well. Add butter, beaten egg, and seasonings. Add salt if needed. Slip by tablespoons into kettle of hot fat. Fry brown. Garnish with parsley and serve for breakfast or luncheon. See general rules for deep fat frying.

Small recipe, ¼ c. fish, ⅔ c. potatoes, 1 T. egg, ½ t. butter, dash pepper.

BAKED FISH

Clean and prepare fish for stuffing. Stuff, sew up with tailor's stitch. Rub thoroughly with salt and pepper. Cut gashes in both sides 2 inches apart and fill with thin slices of bacon or salt pork. Lay thin slices of salt pork on back and head. Lay in a pan on top of folds of cheesecloth. Dredge with flour. Bake 15 minutes to each pound, basting frequently.

Dressing or Stuffing for Baked Fish

1 c. crumbs	$\frac{1}{4}$ c. melted butter	1 t. chopped onion
$\frac{1}{4}$ t. salt	1 t. chopped parsley	1 T. lemon juice
$\frac{1}{8}$ t. pepper	1 T. chopped pickle	

Mix dry ingredients and add melted butter and lemon juice to make them stick together. If crumbs are too dry to stick together increase butter or moisten with hot water. Pimentos may be chopped and added to the stuffing.

For Fish Loaf, see page 404.



SALADS, SALAD DRESSINGS, AND SALAD ACCOMPANIMENTS

(See Unit Two, Chapter XI, and Unit Three, Chapter XX)

A salad is made of a body and a garnish. In a green salad the body and garnish are of the same material. The garnish is most often lettuce. The body may be of one or more of a wide variety of foods mixed with a small amount of salad dressing and arranged in a small mound on a lettuce leaf. A bit of decoration is attractive, such as a tiny leaf of lettuce, a ring or two of stuffed olive, or a small piece of vegetable cut in a fancy shape.

Salad must always be cold, and uncooked vegetables must be crisp. Place the body of the salad as closely together as possible to avoid a scattered appearance. Cut pieces should be small enough to be eaten without further cutting; it should be possible to do any necessary cutting with a fork. Salads must be dainty.

SALAD SUGGESTIONS

Amounts and ingredients may be varied according to preference. For small recipes, use one fourth or one sixth of given amounts.

I. MEAT SALADS

1. **Chicken, Fish, Turkey, or Veal:** 2 c. diced meat; 1 c. sliced celery; $\frac{1}{4}$ c. chopped olives; 1 c. to $1\frac{1}{2}$ c. salad dressing. Cucumber may be used instead of celery and hard-cooked egg in place of olives.

2. **Meat or Chicken:** 2 c. ground meat; 1 c. celery; 2 hard-cooked eggs, sliced or diced; $1\frac{1}{4}$ c. mayonnaise.

3. **Flaked Fish:** $2\frac{1}{4}$ c. flaked fish (boiled fish, tuna fish, salmon, or crab flakes); 1 c. sliced celery; 2 T. chopped green pepper; $1\frac{1}{2}$ c. salad dressing.

4. **Shrimp:** 2 No. 2 cans shrimp; $1\frac{1}{2}$ c. sliced celery; 1 c. to $1\frac{1}{2}$ c. mayonnaise. Clean the shrimp by cutting out the line of black that is on the outside edge of each one. Use the point of a sharp knife.

II. CHEESE AND EGG SALADS

1. **Cream Cheese or Cottage Cheese:** 1½ c. cheese; 2 to 4 T. cream; ½ c. broken nut meats or chopped olives; 1 c. mayonnaise or cooked dressing.

2. **Cream Cheese or Cottage-cheese Balls:** Soften 1½ c. cream cheese with mayonnaise or cooked dressing. Form into balls and roll them in ¼ c. finely chopped nuts or 3 T. chopped parsley. Serve 3 or 4 balls for each salad.

3. **Prunes or Pineapple with Cottage Cheese:** Soften ½ to ¾ c. cheese with mayonnaise or cooked dressing; make small balls to stuff seeded, cooked or canned prunes; make large balls for the center of pineapple slices. Use 1 slice pineapple, or 3 prunes for each serving.

4. **Stuffed Eggs:** 3 hard-cooked eggs cut in half; yolks mashed with ½ t. lemon juice or vinegar, ¼ t. mustard, ½ t. salt, ⅛ t. cayenne, 1½ T. melted butter; whites refilled with yolk mixture.

5. **Egg:** 6 hard-cooked eggs, quartered lengthwise; 1 c. chopped celery; 1 T. chopped pimento; 1 c. mayonnaise. Arrange the eggs petal fashion, yolk up; mix celery and mayonnaise and pile the mixture in the center; decorate the salad with pimento.

III. VEGETABLE SALADS

1. **Tomato and Lettuce:** 6 medium-sized tomatoes (2 lb.); 1 head or 1 bunch lettuce; ¾ c. mayonnaise. Peel tomatoes, cut in quarters from stem almost through blossom end. Lay each tomato on a leaf of lettuce and put 1 T. mayonnaise in the center of it. Chopped celery, diced cucumber, or diced pineapple (½ c. of any one) may be mixed with the mayonnaise and piled in the center.

2. **Stuffed Tomatoes:** 6 medium-sized tomatoes (2 lb.); 1 c. diced chicken, veal, or cucumber, or chicken and celery mixed; 1 c. dressing. Peel tomatoes; cut stems out and hollow each tomato. Remove water from tomato by rubbing inside of shell with salt and placing it hollow down, on a plate for 30 minutes to 1 hour. Mix solid part of pulp with meat or cucumber, and with dressing; fill tomatoes and serve ice cold on lettuce.

3. **Cabbage:** ½ lb. cabbage; 4 medium-sized oranges; 1¼ c.

mayonnaise or cooked dressing. Shred oranges (see page 357) and cabbage.

4. **Asparagus:** 1 square can asparagus (about 7 stalks each for 6 persons); $\frac{3}{4}$ c. mayonnaise; strips of green or red pepper. Pile stalks together on a lettuce leaf; place garnish in a narrow band; add 2 T. mayonnaise.

5. **Carrot:** $\frac{3}{4}$ lb. raw carrots grated; 1 c. ground celery; 1 c. mayonnaise or cooked dressing, or $\frac{1}{2}$ c. French dressing. Beat ingredients together with a fork and pile salad in a small mound on lettuce.

6. **Potato Salad:** 1 $\frac{1}{2}$ lb. potatoes, cooked and diced; 3 sliced hard-cooked eggs; 3 drops onion juice; 3 chopped small sweet pickles; 6 stuffed olives; 1 $\frac{1}{4}$ c. mayonnaise or cooked dressing. Garnish with long slices of hard-cooked egg, slices of iced cucumber, or olives.

7. **Combination Salad:** $\frac{1}{2}$ c. diced cooked carrot; $\frac{1}{4}$ c. peas or string beans; 1 c. shredded cabbage or lettuce; 24 stalks cooked asparagus or strips cooked celery; $\frac{3}{4}$ c. French dressing or mayonnaise or Spanish dressing. Mix together all except asparagus; pile on lettuce around asparagus.

8. **Cold Slaw:** 3 c. shredded cabbage; dressing made of 1 t. salt, $\frac{1}{2}$ t. mustard, dash of cayenne, 1 T. sugar, 1 egg, $\frac{1}{2}$ c. hot milk, 1 T. butter, $\frac{1}{2}$ c. hot vinegar. Make dressing by mixing seasonings and unbeaten egg; add hot milk and butter and stir until the dressing thickens; remove from heat and beat in vinegar. Pour dressing over cabbage; serve cold.

9. **Green Salads:** Make only small green salads. Green salads are made of lettuce, romaine, endive, or watercress. Lettuce may be shredded and served with French dressing; or head lettuce may be cut in wedge-shaped slices and served with Spanish dressing or Thousand Island dressing. Romaine is usually served with French dressing made with lemon or orange juice, or with Roquefort dressing. Any green salads may be served with French dressing.

IV. FRUIT SALADS

Beat whipped cream into mayonnaise or cooked dressing for fruit salads.

1. **Grapefruit, or Orange, or Orange and Grapefruit:** 3 grapefruit, or 4 medium oranges, or 2 oranges and 2 grapefruit; $\frac{1}{2}$ c. French dressing or $\frac{3}{4}$ c. mayonnaise. Shred fruit, pile on lettuce, and pour over it French dressing or add mayonnaise.

2. **Waldorf or Apple Salad:** 3 medium apples (1 lb.) cut in small pieces; 1 c. sliced celery; 1 c. broken nut meats — English walnuts, pecans, peanuts, or Brazil nuts; 1 c. mayonnaise. The walnut meats will darken if combined and allowed to stand.

3. **Cooked Apple:** 6 apples, cored and boiled whole in their skins; $\frac{1}{2}$ c. cream cheese softened with mayonnaise or cream; $\frac{1}{4}$ c. nut meats, $\frac{3}{4}$ c. mayonnaise. Remove skins from cooked apples, stuff the apples with cheese and nuts mixed. Serve with mayonnaise.

4. **Pear:** 6 halves pear, fresh or canned; 24 canned red cherries; 24 blanched almonds; (or $\frac{1}{4}$ c. cheese and $\frac{1}{4}$ c. raisins made into balls); $\frac{1}{2}$ c. French dressing. Stone cherries and put an almond into each cavity. Arrange four cherries on a lettuce leaf with each half pear; pour French dressing over them.

5. **Canned Apricot:** 1 No. 2 can apricots; $\frac{1}{8}$ lb. marshmallows cut in halves; 1 c. whipped cream seasoned with salt and paprika. Mix lightly and serve on lettuce.

6. **Frozen Fruit Salad:** 1 tall No. 2 can sliced fruit, peaches, pears, or mixed fruit, and 1 c. whipped cream mayonnaise. Freeze fruit in the can with 1 part salt to three of ice; pack it if it is to be kept after freezing, with 1 part salt to 4 parts ice to prevent its freezing too hard. Cut can on side near top; slip mixture out, slice and serve on lettuce with mayonnaise. This salad is pretty on glass plates.

7. **Strawberries:** Roll strawberries in finely chopped almonds, and arrange in a small mound on lettuce with dressing at side.

V. GELATIN SALADS

To 2 c. thin strained vegetable or fruit juice, use 1 T. granulated gelatin. Add a little cold liquid to gelatin and allow to stand for 10 minutes; add remaining liquid hot, and stir until gelatin is dissolved.

To unmold gelatin, see page 455.

1. **Perfection Fruit Salad:** 2 grapefruit and 2 oranges shredded (see page 357); 2 T. sugar and 1 T. lemon juice in 1 c. gelatin made from water, fruit juice, and $\frac{3}{4}$ T. gelatin. Fill small molds with shredded fruit and pour the gelatin over it. Chill until gelatin has stiffened.

2. **Perfection Vegetable Salad:** Gelatin made of $\frac{1}{2}$ c. cold water, $1\frac{1}{2}$ T. granulated gelatin, 1 c. boiling water, $\frac{1}{3}$ c. sugar and $\frac{1}{2}$ c. strained lemon juice. Cool and add $\frac{3}{4}$ c. minced celery, 1 T. mild vinegar, $\frac{3}{4}$ c. minced cabbage, and 3 T. chopped green pepper.

Stir occasionally before gelatin stiffens, so that vegetables will be well distributed.

3. **Tomato Jelly for Salad:** $\frac{1}{4}$ c. cold water; $1\frac{1}{2}$ T. gelatin; 2 c. strained tomato; 1 slice onion; 1 peppercorn; 1 whole clove; 1 t. salt; 1 t. sugar. Soak the gelatin in cold water. Heat tomato, onion, and seasonings together for 3 minutes; strain, and add gelatin with cold water. Stir until gelatin is dissolved. Pour into 6 individual molds.

4. **Perfection Fruit Salad** (to serve 30):

4 envelopes gelatin	$2\frac{1}{2}$ c. sugar
3 c. cold water	2 envelopes citric acid
7 c. boiling water	3 c. pecans or blanched almonds
10 apples	1 large can pimento
6 shredded oranges	3 cans sliced pineapple

Follow general rules for making gelatin. Fill molds with mixed chopped fruits. Pour in gelatin.

COTTAGE CHEESE

Using Sweet Milk with a Little Sour Milk

(Makes about $1\frac{1}{2}$ lb. cheese)

1 gal. sweet skim milk	$\frac{1}{8}$ junket tablet	1 t. salt
$\frac{3}{4}$ c. clean, sour milk	4 T. cold water	

Stir sour milk into sweet skim milk; place vessel in hot water and raise temperature to almost lukewarm (75° F.). Remove and set where it is to remain until clabbered. Dissolve junket tablet in water and stir it in. Cover the vessel with cloth and leave at about 75° F. for 12 to 16 hours, or until there is a slight whey on

top. Drain through cotton cloth (not cheesecloth). When well drained, work in salt.

Small recipe, one eighth of amounts given, except use one eighth junket tablet.

Using Freshly Soured Milk

(About $1\frac{1}{2}$ lb. cheese)

1 gal. fresh clabber

1 t. salt

Heat milk slightly over hot water until almost lukewarm (70° F.). Let stand for about 1 hour. Drain curd on a cotton cloth; work in salt; add $\frac{1}{4}$ c. thin cream.

Small recipe, 1 pint milk.

Cottage Cheese is used in salads and sandwiches or eaten with sugar and a little cream, or with salt and pepper.

SALAD DRESSINGS

FRENCH DRESSING

4 T. salad oil	1 T. sugar	$\frac{1}{8}$ t. paprika
$1\frac{1}{2}$ to 2 T. lemon juice or mild vinegar	1 t. salt	

Mix vinegar and dry ingredients; add a small piece of ice, and beat with a silver fork or shake in a covered jar until it is thick and creamy. Serve immediately.

Spanish Dressing: Add 2 T. catsup to French dressing.

Roquefort Dressing: Cream 2 T. Roquefort cheese into French dressing.

MAYONNAISE MADE WITH WHOLE EGG

1 egg	$\frac{1}{2}$ T. sugar	2 T. lemon juice or vinegar
1 t. salt	1 c. to $1\frac{1}{4}$ c. salad oil	(or lime or orange juice)
$\frac{1}{4}$ t. mustard		1 T. hot water (omit if desired)

Break egg into bowl and beat well; add seasoning and lemon juice, and beat with a fork. Add 1 or 2 t. oil and beat well. Add $\frac{1}{4}$ c. oil and beat with dover egg beater until thick. Add a second $\frac{1}{4}$ c. oil and beat until thick. Add remaining oil in same manner, adding 1 T. boiling water when all of oil has been added.

For mayonnaise made with egg yolk, use 1 yolk instead of 1 egg. Add oil, a few drops at a time at first, then in larger amounts, and continue as for mayonnaise made with whole egg.

COOKED SALAD DRESSING

$\frac{1}{2}$ t. mustard	1 T. sugar	2 T. butter
1 t. salt	1 $\frac{1}{2}$ T. flour	1 c. milk
$\frac{1}{4}$ t. paprika	2 egg yolks or 1 whole egg	$\frac{1}{4}$ c. mild vinegar

Mix dry ingredients, egg, and milk in double boiler. Cook until thickened, stirring constantly. Add butter; cool; and add vinegar. Peanut butter (2 T.) or thick cream ($\frac{1}{4}$ c.) may be added to this dressing.

Thousand Island Dressing: To 1 c. mayonnaise or cooked dressing add 2 T. chili sauce, 2 T. finely chopped sweet pickle, 2 T. chopped olives, and 2 T. chopped pimento. One tablespoon of finely chopped green pepper may be added, if desired. Use this dressing for head lettuce salad or for open sandwiches. The flavors will be well blended if it is mixed and allowed to stand for 2 hours before use.

Tartar Sauce: To 1 c. mayonnaise, add 2 or 3 T. capers, 2 T. finely chopped sweet pickles, and 2 drops onion juice if desired.

Whipped Cream Mayonnaise or Cooked Dressing: To 1 c. dressing, add $\frac{1}{4}$ to $\frac{1}{3}$ c. whipped cream.

SALAD ACCOMPANIMENTS

SANDWICHES AND BREADS

See page 413. Nut-bread sandwiches, white bread-and-butter sandwiches, and dainty toast are good accompaniments for almost any salad. Small toasted cheese sandwiches are excellent with fruit salad (see page 414).

Baking powder or sour milk biscuit, hot rolls, and bread sticks are well liked with salads.

CHEESE STRAWS

1 c. crumbs from fresh bread	1 c. grated cheese
$\frac{2}{3}$ c. flour	$\frac{1}{8}$ t. white pepper
1 T. butter	Dash cayenne
$\frac{1}{2}$ t. salt	2 T. milk

Mix crumbs, cheese, flour, melted butter, and seasonings. Add milk if needed. Roll or pat one fourth inch thick; cut into strips

one fourth inch wide and about 4 inches long. Bake until brown in a moderate oven (375° F.).

Small recipe, ¼ c. fresh crumbs, ⅓ c. flour, 1 t. butter, pinch salt. ¼ c. grated cheese, dash of pepper and dash of cayenne, 1 t. water.

CHEESE BALLS

1 ½ c. grated cheese	Few grains cayenne
1 T. flour	3 egg whites
¼ t. salt	¾ c. fine cracker crumbs

Mix cheese with flour, salt and cayenne. Beat whites until stiff and add flour. Shape in small balls; roll in crumbs, fry in deep fat, and drain on brown paper. Excellent served with fruit or vegetable **salad**. Serve immediately after cooking.

SWEDISH WAFERS

Heat Swedish wafers (bought in packages of 12) until hot and crisp. Brush with melted butter or spread with butter, and serve immediately with salad. They are especially nice for party **salads**.

STUFFED CELERY

12 small pieces celery	8 to 10 stuffed olives
¾ c. cream or cottage cheese	or 2 T. chopped pimento
2 to 3 T. milk or cream	¼ t. salt.

Soften cheese with milk or cream, add olives or pimento and salt. Fill the rounded side of celery with mixture. Serve cold with green salad or fruit salad.

CAKES AND COOKIES

(See Chapters XIII, XV, XXI, XXIX, XXX)

BUTTER CAKES

PROPORTIONS FOR THREE TYPES OF BUTTER CAKE¹

INGREDIENTS	(2 thick or 3 thin layers)		
	PLAIN CAKE	FOUNDATION CAKE	RICH CAKE
Milk	1 $\frac{3}{8}$ cups	1 cup	1 cup
Flour (soft wheat)	3 cups	3 cups	3 cups
Fat	$\frac{1}{3}$ cup	$\frac{1}{2}$ cup	$\frac{3}{4}$ cup
Eggs	1	2 or 3	4
Baking powder	5 teaspoons	4 teaspoons	4 teaspoons
Sugar	1 $\frac{1}{4}$ cups	1 $\frac{1}{2}$ cups	2 cups
Salt	$\frac{1}{4}$ teaspoon	$\frac{1}{4}$ teaspoon	$\frac{1}{4}$ teaspoon
Flavoring	$\frac{1}{2}$ teaspoon	$\frac{1}{2}$ teaspoon	$\frac{1}{2}$ teaspoon

These proportions are for fat containing no water. If butter or other fat containing water is used, increase the proportions 2 T. for each cup. Flour should always be sifted once before it is measured.

Small cake recipe: $\frac{1}{4}$ c. milk, 8 T. or $\frac{1}{2}$ c. flour, 1 $\frac{1}{4}$ T. fat, $\frac{1}{2}$ egg, $\frac{3}{4}$ t. baking powder, $\frac{1}{4}$ c. sugar, $\frac{1}{8}$ t. flavoring.

METHODS OF MIXING BUTTER CAKES

1. **Cake Method.** Cream fat well. Add sugar gradually. Beat yolks until thick and add to creamed sugar and butter. Sift together dry ingredients. Add dry ingredients and milk alternately. Beat or stir batter only enough to make it smooth. Add flavoring. Fold in stiffly beaten egg whites.

2. **Muffin Method.** This method is a time saver in that the fat is melted instead of creamed. Mix and sift dry ingredients. Beat eggs (whole or separately). Combine eggs, sugar, and milk, and add melted fat. Sift in dry ingredients. Beat well to make a smooth mixture. Beat thoroughly for one to two minutes.

See Table of Temperatures and Baking Time, page 51, Quick Breads.

¹ *Home Baking.* United States Department of Agriculture Farmers' Bulletin 1415 (1926).

THE BAKING OF BUTTER CAKES

Cake pans should be greased or lined with heavy oil paper and should be filled two thirds full, the batter being spread a little to the sides to prevent the cakes rounding in the center.

For division of time in baking cakes see page 441.

TIME AND TEMPERATURE REQUIRED FOR CAKE-BAKING

275° to 325° F.	325° to 350° F.	350° to 375° F.	375° to 400° F.
Sponge cakes	Loaf cake	Cup cakes	Layer cakes
Sponge drops	40 min. to 1 hr.	15 to 25 min.	20 to 30 min.
40 min. to 1 hr.			

The temperature for cake-baking may be even throughout, or it may be a rising temperature. It is safest not to allow the temperature to reach the highest point given.

Cakes are done when they shrink from the sides of a pan, are delicately browned, and spring back into place when touched gently with the finger.

To Remove Butter Cakes from the Pan: Remove the cake from the oven and let stand in pan about 2 minutes. Loosen edges with a sharp knife, invert the pan, and let the cake slip out on a wire cake rack under which paper has been spread to catch crumbs. Allow cake to cool on rack.

VARIATIONS IN INGREDIENTS OF BUTTER CAKES

White Cake I: Follow foundation cake recipe, page 435, but use all egg whites ($\frac{3}{4}$ c. or 6 egg whites) instead of 3 eggs. Decrease the baking powder $\frac{1}{3}$ t. for the replacing of each yolk with an egg white. Decrease milk $2\frac{1}{2}$ T. for each added egg white (or $\frac{1}{2}$ c. for 3 added egg whites).

White Cake II: Use recipe for rich cake, page 435, with $\frac{3}{4}$ c. or 6 egg whites in place of 4 eggs. Increase flour $\frac{1}{2}$ c. (or 4 T. for each added egg white) and decrease baking powder $\frac{1}{2}$ t. for each added egg white.

Gold Cake: Use rich cake recipe, with 8 egg yolks and 1 whole egg in place of whole eggs. Decrease butter 1 T. and increase flour 1 T. for each yolk added after 4. Use $1\frac{1}{2}$ t. flavoring. Measure flour very lightly.

Spice Cake: Add $\frac{1}{2}$ t. spices for each c. of flour used; 1 t. cinnamon and $\frac{1}{2}$ t. cloves makes a good spice cake. If a dark spice cake is desired, use brown sugar for half of granulated sugar and heat one fourth of liquid with the spices for 3 to 5 minutes.

Nut Cake: Add 1 c. chopped nuts and $\frac{1}{2}$ t. cinnamon to foundation cake, increasing milk 2 T. or decreasing the flour 3 T.

Devil's Food or Chocolate Cake: To foundation cake, page 435, add $\frac{1}{3}$ c. liquid (water), 2 t. cocoa, and 2 sq. (2 oz.) melted chocolate, and increase eggs to 4 or use 9 egg yolks; $\frac{1}{2}$ t. cinnamon may be added if desired. The melted chocolate and cocoa should be added before flour is added, or before baking powder is added. Half brown sugar may be used in place of all granulated.

Sour milk may be used in place of sweet milk. If sour milk is used, use $\frac{1}{2}$ t. soda and use $1\frac{1}{2}$ t. less of baking powder.

Apple Sauce Cake: Use foundation cake recipe, page 435, and substitute $1\frac{1}{3}$ c. apple sauce for 1 c. liquid, use $\frac{1}{2}$ t. soda and $1\frac{1}{2}$ t. less baking powder; add 1 t. cinnamon, and $\frac{1}{4}$ t. cloves.

Washington Cream Pie: Make one thick layer of butter cake, using half of foundation cake recipe, page 435. When baked, split and fill with fruit whip (page 452), sweetened whipped cream, sweetened whipped cream flavored with cocoa, or one half recipe for lemon pie filling (page 447).

White Fruit Cake: Add to white cake II, page 436, 1 c. fresh grated cocoanut, 2 c. light-colored citron, sliced, 1 c. chopped raisins, 1 c. finely chopped candied orange peel, 1 c. sliced candied cherries, and 2 or 3 c. blanched almonds, sliced lengthwise.

FRUIT CAKE (Dark)

(Ingredients for small recipe given in parenthesis)

1 lb. butter ($\frac{1}{2}$ c.)	2 lb. raisins ($\frac{3}{4}$ lb.)
1 lb. brown sugar ($\frac{2}{3}$ c.)	2 lb. currants ($\frac{1}{2}$ lb.)
1 lb. flour (1 c.)	$\frac{1}{2}$ lb. citron ($\frac{1}{8}$ lb.)
9 eggs (2)	1 lb. candied cherries (5 oz.)
2 t. cinnamon ($\frac{1}{4}$ t.)	1 lb. shelled almonds, blanched ($\frac{1}{4}$ lb.)
$\frac{1}{2}$ t. cloves ($\frac{1}{8}$ t.)	1 lb. shelled pecans ($\frac{1}{4}$ lb.)
1 t. mace ($\frac{1}{4}$ t.)	2 T. vanilla (2 t.)
2 T. milk (2 t.)	$\frac{1}{2}$ lb. candied orange peel ($\frac{1}{2}$ lb.)
4 T. lemon juice (1 T.)	1 t. soda ($\frac{1}{4}$ t.)
	1 t. baking powder ($\frac{1}{8}$ t.)

Candied pineapple may be substituted for orange peel.

Blanch almonds and heat them in a moderate oven until a delicate brown. Cut fruit and nuts into small pieces. Melt butter and add sugar; mix together until thoroughly blended. Add well beaten eggs. Dredge mixed fruit with half of flour. Sift together remaining flour, soda, spices, and salt. To the cake batter add dry ingredients and milk alternately. Add nuts and fruit. Mix thoroughly. Line pans with waxed paper and fill three fourths full of cake mixture. Bake for 4 hours in a very slow oven (300° F. or below).

Instead of baking in the oven, cook in pressure cooker. Cover the pans with 3 thicknesses of waxed paper tied in place to keep the tops of the cakes dry. Cook in steam pressure cooker at 10 lbs. for 45 minutes, then at 15 lbs. for 30 minutes. When done remove the paper covers. Put cakes in a slow oven for 12 minutes to dry them.

Small recipe, 2 lbs. fruit cake. Use quantities given in parentheses in recipe.

CUP CAKES

Cup cakes may be made with any butter-cake or sponge-cake mixture. Use one half a cake recipe and fill muffin tins (greased for butter cake, ungreased for sponge cake) two thirds full of mixture. Bake about 25 minutes in moderate oven for butter cake, or in moderately slow oven for sponge cake.

CAKE FILLINGS AND FROSTINGS

UNCOOKED FROSTING

General Proportions: 5 or 6 T. liquid, 1 T. butter, flavoring, a sufficient amount of sifted powdered sugar to make frosting thick enough to spread on the cake (about 3 c.).

Orange Frosting: Use orange juice for liquid, add 2 T. grated orange rind, and 1 egg yolk.

Cream Frosting: Use cream for liquid (increasing 2 T.), omit butter, and use 1 t. vanilla or almond flavoring.

Chocolate Frosting: Use hot water for liquid, add 1½ sq. melted chocolate or 5 T. powdered cocoa.

Decorative Icing: Use egg white for liquid, add 1 t. lemon juice. Beat egg white stiff before adding powdered sugar.

COOKED FROSTING

White Frosting (236°-238° F.)

1 c. sugar	Few grains salt
$\frac{1}{2}$ c. water	1 egg white, beaten stiff but not dry
$\frac{1}{8}$ t. cream of tartar	1 t. lemon juice or 2 t. vanilla

Dissolve sugar in water and cook with cream of tartar and salt to thread stage. (See Chapter XXIX, pages 297-299, for temperature of thread stage and for precautions in sugar cookery.) Add sirup to egg white, beating constantly. Beat in flavoring, and beat until thick enough to spread.

Fondant Icing

See Fondant, in Candy, page 463.

Caramel Frosting (236° F.)

1 c. brown sugar	1 c. cream
$\frac{1}{2}$ c. granulated sugar	1 T. butter

Boil to soft ball stage. Cool, and beat until thick enough to spread.

Chocolate Frosting (236° F.)

2 c. sugar	2 sq. chocolate, melted
$\frac{1}{2}$ c. water	1 T. butter
6 egg yolks	1 t. vanilla.

Boil sugar and water to thread stage. Pour over yolks beaten until thick. Beat well; add butter, and spread.

Lady Baltimore Filling

Use white frosting. When cool, add 1 c. chopped seeded raisins, 1 c. chopped figs, 2 c. chopped nuts, and $\frac{1}{2}$ t. lemon juice. Use as filling and frosting for white cake.

SPONGE CAKES

PROPORTIONS FOR SPONGE CAKES:

Ingredients	Sponge Cakes ²	Angel Food
Flour (pastry)	1 c.	$\frac{3}{8}$ c.
Eggs	1 c. (4 or 5)	1 c. whites (8 fairly large)
Sugar	1 c.	1 c.
Salt	$\frac{1}{2}$ t.	$\frac{1}{2}$ t.
Flavoring and acid	3 t. lemon juice	1 t. flavoring
	$\frac{1}{2}$ lemon rind grated	$1\frac{1}{2}$ t. cream of tartar

Small recipe for sponge cake: 2 eggs, $\frac{1}{3}$ c. sugar, 1 t. lemon juice, $\frac{1}{8}$ t. grated lemon rind, $2\frac{1}{2}$ T. flour.

Small recipe for angel food cake: $\frac{1}{4}$ c. egg white (2), $\frac{1}{4}$ t. cream of tartar, $\frac{1}{4}$ c. sugar, $\frac{1}{4}$ t. vanilla or almond extract, $2\frac{1}{3}$ T. flour.

METHOD OF MIXING

1. Plain Sponge Cakes: The egg yolks are beaten well and sugar added. If liquid is used it is added to yolks and sugar. Sift in flour gradually. Beat whites well and fold in last. If the whites are beaten too dry the cake will be tough and dry. This precaution is more necessary in angel food cake.

2. Angel Food Cake: Sift dry ingredients together, except cream of tartar and salt, four or five times. Beat egg whites until foamy, add cream of tartar and salt, and finish beating. Gradually sift and fold in the mixed dry ingredients and flavoring.

If a crisp crust is desired, sprinkle the top with a little sifted powdered sugar before baking.

BAKING SPONGE CAKES

Cook sponge cakes in unbuttered, smooth pans. They should be cooked in a stem or tube cake pan (loose bottom preferable) for one hour at about 275° to 325° F. The smaller cakes in muffin pans or jelly cake tins may be cooked about 30 to 40 minutes at

¹ *Home Baking.* United States Department of Agriculture Farmers' Bulletin 1450 (1926).

² Water or milk and baking powder may be substituted for one or two eggs. Two tablespoons of liquid and one half teaspoon of baking powder equals one egg. Sift baking powder with flour. Add liquid to egg yolks.

the higher temperature. The baking of a cake can be checked by dividing the required baking time into fourths:

First quarter — Cake should begin to rise (bubbles).

Second quarter — Cake should continue to rise and form a crust.

Third quarter — Cake should finish rising and begin to brown.

Fourth quarter — Cake should finish browning and shrink from sides of pan.

If the oven is too quick and cannot be regulated, place a pan of hot water above the cake and another below it. The greatest danger to sponge cake is having too hot an oven; that makes the cake rise too quickly and then fall. If no oven thermometer is available watch the division of time very carefully and reduce the oven temperature if the cake is cooking too quickly.

Be careful not to move the cake during the rising period, second and third quarters. Why? If the oven does not cook evenly the cake may be moved in the first and fourth quarters.

TESTING THE CAKE

Sponge cakes should not brown as much as butter cakes. The cake is done when it shrinks from the sides of the pan, and when the portion near the center of the crust springs back on being touched lightly with the finger.

REMOVING THE CAKE FROM THE PAN

Invert the pan on a rack or cake rack. When it is cold, loosen edge of cake with sharp knife; the cake will loosen itself from the pan by its own weight.

CAUSE OF FAILURE

Too hot an oven is the most frequent cause of failure. Very large holes in the sponge cake may be accounted for in two ways. Either the egg whites were not well folded in, or not enough sugar was added.

FILLED ANGEL FOOD CAKE

In recipe for angel food cake, page 440, increase sugar to $1\frac{1}{2}$ c. and flour to 1 c., and add $\frac{1}{2}$ c. chopped nuts and $\frac{1}{2}$ c. candied cherries and pineapple. This makes good angel food squares for parties.

COOKIES

OATMEAL COOKIES

$\frac{1}{2}$ c. fat	2 T. sour milk	$\frac{1}{8}$ t. salt	1 t. soda
1 c. sugar	1 $\frac{1}{2}$ c. rolled oats	$\frac{1}{2}$ t. cinnamon	
1 egg	1 $\frac{1}{2}$ c. flour	1 c. chopped raisins or nuts	

Mix ingredients as for butter cakes, adding rolled oats to dry ingredients, and adding raisins or nuts last. Drop by spoonfuls on greased pans or baking sheets. Bake in moderate oven (350° to 375° F.) for 12 to 15 minutes.

*Small recipe, 1 T. fat, 2 T. sugar, 1 T. ($\frac{1}{4}$) egg, $\frac{1}{2}$ T. sour milk, 3 T. rolled oats, 3 T. flour, $\frac{1}{8}$ t. soda, *spk.* cinnamon, 2 T. raisins.*

PEANUT COOKIES

$\frac{3}{8}$ c. butter	1 egg	2 T. milk
$\frac{1}{2}$ c. sugar	$\frac{3}{4}$ c. chopped peanuts	1 c. flour
$\frac{1}{4}$ t. salt	1 t. vanilla	1 $\frac{1}{2}$ t. baking powder

Cream butter, add sugar and well beaten egg. Stir in milk and vanilla, and add dry ingredients well sifted together. Stir in peanuts last. Drop by teaspoonfuls on buttered sheet. Bake in moderate oven (350° to 375° F.) for about 8 minutes.

Small recipe, one fourth of given amounts.

CHOCOLATE COOKIES

Add 2 sq. (2 oz.) melted chocolate to peanut cookie recipe and decrease flour-2 T. Any other nut may be used.

Small recipe, one fourth of given amounts.

GINGER SNAPS

$\frac{1}{2}$ c. fat	$\frac{1}{4}$ c. water	$\frac{1}{4}$ t. cinnamon
$\frac{1}{2}$ c. sugar	$\frac{1}{2}$ t. soda	About 2 $\frac{1}{4}$ c. flour
$\frac{1}{2}$ c. molasses	$\frac{1}{2}$ to 1 t. ginger	

Mix as other cookies or butter cakes, adding enough flour to make a stiff dough. Roll thin on a slightly floured board, cut with cookie cutter; place on greased pans and bake in moderately hot oven (400° F.) for about 10 minutes.

ROLLED CHOCOLATE COOKIES

$\frac{1}{2}$ c. fat	1 egg	2 t. baking powder
$2\frac{1}{2}$ c. flour	1 t. salt	2 oz. melted chocolate
1 c. sugar	$\frac{1}{4}$ c. water or milk	

Mix and bake as for ginger snaps.

BROWNIES

$\frac{1}{2}$ c. flour	$\frac{3}{4}$ t. vanilla
1 c. sugar, light brown or granulated	$1\frac{1}{2}$ sq. chocolate, melted
$\frac{1}{4}$ c. melted fat	$\frac{1}{2}$ c. broken walnut or pecan meats
1 egg	Heavy oil paper to line pan

Mix flour and sugar; add fat, egg, and melted chocolate. Beat for about 30 seconds; add nuts and flavoring. Spread evenly on a pan lined with heavy oil paper. Bake in moderate oven (375° F.) for 8 to 12 minutes.

Small recipe, one fourth of given amounts.

THIN CRISPS

$\frac{1}{2}$ c. butter	2 eggs	2 t. baking powder
1 c. sugar		About $2\frac{1}{4}$ c. flour
1 T. milk or a half lemon, grated rind and juice		

Mix as for other cookies or cakes, using enough flour to make a stiff dough. Roll very thin (one eighth inch or less). Cut and place on greased pans or baking sheets. Glaze with mixed egg white and water, if desired. Bake as for ginger snaps. These cookies will brown only slightly. They may be cut in fancy shapes or decorated before baking.

ROLLED WAFERS

$\frac{1}{4}$ c. butter	$\frac{1}{4}$ c. milk	$\frac{3}{8}$ c. flour
$\frac{1}{2}$ c. sugar (powdered)		$\frac{1}{2}$ t. flavoring

Cream butter and sugar together. Add milk gradually, then flour and flavoring. Spread very thinly with spatula on bottom of slightly greased square pans. Crease in squares, and bake in slow oven (300° to 350° F.) until delicately brown. Cut squares. Remove from pans, turn over so the glazed side will be outside.

and roll cornerwise while hot. If squares become too brittle to roll, put in oven to soften.

MARGUERITES

1 c. sugar	2 egg whites	1 c. nuts
$\frac{1}{2}$ c. water	2 T. shredded cocoanut	Saltines
4 marshmallows	$\frac{1}{4}$ t. vanilla	

Boil sugar and water until sirup will spin a long thread when dropped from the tines of a fork. Remove from fire. Add marshmallows cut to pieces. Do not stir. Pour into stiffly beaten egg whites, beat until stiff. Add cocoanut, nuts, and vanilla. Pile on crackers and bake in slow oven (325° to 350° F.) until delicately browned.

KISSES

$\frac{1}{2}$ c. egg white (about 4 whites)	$\frac{1}{8}$ t. salt	$\frac{1}{8}$ t. cream of tartar
1 c. powdered sugar	$\frac{1}{2}$ t. vanilla	1 c. chopped nuts

Add salt and cream of tartar to egg white and beat very stiff. Beat in $\frac{1}{4}$ c. powdered sugar and fold in remaining sugar, nuts, and vanilla. Drop by teaspoonfuls on ungreased paper on a pan, dust with powdered sugar, and bake in a slow oven (275° F.) about 50 minutes, increasing the heat at last to brown slightly.

PASTRY

(See Unit Two, Chapter XV)

KINDS OF PIES

Pies are difficult to classify according to the filling, but we may group them according to the crust.

(1) **One-crust Pies for which the Crust is Baked Separately;** such as, lemon, chocolate, cream — and various fruit pies for which the fruit is cooked first and served in the pie crust, with whipped cream. Apple sauce and banana custard, also, are used as fillings for one-crust pies.

Tarts are individual pies of this type. They are frequently filled with jelly or preserves, as cherry tarts.

(2) **One-crust Pies with the Filling and the Crust Baked Together;** such as custard, pumpkin, and molasses pies.

(3) **Two-crust Uncooked Pies with Latticed or Crossbarred Tops, or with Solid Tops.** Openings must always be made in the top crust of two-crust pies in order to allow the steam to escape as the pie cooks. Fruit pies are examples of two-crust pies.

PLAIN PASTRY

STANDARD RECIPE FOR TWO CRUSTS

1 ½ c. flour	¾ t. salt
½ c. fat	Cold water to make dough, about ¼ c.

Use no water if a liquid fat is used.

Small recipe for 5-inch pie plate: ½ c. flour, 3 T. fat, ¼ t. salt, 1 T. water.

Cut fat into flour with two knives, or rub it in with the tips of the fingers, for a flaky crust. Stir in only enough water to hold the dough together. Knead very lightly to mix well. The pastry may be chilled on ice before it is rolled. Rub just enough flour on bread board to keep pastry from sticking. Roll lightly with the rolling pin to about one eighth inch thickness.

For a Two-crust Pie, place rolled dough in pan, press it down carefully, and trim edge with a knife. Place filling in pie, heaping very slightly toward center. Form the second crust of strips, or of solid dough in which a few cuts have been made in order to allow the steam to escape.

For a One-crust Pie: Pie crust to hold the shape of pan must have no bubbles between pastry and pan. The edge of the crust must also be fastened to the pie tin by pinching with the fingers or by marking with fork or pastry wheel. Prick dough very thoroughly with a fork to avoid air bubbles. Bake crust in hot oven (about 450° F.) until delicate brown. Remove from oven, cool and fill. Crust may be baked on the outside of pie tin instead of inside.

ONE-CRUST APPLE PIE

Fill a baked pie crust with apple sauce. Flavor the sauce with few drops of lemon juice and dash of nutmeg. Spread about three fourths inch thick, cover with stiff whipped cream sweetened to taste.

TWO-CRUST APPLE PIE

2 c. sliced apples (about 4 apples)	2 T. butter
Dough for 2 pie crusts	$\frac{3}{4}$ c. sugar
1 t. cinnamon or nutmeg	

Pare, core, quarter apples and slice thin. Line pie tin with pastry; pile in slices, rounding slightly toward the center, and sprinkle with sugar. Dot with butter and sprinkle with cinnamon or nutmeg. Cover with pastry according to general directions. Bake 10 minutes in hot oven (400° to 425° F.); reduce temperature and finish baking 25 minutes in moderate oven.

Small recipe, one half of given amounts.

In place of apples, use the same amount of any fruit desired. Do not fill berry pie as full as pie made with less juicy fruit. Dried fruit should be soaked, cooked until almost tender, and drained before used for pie. Add 1 to 2 T. lemon juice. Whipped cream may be used in place of second crust. Cool pie before adding whipped cream.

PEACH, APPLE OR BERRY COBBLER

Pastry for 1 crust	1 $\frac{1}{2}$ c. sugar
Pastry strips or whipped cream	2 $\frac{1}{2}$ to 3 c. fruit

Line a deep (about 2-in.) pie tin with pastry prepared and cooked according to directions for one crust. Fill with cooked

sweetened, sliced apples or peaches, or with berries and pour sugar over them. Cover with pastry strips and bake in a moderately hot oven (375° to 400° F.) until pastry is cooked. If whipped cream is used, heat filled pie for 5 minutes in a moderate oven (about 350° F.); cool; cover with whipped cream, and serve.

Small recipe, one half of given amounts.

LEMON PIE

Pastry for 1 crust	2 egg yolks
$2\frac{1}{2}$ T. cornstarch or $\frac{1}{3}$ c. flour	2 T. butter
1 c. sugar	3 T. lemon juice
1 c. milk	Grated rind of 1 lemon
	$\frac{1}{8}$ t. salt

Bake a single crust in a pie tin. Mix cornstarch or flour with sugar, add milk, and cook in double boiler, stirring frequently for 20 minutes. Remove from heat, cool 2 or 3 minutes, add butter and well-beaten yolks. Return to fire and cook in double boiler for 15 minutes. Add lemon juice and rind. Cool 5 to 10 minutes, and pour into baked pastry shell. When the filling has stiffened, cover with meringue, leaving the meringue slightly rough. Brown the meringue in a moderate oven.

For Meringue: 2 egg whites, $\frac{1}{4}$ c. powdered sugar, $\frac{1}{2}$ t. cream of tartar, $\frac{1}{4}$ t. flavoring, 1 to 2 T. boiling water.

Beat egg whites very stiff and beat in cream of tartar, sugar, and flavoring. Add boiling water, stirring it into beaten whites.

Small recipe, one half of given amounts ($\frac{3}{4}$ T. cornstarch, $1\frac{1}{2}$ T. flour).

CHOCOLATE PIE

Omit lemon juice and rind in lemon pie and add 2 sq. (2 oz.) melted chocolate just before removing pie filling from double boiler.

Small recipe, one half of given amounts ($\frac{3}{4}$ T. cornstarch, $1\frac{1}{2}$ T. flour).

COCOANUT CREAM PIE

Substitute $\frac{1}{4}$ c. cream for $\frac{1}{4}$ c. milk in lemon pie. Omit lemon juice and rind and add $\frac{3}{4}$ c. grated cocoanut and $\frac{1}{2}$ t. vanilla.

TARTS

Tarts are made from plain pastry. All scraps of pastry dough may be utilized for making tarts. Bake crusts on bottom of muffin pans. Fill with any pie filling. Other suggested fillings follow:

Fresh fruit, chopped and sweetened, or jam or jelly makes an excellent filling for tarts. Cover with whipped cream.

Dried fruit, with 1 T. lemon juice and $\frac{1}{2}$ t. grated lemon rind added for each $\frac{1}{2}$ c. fruit, may be used for tarts. Cover with meringue (see Lemon Pie) or whipped cream.

CREAM PUFFS

(Recipe for 12 puffs)

1 $\frac{1}{2}$ c. flour	1 c. hot water	3 c. filling
$\frac{1}{2}$ c. butter	4 or 5 eggs	

Add butter to boiling hot water. When melted add flour all at once. Mix thoroughly and cook over direct heat for 5 minutes. Cool for 5 minutes and then beat unbeaten eggs in, one at a time. Drop by tablespoonfuls on buttered baking sheet, allowing 2 to 3 inches between puffs for expansion. Bake in moderate oven (350° to 375° F.) for 30 to 35 minutes. Cool; split open and fill with sweetened whipped cream, sweetened whipped cream flavored with cocoa (1 T. to 1 c. cream), cream filling, or cocoa cream filling.

Small recipe, $\frac{1}{3}$ c. flour, 2 T. butter, $\frac{1}{4}$ c. hot water, 1 egg.

Cream Filling for Cream Puffs

$\frac{1}{3}$ c. flour	2 eggs
2 c. milk	$\frac{3}{8}$ c. sugar
1 T. butter	$\frac{3}{8}$ t. salt

Make cream sauce of flour and milk in double boiler (cooking 15 min.). Add eggs, sugar, and butter after creaming together; cook until eggs thicken; cool and add flavoring.

Cocoa Cream Filling. Add 1 sq. (1 oz.) melted chocolate before adding eggs to cream filling.

Small recipe, 2 T. flour, $\frac{1}{2}$ c. milk, $\frac{1}{2}$ egg, 3 T. sugar, $\frac{1}{2}$ t. butter.

PUDDINGS, CUSTARDS, AND FRUIT DESSERTS

(See Unit Two, Chapter XV, and Unit Three, Chapter XXI)

Sauces for desserts are found on pages 398-400.

STEAMED PUDDINGS

PLUM PUDDING

$\frac{1}{2}$ lb. seeded raisins	$\frac{1}{2}$ c. flour
$\frac{1}{2}$ lb. currants	$1\frac{1}{4}$ c. stale bread crumbs
$\frac{1}{8}$ lb. candied orange peel	4 eggs
1 oz. citron or candied pineapple	$\frac{5}{8}$ c. light brown sugar
$\frac{3}{4}$ c. finely chopped suet	2 t. cinnamon
$\frac{1}{8}$ t. allspice	$\frac{1}{2}$ c. jelly (apple or currant)
$\frac{1}{8}$ t. grated nutmeg	or $\frac{1}{2}$ c. water

Wash and dry currants and raisins; cut citron and orange peel fine. Mix dry ingredients; mix liquid ingredients; combine liquid and dry ingredients. Fill greased molds two thirds full and steam 4 hours. Steam again 1 to 2 hours before using it. Serve hot with hard sauce or whipped cream.

Small recipe, one fourth of given amounts. (Measure fruit in ounces.)

FIG PUDDING

Omit fruit in plum pudding and add a half-pound of finely chopped figs and 1 finely chopped sour apple. Steam four hours and serve with lemon sauce, hard sauce, or foamy sauce.

BLANC-MANGE (CORNSTARCH PUDDING)

3 c. milk	$\frac{1}{2}$ t. salt
$4\frac{1}{2}$ T. cornstarch	1 t. flavoring
$\frac{3}{4}$ c. sugar	$1\frac{1}{4}$ c. custard, chocolate, or caramel sauce

Mix cornstarch and sugar; add milk and mix thoroughly. Cook in double boiler, stirring frequently until well thickened (about 4. min.). Add flavoring and salt and serve with sauce.

CHOCOLATE BLANC-MANGE

Melt 1 sq. (1 oz.) chocolate and stir in $\frac{1}{2}$ c. milk. Mix remaining milk with cornstarch and sugar; heat; after cooking about 20 minutes, stir in chocolate and milk. Or stir in $\frac{1}{2}$ c. cocoa when blanc-mange is almost cooked. Serve with thin or whipped cream.

TAPIOCA CUSTARD

3½ T. minute tapioca	2 eggs
2 c. hot milk	⅛ t. salt
1 t. vanilla	⅓ c. sugar

Cook tapioca and milk in double boiler until tapioca is transparent (15 to 20 min.); stir in gradually egg yolks, mixed with salt and sugar. Cook 15 minutes or until thickened. Cool for a few minutes and fold in flavoring and stiffly beaten egg whites. Serve with custard sauce, thin or whipped cream, crushed fruit, or cooked apples.

FRUIT TAPIOCA

Substitute water for milk in above recipe, omit eggs, and add 1 c. sliced fruit — as apples or peaches. Fruit may be added after the first five minutes of cooking and the fruit tapioca baked in a moderate oven for 30 minutes.

RICE PUDDING

2 c. milk or milk and cream	1 c. water
¾ c. rice	½ c. sugar
½ to ¾ c. seeded raisins, if desired	

Mix ingredients, place in baking dish and bake in a moderate oven 30 to 45 minutes, or until rice is soft. Serve with thin or whipped cream. One egg, well beaten, may be added before cooking.

COCOA RICE PUDDING

PART I	PART II
1 c. rice	1 c. milk
3 c. water	3 T. cocoa
	⅓ c. sugar

Bake part one until water is almost evaporated. Stir in part two, and bake 15 minutes longer. Serve either hot or cold with thin or whipped cream.

CHOCOLATE BREAD PUDDING

2 c. milk	⅛ t. salt
2 eggs	1 c. bread crumbs
2 T. melted butter	1 t. vanilla
½ to ⅓ c. sugar	1 sq. (1 oz.) chocolate or 3 T. cocoa

Beat egg yolks with butter and sugar; add crumbs, salt, and milk. Cook in double boiler until thick. Beat about 1 minute with dover beater; fold in vanilla and egg whites beaten stiff. Bake in moderate oven until firm (when a knife will come out clean). Serve with whipped cream, hard sauce or lemon sauce.

Lemon Bread Pudding. Omit chocolate and substitute grated rind and juice of 1 lemon.

BROWN BETTY (SCALLOPED APPLES)

1 lb. apples (3 apples) sliced	$\frac{1}{4}$ c. sugar (light brown)
1 $\frac{1}{4}$ c. stale bread cubes	$\frac{1}{4}$ t. grated nutmeg if desired
$\frac{1}{4}$ c. butter, melted	Grated rind and juice of $\frac{1}{2}$ lemon

Stir butter into cubes of bread; cover bottom of buttered baking dish with bread, and spread over it half the apples, sugar, and seasonings; repeat, covering with a light layer of bread. Bake 30 to 40 minutes in a moderate oven (325° F.). Serve with hard sauce or thin cream.

CUSTARDS

STANDARD PORTIONS FOR CUSTARD

Two egg yolks or 1 whole egg to each cup of liquid, and $\frac{1}{8}$ c. (2 T.) sugar, $\frac{1}{6}$ t. (spk.) salt, $\frac{1}{4}$ t. flavoring.

METHOD OF MIXING

Mix eggs, slightly beaten, sugar and salt; add either hot or cold milk. For baked custard add flavoring and pour into greased custard cups (2 cups for each c. of mixture); set in a pan containing a little hot water; bake in moderate oven about 25 minutes or until firm (knife comes out clean). For soft or boiled custard, cook mixture in double boiler and stir constantly until the custard coats a metal spoon. Remove from heat; cool; add flavoring, and serve cold.

Baked custards may be eaten in the cups or removed from cups when cold.

BOILED OR SOFT CUSTARD

Use 3 c. milk for six servings. Use general proportions, with $\frac{1}{8}$ t. salt, and make according to general directions.

BAKED CUSTARD

Use 3 c. milk for six servings. Use general proportions, with $\frac{1}{8}$ t. salt, and make according to general directions.

Caramel Custard: Use $\frac{3}{8}$ c. sugar to each cup of custard. Caramelize sugar by heating in pan until it melts and is light brown. Dissolve in heated milk. Make the custard according to general proportions (omitting flavoring), and use the general method.

Chocolate Custard: Use $\frac{1}{2}$ sq. chocolate or $1\frac{1}{2}$ T. cocoa for each c. of liquid. Add chocolate or cocoa to a little ($\frac{1}{3}$ to $\frac{1}{2}$ c.) hot milk and stir until smooth. Mix with remaining milk (hot) and combine according to general directions.

Floating Island: Make boiled custard (3 c. for 6 people) with egg yolks. Beat the whites until stiff and drop by spoonfuls on hot water or hot custard. Cook until firm. Place on custard in serving dish with a wire whisk. Chill floating island and serve cold.

FRUIT DESSERTS

FRUIT WHIPS, COOKED AND UNCOOKED

Proportions for Uncooked Fruit Whip, Using Egg White: 1 unbeaten egg white, $\frac{1}{2}$ c. fruit pulp, $\frac{1}{2}$ c. sugar, 2 t. lemon juice. Mix all ingredients and beat with wire whisk or dover beater until very light and fluffy. Grated raw apple, apricot pulp, grated apple and pineapple mixed, or crushed banana make excellent whips.

Pile whip lightly in individual dishes and serve cold with thin or whipped cream, or serve as filling for Washington cream pie.

Proportions for Uncooked Fruit Whip, Using Whipped Cream: 1 c. heavy cream, whipped; $\frac{1}{2}$ to $\frac{3}{4}$ c. sugar, 2 c. fruit pulp; $1\frac{1}{2}$ T. lemon juice; rind of $\frac{1}{2}$ lemon. Mix and serve in individual dishes. Use any fruit desired, such as berries, shredded oranges, or pineapple.

PRUNE WHIP (A COOKED FRUIT WHIP)

1 c. dried prunes	2 c. cold water
Whites of 5 eggs	$\frac{1}{2}$ c. sugar
1 T. lemon juice	$\frac{1}{8}$ t. salt

Wash prunes carefully. Soak 10 to 12 hours or overnight in

2 c. cold water. Cook in the same water till tender. Remove stones and rub pulp through strainer. Add sugar and reheat. This mixture should be the consistency of marmalade. Add salt to whites of eggs and beat till stiff. Add cold prune mixture gradually; add lemon juice. Pile lightly in buttered baking dish and bake 20 minutes, or until firm, in a slow oven.

APPLE DUMPLINGS OR FRUIT ROLL

See Variations for Biscuit, page 374.

SHORTCAKES

Shortcake is made with rich biscuit dough, with pastry squares, with sponge cake, or with butter cake, according to preference. Strawberries, fresh cherries, shredded orange, huckleberries, prunes, blackberries, and raspberries are favorites for shortcake. Sweeten the fruit slightly before using it and crush part or all of it as desired. See variations for biscuit, plain pastry, sponge cake, and one-egg cake for the foundation of shortcake. Do not combine fruit with shortcake more than 20 to 30 minutes before serving.

FRUIT TAPIOCA

See under Tapioca Custard, page 450.

FRUIT CUPS

Fruit cups are excellent when served as fruit cocktails for the first dinner course. They are equally good as the last course for dinner, and are found to be an acceptable and refreshing change from the very heavy and sweet desserts often served.

A larger serving of fruit cup should be used for dessert than the serving used as a cocktail.

Suggestions for Fruit Cup: Cut the fruit into half-inch pieces. Amounts and ingredients have endless possibilities of variation. Serve fruit cup very cold. Use in it the juice from shredded oranges or grapefruit.

Grapes ($\frac{3}{4}$ lb. white), pineapple (4 slices), lemon juice (1 t.), almonds ($\frac{1}{4}$ lb. blanched), sugar if necessary, $\frac{1}{8}$ lb. marshmallows may be added, if the fruit cup is used as a dessert.

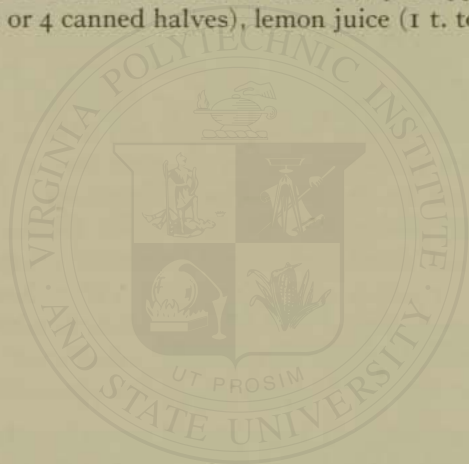
Orange (4 or 5 medium), mint (3 sprigs fresh, finely minced), sugar (2 to 4 T.). One T. lemon juice or 4 T. grapefruit juice may be added.

Orange (4 medium), cocoanut ($\frac{1}{2}$ to $\frac{3}{4}$ c. fresh shredded), lemon juice (1 T.), sugar (2 to 4 T.).

Grapefruit (2 medium), pear (1 fresh), orange (2 medium). Add 1 T. lemon juice if desired. Add 1 drop oil peppermint if desired.

Grapefruit (3 medium), orange (3 medium), sugar if needed. Add grated rind of 1 orange if desired.

Apricot (6 to 8 halves, fresh or canned), pineapple (4 slices), pear (2 fresh or 4 canned halves), lemon juice (1 t. to 1 T.).



GELATIN DESSERTS

(See Unit Three, Chapter XXI)

GENERAL RULES FOR MAKING GELATIN DISHES

1. Soak gelatin in a small amount of cold water for 5 minutes or until it swells. Use an amount of gelatin that will give a proportion of 2 to 3 T. gelatin to 1 qt. liquid in the final product.
2. Dissolve it in hot liquid.
3. Add sugar and fruit or vegetable juice. Strain if clear jelly is desired.
4. Have molds clean. It is not necessary to rinse in cold water.
5. Pour gelatin into molds if it is to be plain jelly. If it is to be a sponge-type jelly let stand until partially thickened and beat until foamy, like beaten egg white; then pour into molds.
6. Chill. If chilling is to be hurried, surround the gelatin with crushed ice.
7. To unmold the gelatin, dip mold in lukewarm water and loosen upper edge with a sharp knife. Invert on the dish on which it is to be served. If it does not unmold readily shake mold gently to loosen gelatin.

CLEAR JELLY

One cup of liquid will serve two people; $\frac{1}{2}$ T. to $\frac{3}{4}$ T. gelatin will thicken 1 c. liquid. Use a little liquid cold and the rest, except fruit juice, hot. Why?

Lemon Jelly: 2 $\frac{1}{2}$ c. water, $\frac{1}{2}$ c. lemon juice (about 4 lemons), 1 c. sugar.

Orange Jelly: 1 $\frac{1}{2}$ c. water, 1 c. orange juice, $\frac{1}{2}$ c. lemon juice, 1 c. sugar.

Orange Mint, or Lemon Mint Jelly: Add to either orange jelly or lemon jelly while hot 8 sprigs of mint finely chopped and 1 drop of oil of peppermint.

Fruit Jellies: Add 1 $\frac{1}{2}$ c. fruit to lemon or orange jelly. Berries may be left whole; other fruits should be cut in pieces. Shredded orange or grapefruit mixed with banana, apricots, strawberries, or cooked pineapple make good fruit jellies. Prunes and orange make a good combination.

SPONGES

Mix plain gelatin of any desired flavor; let stand until partly thickened; beat with dover beater until foamy. Fold in 1 beaten egg white for each cup of liquid used: 2 c. liquid will make enough gelatin sponge for 6. Lemon sponge is often called snow pudding and is served with custard sauce ($\frac{1}{4}$ c. sauce per person).

BAVARIAN CREAMS (OR CHARLOTTE)

Mix plain gelatin of any desired flavor ($\frac{1}{3}$ c. liquid for each serving); let it stand until thick enough to beat; beat with dover beater until foamy; fold in $\frac{1}{2}$ c. cream (that has been whipped) for each cup of liquid used (half as much cream as liquid). Milk may be used for most or all of the liquid in Bavarian cream.

Orange Bavarian is made with orange juice and molded with sections of shredded orange.

Strawberry Bavarian is made of milk, or of plain lemon jelly with whipped cream added, and is molded with halves of strawberries or 1 c. mashed strawberries for 6 servings.

Chocolate Bavarian is plain Bavarian with 1 sq. melted chocolate stirred into liquid for 6 servings.

JUNKET

1 junket tablet	$\frac{1}{4}$ c. sugar
1 T. cold water	$\frac{3}{4}$ t. vanilla
3 c. milk	$\frac{1}{8}$ t. salt

Mash the junket tablet with a wooden spoon and dissolve it in cold water. Heat milk to lukewarm (80° to 85° F.); add other ingredients and junket tablet dissolved. Pour quickly into dishes in which it is to be served. Leave in a warm place until firm; chill; serve.

Caramelized sugar (dissolved in a little water) or cocoa ($1\frac{1}{2}$ T.) may be used in place of vanilla.

Small recipe, one fourth of given amounts.

FROZEN DESSERTS

(See Unit Three, Chapter XXI)

GENERAL METHOD OF MAKING FROZEN DESSERTS

1. Prepare mixture to be frozen (see proportions and methods below) and chill.

2. Use crushed or finely chopped ice with rock salt.

3. Prepare freezer container by scalding and chilling. Pour in mixture to be frozen, allowing a space of about one third or one fourth of can for expansion of mixture when it freezes. Put can in place in bucket before adding ice. For mixtures that are not to be stirred, make a bed of ice and salt before putting filled container in place.

4. Use the correct proportion of ice and salt for the method of freezing used, and the method of packing.

For mixtures to be stirred while freezing, use 1 part salt to 6 or 8 parts ice;

For mixtures to be frozen without stirring, use 1 part salt to 2 or 4 parts ice;

For packing mixtures that are frozen, use 1 part salt to 4 parts ice.

5. For freezing a mixture that is stirred while freezing, put in ice and salt so that the packing comes above the level of the mixture to be frozen; see that the upper drain for salt water is open and is 1 or 2 inches below the top of the ice-cream container. Turn crank steadily and rather slowly — about 20 revolutions a minute.

6. When mixture is frozen clean ice and salt from top of can; uncover; remove and scrape dasher; stir cream down into can; place clean paper or paraffin paper over hole and plug with a cork; invert a cup over the cork; pack cream by pouring off water and adding ice and salt. Make sure that proportion of salt to ice is not more than 1 to 4, otherwise cream will freeze too hard. Cover freezer with burlap or newspapers.

A tightly covered tin can and a wooden pail may be substituted for an ice-cream freezer; a wooden spoon or spatula should be used to scrape the mixture from the sides and bottom of the can as it freezes.

PREPARATION OF MIXTURE TO BE FROZEN

In preparing frozen fruit or water ice the sugar and water should be made into a sirup, which should be boiled 5 minutes, then strained. In preparing ice cream with fruit, let the sugar and crushed fruit stand 1 hour in a cool place, or until the sugar is dissolved, then add the cream and freeze the mixture; or freeze the fruit mixture to a mush, add the cream, and finish the freezing; in preparing ice creams without fruit dissolve the sugar in the cream, cool, add the flavoring, and freeze.

Fruit juice is used for water ice. The fruit is pressed through a colander or cut in small pieces with a silver knife for frozen fruit. Either juice or crushed fruit may be used for ice cream; preferably only the juice of very seedy fruits.

Amounts for Frozen Mixtures: One pint of frozen mixture serves 3 or 4 persons but a pint of liquid will make about $1\frac{1}{2}$ pints of frozen mixture and will serve 4 or 5 persons. When beaten cream is used the mixture does not swell as much during freezing as when unbeaten cream is used.

ICE CREAMS

For Ice Cream, use a foundation of one pint thin cream and $\frac{1}{2}$ c. sugar or 1 pint custard.

For 1 pint custard, use $1\frac{1}{2}$ c. milk, $\frac{1}{3}$ c. sugar, 2 to $2\frac{1}{2}$ egg yolks, slightly beaten, $\frac{1}{2}$ c. cream. The cream may be either thin or heavy cream. Make a soft custard of the milk, sugar, and egg yolks. (See Custard, page 451.) When the custard is cold, add cream, either plain or whipped.

Condensed or powdered milk may be used in ice cream. (See page 400 for dilution of these products.)

The amounts given below may be used either with 1 pint thin cream or with 1 pint custard and will serve about 5 persons. When custard is used, the product is called French ice cream; when thin cream is used, the product is called Philadelphia ice cream.

VARIATIONS FOR ICE CREAMS

Add amounts suggested for each pint of cream or custard.

General Method: Add sugar ($\frac{1}{2}$ c. for 1 pt. cream) to the cream,

and stir occasionally until dissolved, or make custard. Add the flavoring just before freezing the mixture. Fruit is best prepared by pressing through a fruit press.

Apricot or Peach Ice Cream. Two cups fresh, canned, or cooked dried apricots. Peel, remove stones, and mash. Add to cream just before freezing or stir in when half frozen.

Banana Ice Cream. Add 2 or 3 medium-sized ripe bananas cut fine or mashed, 1 T. lemon juice, $\frac{1}{2}$ t. grated lemon rind to the cream. Decrease sugar 2 T. for 2 bananas.

Caramel Ice Cream. Caramelize half of sugar by heating until it is melted and light brown in color. In order to dissolve this caramelized sugar, add it to the hot custard, or add to it a few T. of boiling water before pouring it into the cream. The total amount of sugar may be increased 2 T. if desired.

Caramel Nut Ice Cream. Add $\frac{1}{2}$ to $\frac{3}{4}$ c. broken nut meats to caramel ice cream before freezing.

Chocolate Ice Cream. Powdered cocoa is easier to use than chocolate. Three tablespoons of cocoa, made into a paste by being heated with 2 or 3 T. water. Cool and beat into sweetened cream or custard. Or use 1 sq. chocolate. Melt chocolate and stir into $\frac{1}{3}$ c. cream or custard. Add to remaining cream or custard.

Chocolate Nut Ice Cream. Add $\frac{1}{2}$ to $\frac{3}{4}$ c. broken nut meats to chocolate ice cream.

Coffee Ice Cream. Heat $\frac{1}{2}$ c. milk or cream with 3 T. coffee for 5 minutes and use this milk or cream in general ice-cream recipe.

Fig Ice Cream. Add 1 cup of chopped fresh figs or $\frac{1}{2}$ c. chopped dried figs, and 1 t. lemon juice to the cream.

Lemon Ice Cream. Add, just before freezing, $1\frac{1}{2}$ T. lemon juice (from $\frac{1}{2}$ lemon) and the grated rind of $\frac{3}{4}$ lemon. This is best made with cream instead of milk.

Macaroon Ice Cream. Add $\frac{1}{3}$ c. rolled dried macaroons to the cream.

Orange Ice Cream. Add to the mixture just before freezing it, 1 T. lemon juice, 2 T. orange juice and the grated rind of 1 orange. This is best with cream.

Peppermint Ice Cream. Use $1\frac{1}{2}$ c. milk and $\frac{1}{2}$ c. whipped cream in place of cream or custard, and $\frac{1}{4}$ lb. striped red and white peppermint candy. Heat the candy in milk in a double boiler until it dissolves; cool, and when it is cold add whipped cream (or add whipped cream after the milk mixture has frozen to a mush).

WATER ICES

GENERAL PROPORTIONS FOR SIX SERVINGS

2 1-2 c. liquid, 1 c. sugar, 1 to 2 T. lemon juice when desired. See general directions for the method of preparation.

Cranberry Ice. Use $1\frac{1}{2}$ c. cranberry juice and 1 c. water with 1 c. sugar.

Lemon Ice. $1\frac{3}{4}$ c. water, $\frac{3}{4}$ c. lemon juice (3 lemons), $1\frac{1}{8}$ c. sugar.

Mint Ice. $2\frac{3}{4}$ c. water, 1 c. sugar, $\frac{1}{4}$ c. lemon juice, 8 sprigs mint, chopped fine. Combine and let stand 1 hour before freezing. Strain and freeze.

Orange Ice. 1 c. water, $1\frac{1}{2}$ c. orange juice (4 or 5 oranges), 1 T. lemon juice, 1 c. sugar.

Pineapple Ice. $1\frac{3}{4}$ c. water, $1\frac{1}{4}$ c. shredded pineapple, 1 T. lemon juice, 1 c. sugar.

Raspberry or Strawberry Ice. 1 c. water, $1\frac{1}{2}$ c. crushed strawberries or raspberries (about 1 qt.), 2 T. lemon juice, 1 c. sugar.

SHERBETS

Add 2 stiffly beaten egg whites to any water ice when half frozen or frozen to a mush, and finish the freezing.

MILK SHERBET

Substitute milk for water in lemon ice or orange ice. Dissolve sugar in milk; add lemon juice just before freezing.

MOUSSE**General Proportions**

2 c. heavy cream, whipped, $\frac{1}{2}$ T. gelatin, 2 T. cold water, $\frac{1}{2}$ c. sugar.

Method

Soak gelatin in cold water for 5 minutes; stir sugar into gelatin. Dissolve gelatin over hot water; cool; fold into whipped cream. Pour into a mold and freeze (without stirring). See proportion for ice and salt, page 457. When frozen, add ice for packing and not salt, in order to decrease proportion of salt.

CHOCOLATE MOUSSE

Melt 1 sq. chocolate, add $\frac{1}{2}$ c. powdered sugar; stir in 2 or 3 T. hot milk and add to whipped cream, sugar, and gelatin mixture for mousse.

STRAWBERRY OR RASPBERRY MOUSSE

Stir into mousse 1 c. or $1\frac{1}{2}$ c. crushed strawberries and 2 t. lemon juice.

TO SERVE MOUSSE

Dip mold in lukewarm water. Dry mold and turn mousse out on plate on which it is to be served. Slice for individual servings before sending to the table, or slice at the table.

FRAPPÉS

Freeze to a mush any desired beverage, such as grape juice, lemonade, orangeade, cocoa. Serve in small frappé glasses with finely crushed ice.

Mint ice adds a refreshing flavor when served in ginger ale or in lemonade.

CANDIES

(See Unit Five, Chapter XXIX)

SOFT BALL CANDIES

FUDGE

2 lb. (4 c.) sugar	2 to 3 sq. chocolate
2 c. water	$\frac{1}{8}$ lb. to $\frac{1}{4}$ lb. butter
2 T. glucose (corn sirup)	1 t. vanilla
or $\frac{1}{8}$ t. cream of tartar	1 $\frac{1}{2}$ c. broken nut meats if desired

Place sugar, salt, water, glucose (or cream of tartar), and chocolate in deep pan; heat and stir until it boils. Boil to soft-ball stage (234° to 236° F.), washing crystals from sides of pan occasionally with a wet cheesecloth swab. Remove from heat, add butter and vanilla, and cool. Beat until creamy, add nuts. Pour into a buttered pan and mark in squares, or knead for a few minutes and form into small fudge balls, or balls with twisted tops (kisses).

DOUBLE FUDGE

Cook the following two mixtures separately, one ten minutes ahead of the other, as fudge is cooked. After beating the first mixture until creamy pour into a greased pan, spreading it one third to one half inch thick. When the second mixture is creamy, pour it on top of the first.

Chocolate Mixture

1 lb. (2 c.) sugar
1 sq. (1 oz.) chocolate
$\frac{2}{3}$ c. water
4 T. butter or $\frac{1}{2}$ c. cream
$\frac{1}{2}$ t. vanilla

Pinoche Mixture

1 lb. (2 $\frac{1}{4}$ c.) brown sugar
$\frac{1}{2}$ c. water
3 T. butter or $\frac{1}{3}$ c. cream
1 c. broken walnut meats
$\frac{1}{2}$ t. vanilla

DIVINITY FUDGE

2 lb. granulated sugar	Pinch of salt
1 $\frac{1}{4}$ lb. (1 c.) Karo sirup	4 egg whites
1 T. vinegar	$\frac{1}{2}$ lb. walnut meats
1 c. water	1 T. vanilla

Cook sugar, sirup, water, vinegar, and salt to 262° F. Beat slowly into well-beaten egg whites. Add walnuts and vanilla.

When it begins to thicken, drop by the spoonful on heavy waxed paper. Pack fudge in air-tight tin boxes or cans.

PINOCHÉ

Use the ingredients and amounts in pinoche mixture of double fudge and use the fudge method of cooking.

RAISIN FUDGE

Add $1\frac{1}{2}$ c. chopped seeded raisins to pinoche, omitting nuts.

FONDANT

2 lb. (4 c.) granulated sugar	Cold water to dissolve sugar
$\frac{1}{4}$ t. cream of tartar	(about $1\frac{1}{2}$ c.)

Mix ingredients, heat and stir until sugar is dissolved. Allow to boil gently after sugar is dissolved, cooking to soft-ball stage (236° to 238° F.) and washing down sides of pan occasionally with wet cloth swab. Pour on a platter without scraping the pan, and cool until hand can be held on bottom of platter. Beat the mixture until it "sugars," and knead for a few minutes, or until creamy. It becomes more creamy still if allowed to stand 20 to 24 hours in a covered jar before it is used.

Fudge can be beaten at a higher temperature than fondant because it contains butter and other materials which prevent too rapid crystallization.

USES OF FONDANT

Peppermint Creams: Melt about 1 c. fondant in the top of a double boiler; flavor with 2 drops oil of peppermint, and stir until creamy. Drop from the tip of teaspoon or from pastry bag in small patties on heavy oil paper.

WINTERGREEN AND CLOVE CREAMS

(See peppermint creams.) For wintergreen creams, color fondant pink with red vegetable coloring and flavor with wintergreen as it melts. For clove creams, color red and flavor with a small drop of oil of cloves.

TUTTI FRUTTI

Knead 1 c. to $1\frac{1}{2}$ c. fondant and flavor with $\frac{1}{2}$ t. almond

extract; knead into it a mixture of chopped candied cherries, citron, candied pineapple, currants, and sliced blanched almonds. Shape into a flat cake and allow to stiffen. Cut into oblong or square pieces.

CREAM LOAF

Knead vegetable coloring or melted chocolate into a piece of fondant, and into another piece (uncolored) $\frac{3}{4}$ c. chopped nuts or candied fruit for 1 c. fondant. Flavor each piece with $\frac{1}{2}$ t. flavoring. Shape into flat cakes, place one cake on top of other, and allow to stiffen before cutting into narrow pieces about $1\frac{1}{2}$ inches long.

ORANGE PEEL CREAMS

Knead 1 c. ground candied orange peel into 1 c. fondant and add 1 T. orange juice or $\frac{1}{2}$ t. orange flavoring. Shape into a long stick about 1 inch thick and cut it into pieces one half inch thick.

FONDANT ROLL

Knead two pieces of fondant, flavoring and coloring as desired (one green flavored with peppermint, and the other vanilla, or one chocolate and the other vanilla). Roll into very thin pieces between heavy oil paper. The pieces should not be more than $2\frac{1}{2}$ to 3 inches wide, but may be as long as desired. Remove oil paper, place one piece on top of the other, and roll into a long stick. Cut the stick across into $\frac{1}{2}$ inch pieces.

STUFFED DATES OR PRUNES

Wash and dry the fruit. The prunes should be steamed for 20 minutes before used. Stone fruit and place a whole nut in each cavity. Stuff each piece with a small lump of fondant kneaded and flavored with vanilla. Roll stuffed fruits in granulated sugar.

CENTERS DIPPED IN FONDANT

Melt fondant in top of double boiler. Flavor and color as desired (delicate colors are usually preferred). Dip centers (nuts, raisins, Parisian sweets etc.) into fondant on a fork, a candy dipping fork, or a toothpick. Place on heavy oil paper to harden. Decorate if desired, with the tiniest possible pieces of candied fruit or nuts.

FONDANT CANDIES DIPPED IN CHOCOLATE

Melt dipping chocolate very slowly over hot, but not boiling, water (120° F.). Beat chocolate until creamy; keep warm; drop fondant centers in and dip them out with a fork; place on heavy oil paper. Let harden in a cool, very dry place. When they are hard pack them in boxes.

HARD BALL CANDIES**CHOICE CARAMELS**

1 lb. (2 c.) sugar	¼ lb. (½ c.) butter
1 lb. (¾ c.) glucose	1 pt. cream

Put sugar, glucose, butter and half of cream over the fire and stir until the mass boils thoroughly. Then stir in so gradually as not to stop the boiling, a second cup of cream. Put the sugar thermometer in, and let the mixture go on boiling, stirring it every 3 or 4 minutes, until the thermometer registers 250° F. Then stir in 1 t. vanilla, and turn the candy into well buttered pans, to the depth of ¾ of an inch. When the candy is nearly cold, cut it in cubes and roll the cubes in waxed paper. Without a thermometer boil the mass to a fairly firm hard ball. In summer or rainy weather the caramels will hold their shape better if boiled from 2 to 4 degrees higher.

CRACK DEGREE CANDIES**PEANUT CANDY**

1 c. shelled and chopped peanuts	2 c. sugar
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Put sugar into a smooth frying pan and stir with bowl of the spoon until it melts, keeping the spoon flat. Remove immediately from the fire and stir in the nuts. When it begins to stiffen, pour on an oiled surface and cut into squares.

BUTTERSCOTCH

2 c. sugar	2 T. vinegar
½ c. brown sugar	¼ c. boiling water
1 c. butter	⅛ t. salt

Boil ingredients together to hard-crack stage (290° F.). Turn into greased pans. Mark candy into squares when partly cold.

CANDIED ORANGE PEEL OR GRAPEFRUIT PEEL

Cut orange peel or grapefruit peel into narrow strips about 4 inches long. Cook in boiling water until tender or until white is partly clear. Drain and weigh cooked peel; using twice its weight in sugar and equal its weight in water, boil sirup 10 minutes or to thread stage. Add peel, and simmer 20 to 25 minutes, stirring occasionally with a fork. Drain the pieces in a strainer; roll in granulated sugar, and put to dry separately. Sprinkle with a little extra sugar. The pieces may be shaped before they harden.

SALTED NUTS

Blanch almonds by pouring boiling water over them, and let stand until skins loosen. Pour cold water over them. Skin, dry them between towels. Brown in hot oil or fat and drain on brown paper. Sprinkle with salt. Heat 1 c. pecans with 1 T. butter in the oven in a pan. Stir to keep from burning. Salt, and drain on brown paper.

BUTTER CREAMS OR JETS

$\frac{1}{2}$ lb. butter	1 t. salt
2 lb. powdered sugar, sifted	1 t. vanilla
$\frac{3}{4}$ lb. chocolate	

Melt butter and mix well with powdered sugar, salt, and vanilla. Form into balls and dip into melted unsweetened chocolate (mixed with a small piece of paraffin, melted, if desired). Place on waxed paper to cool. Chopped nuts may be added to creamed mixture. Dipping chocolate (Dot Chocolate) may be used instead of plain chocolate and paraffin.

CANNING AND PRESERVING

(See Unit Five, Chapter XXXIII and Chapter XXXIV)

CANNING

Equipment and methods of canning are discussed in Chapter XXXIII, and the steps in canning are also given in this chapter.

TABLE 1. TIME-TABLE FOR CANNING FRUITS, TOMATOES, PICKLED BEETS, AND PIMENTOS¹

The times given for processing in boiling water apply only to places with an altitude of 1000 feet or less. For all altitudes above 1000 feet the time should be increased 20 per cent for each additional 1000 feet.

When half-gallon glass jars are used, add 5 minutes to the times given for pint and quart glass jars.

PRODUCT	METHOD OF TREATMENT BEFORE PROCESSING	PROCESSING PERIOD IN BOILING WATER	
		Pint and quart glass jars	No. 2 and No. 3 tin cans
Apples	Slice, quarter, or halve, then pack in containers and cover with boiling sirup.	15 minutes	10 minutes
	Or boil whole in sirup, or bake as for serving, and cover with sirup, and pack hot.	5 minutes	5 minutes
	Or pack hot in form of apple sauce.	5 minutes	5 minutes
Apricots	Same as peaches.		
Blackberries Blueberries Dewberries Huckleberries Loganberries Raspberries Cherries	Pack in containers. Fill with boiling hot, medium sirup. Or precook and pack hot.	20 minutes	15 minutes
		5 minutes	5 minutes
	Pack in containers, cover with boiling sirup, using thick sirup for sour cherries, and medium for sweet.	25 minutes	20 minutes
Currants Figs	Or remove pits, add sugar as desired, bring to a boil, and pack.	5 minutes	5 minutes
	Same as for berries.		
	Sprinkle 1 c. of soda over 6 quarts of figs. Add 1 gallon of boiling water. Allow figs to stand in this 5 minutes. Drain and rinse well. Add 2 quarts boiling medium sirup. Boil for 1 hour. Fill in containers. Cover with hot sirup.	5 minutes	5 minutes

¹ *Canning Fruits and Vegetables at Home.* United States Department of Agriculture Farmers' Bulletin 1451 (1926).

TABLE I. TIME-TABLE FOR CANNING FRUITS, TOMATOES, PICKLED BEETS AND PIMENTOS (continued)

PRODUCT	METHOD OF TREATMENT BEFORE PROCESSING	PROCESSING PERIOD IN BOILING WATER	
		Pint and quart glass jars	No. 2 and No. 3 tin cans
Gooseberries	Pack in containers. Fill with boiling hot, thick sirup. Or prepare sauce, using sugar as desired. Fill hot.	20 minutes	15 minutes
		5 minutes	5 minutes
Peaches	Scald, dip into cold water, and peel. Cut into size desired, removing pits. Fill containers, then add sirup, of desired consistency, in which one cracked peach pit for every quart of sirup has been boiled.	20 minutes	15 minutes
		for ripe fruit, 25 minutes for firm fruit	
Pears	Pare and cook for 4 to 8 minutes in boiling medium sirup. Pack hot in containers and fill with the boiling sirup.	20 minutes	20 minutes
Pineapples	Peel, core, remove eyes. Cut into convenient cross sections. Pack in containers. Fill with boiling thin sirup.	30 minutes	25 minutes
Plums	Prick. Fill in containers. Cover with boiling medium sirup. Or bring to boil, using sugar as desired. Fill hot in containers.	20 minutes	15 minutes
		5 minutes	5 minutes
Rhubarb	Cut in half-inch lengths. Add one fourth as much sugar as rhubarb by measure. Bake until tender in covered baking dish. Pack in hot containers. Or pack uncooked with boiling sirup.	5 minutes	5 minutes
		20 minutes	15 minutes
Strawberries	To each quart add 1 c. sugar and 2 T. of water. Boil slowly for 15 minutes. Let stand overnight in the kettle. Reheat to boiling. Fill containers hot.	5 minutes	5 minutes
Tomatoes	Scald and peel. Pack whole or cut in pieces. Cover with hot tomato juice. Add 1 t. salt to each quart.	45 minutes	35 minutes
Pickled beets	Precook, peel, and slice in containers. Cover with mixture of vinegar and sugar, boiling hot.	30 minutes	30 minutes
Pimentos	Heat in hot fat or oven to loosen peel. Peel and pack in small containers. Add one half t. salt to each pint.	40 minutes pint glass jars.	30 minutes No. 1 or No. 0 tins.

TABLE 2. TIME-TABLE FOR CANNING NON-ACID VEGETABLES WITH THE PRESSURE CANNER¹

Pack vegetables as nearly boiling hot as possible, using additional boiling water if necessary. Add 1 t. salt per quart to all vegetables, and 2 t. sugar, if desired, to corn. Place jars or cans in hot canner as soon as they are filled.

PRODUCT	METHOD OF TREATMENT BEFORE PROCESSING	PROCESSING PERIOD IN PRESSURE CANNER		
		Quart glass jars	Pint glass jars	No. 2 and No 3 tin cans
Asparagus	Tie in uniform bundles, place in saucepan with boiling water over lower tough portion, cover tightly, boil 4 to 5 minutes, and pack hot into containers. Or cut in half-inch lengths, bring to boil in water to cover, and pack hot into containers.	40 min. at 10 lb. pressure, or 240° F.	35 min. at 10 lb. pressure, or 240° F.	30 min. at 10 lb. pressure, or 240° F.
Beans, string	Heat to boiling with water to cover. Pack hot into containers.	40 min. at 10 lb. pressure, or 240° F.	35 min. at 10 lb. pressure, or 240° F.	30 min. at 10 lb. pressure, or 240° F.
Beans, Lima	Can only young and tender beans, using method suggested for peas.	60 min. at 10 lb. pressure, or 240° F.	55 min. at 10 lb. pressure, or 240° F.	50 min. at 10 lb. pressure, of 240° F.
Baby beets	Can only young tender beets. Scald in boiling water or steam until the skins slip easily. Skin and pack hot into containers	40 min. at 10 lb. pressure, or 240° F.	35 min. at 10 lb. pressure, or 240° F.	30 min. at 10 lb. pressure, or 240° F.
Corn	Cut off without precooking. Add half as much boiling water as corn by weight, heat to boiling, and pack hot into containers.	80 min. at 15 lb. pressure, or 250° F.	75 min. at 15 lb. pressure, or 250° F.	70 min. at 15 lb. pressure, or 250° F.*
Greens, including spinach	Steam or heat in covered vessel until completely wilted, using just enough water to prevent burning. Pack hot into containers, taking care that the material is not packed too solidly and that there is liquid to cover.	90 min. at 10 lb. pressure, or 240° F.	85 min. at 10 lb. pressure, or 240° F.	80 min. at 10 lb. pressure, or 240° F.*

¹ From *Canning Fruits and Vegetables at Home*. United States Department of Agriculture Farmers' Bulletin 1451 (1926).

* Should not be canned in No. 3 cans because of difficulty of heat penetration.

TABLE 2. TIME-TABLE FOR CANNING NON-ACID VEGETABLES WITH THE PRESSURE CANNER (continued)

PRODUCT	METHOD OF TREATMENT BEFORE PROCESSING	PROCESSING PERIOD IN PRESSURE CANNER		
		Quart glass jars	Pint glass jars	No. 2 and No. 3 tin cans
Okra	Can only young, tender pods. Cover with water and bring to boil. Pack hot into containers.	40 min. at 10 lb. pressure, or 240° F.	35 min. at 10 lb. pressure, or 240° F.	30 min. at 10 lb. pressure, or 240° F.
Peas, green	Use only tender young peas. Bring to boil with water to cover and pack hot into containers.	50 min. at 10 lb. pressure, or 240° F.	40 min. at 10 lb. pressure, or 240° F.	30 min. at 10 lb. pressure, or 240° F.
Peas, black-eyed.	Same as Lima beans			
Sweet potatoes	Boil or steam until skins slip off readily. Peel quickly and pack hot into containers.	60 to 70 min. at 10 lb. pressure, or 240° F.	50 min. at 10 lb. pressure, or 240° F.	No. 2 cans 50 min., and No. 3 cans 60 to 70 min., at 10 lb. pressure, or 240° F.

OVEN CANNING

Food is prepared and placed in jars or tin cans for oven canning as for other methods of processing.

All foods in Table 1, page 468, should be processed in the oven for one hour at 250° F.

Foods in Table 2 should be processed from two to four hours at 250° F. Beets and sweet potatoes require two hours; string beans, asparagus, and greens require three hours; the rest should be processed for four hours.

JELLY-MAKING

For discussion of jelly-making, see Chapter XXXIV, page 346.

TO PREPARE GLASSES FOR JELLY

Wash glasses; put in a kettle of cold water and heat water gradually to the boiling point. Remove and drain the glasses; place on a wet cloth to be filled.

APPLE JELLY

Wash fruit and remove blossom and stem ends. Cut into quarters; nearly cover with water. Cook slowly until soft. Mash and strain through a wire strainer, then through a jelly bag. Return pulp to kettle, add a small quantity of water and cook 15 minutes. Strain juice as in making first extract. The pulp may be used for a third extraction, or may be used for making fruit butter (page 474).

Test juice for pectin (page 346). If a good test is obtained, measure $\frac{3}{4}$ c. sugar for each c. of juice. Boil 3 or 4 c. juice 3 to 5 minutes, add sugar, and boil until the mixture "sheets" from the side of the spoon (see page 347), or until the temperature reaches 222° to 224° F. Fill prepared jelly glasses to within one sixteenth inch of the top; cool. When perfectly cool, cover them with melted paraffin, tin covers, label and store in a cool, dark place.

PLUM, GRAPE, OR CURRANT JELLY

Wash fruit. Place in a pan set in hot water and heat until fruit is softened and juice comes out freely. Strain, as for apple jelly, and obtain a second extraction of juice, as for apple jelly.

Test for pectin (see page 346). If the test seems unusually good, add $\frac{1}{4}$ c. water for each 2 c. of juice. Boil the juice 3 minutes, add sugar ($\frac{3}{4}$ c. sugar to 1 c. juice), and cook until the jelly test is satisfactory. (See page 347.) Fill glasses, cover, cool, label, and store as for apple jelly.

For **Cranberry Jelly**, make as for cranberry sauce (see page 360). Strain before adding sugar. Use equal quantities of sugar and juice.

APPLE PECTIN EXTRACT

4 lb. apples

4 $\frac{1}{2}$ pt. water for first extraction

Select tart, sound apples, just underripe. Scrub clean and remove stems and all spots, but do not peel or core. Slice apples thin; cover slices with water and let boil rapidly in covered enamel saucepan for 20 minutes. Strain through four thicknesses of cheesecloth without squeezing.

Remove pulp and add an equal quantity of water for a second extraction. Boil 20 minutes and strain. Add to the first extraction. The total quantity should be about 3 quarts.

Boil this extract until it is reduced to one fourth of its original volume or about 1½ pints. If pectin extract of unusual strength is desired, reduce to 1 pint.

CITRUS PECTIN EXTRACT

For recipe for pectin extract from citrus fruit and for recipes for the use of both apple and citrus pectin see *Home-Made Apple and Citrus Pectin Extracts and Their Use in Jelly Making*, United States Department of Agriculture Circular 254 (1923).

RECIPES FOR JELLY WITH PECTIN EXTRACT

CHERRY JELLY WITH ADDED PECTIN AND ACID

1 c. cherry juice	4 T. apple or lemon pectin extract,
1 to 1¼ c. sugar	or 6 T. orange pectin extract

To prepare juice, thoroughly wash cherries and put in saucepan, adding one fourth cup of water for each pound of fruit. Heat to boiling, and boil 10 minutes. Strain through colander and then through jelly bag. Mix the juice with the remaining ingredients in the proportions indicated and cook until the jelly test is tried with success.

The best jelly is made from rather sour cherries of high flavor. It is clear and has a red color, and because of its tartness is especially suitable for serving with meat. Fill glasses, according to the directions for apple jelly.

Raspberry, grape, or loganberry juice may be used in this way for jelly.

MINT ORANGE JELLY

1½ c. water	2 c. (1 lb.) sugar
1½ c. orange pectin juice	2 drops oil of peppermint
Green coloring	

Heat pectin juice and water to boiling, add sugar and boil until jelly test succeeds. Add green coloring and oil of peppermint. Fill glasses and proceed as with apple jelly.

PRESERVES

GRAPEFRUIT AND ORANGE MARMALADE

1 grapefruit	1 lemon
1 orange	Sugar

Cut each fruit into quarters and slice the quarters very thin through pulp and rind, discarding all the seeds. Weigh the prepared fruit, and to each pound add three pints of cold water. Set aside for 24 hours.

The second day let the fruit boil gently for about 2 hours or until the rind is perfectly tender, then set it aside until the next day.

Weigh the material, and to each pound add one pound of sugar. Cook, with occasional stirring to avoid burning, to a temperature of 222° to 224° F. Store in glasses according to directions for apple jelly. Cool slightly before filling glasses to prevent the fruit rising to top.

PRESERVED PEACHES, APRICOTS, PEARS, OR CRABAPPLES

Prepare fruit for preserving. Small pears and apricots may be peeled but left whole. Crabapples may be peeled or not, as desired. Peaches and large pears should be peeled, cut in halves, and the stones or cores removed.

For each pound of prepared fruit use 1½ c. sugar and ¾ c. water.

SWEET PICKLED PEACHES, PEARS, OR CRABAPPLES

8 lb. fruit	1 qt. white vinegar
3½ lb. light brown sugar	1 oz. cloves
	1 oz. cinnamon

Make a sirup and put in it spices tied in cheesecloth.

Method 1. Cook fruit in sirup until tender and clear. Remove it from sirup; boil down sirup and pour over fruit in jars.

Method 2. Heat fruit in sirup to boiling point. Let stand overnight. Then heat until fruit is tender and clear. Remove fruit; boil down sirup and pour over fruit in glass jars. This method gives a plump and well-flavored fruit.

Small recipe, 1 lb. fruit, ½ lb. light brown sugar, ½ c. white vinegar, 8 cloves, 1 two-inch stick cinnamon.

FIG PRESERVES

6 qt. sound, firm figs	2 qt. cold water
1 c. soda	2 lb. sugar
1 gal. boiling water	

Make a sirup of cold water and sugar, using a little brown sugar if desired, and bring sirup to a boil. Sprinkle soda over figs, add boiling water, and let stand 5 minutes. Drain and rinse figs well. Peel if desired. Add to sirup and boil one hour. Remove fruit, pack in hot containers, fill with boiling sirup and process immediately for 5 minutes in boiling water, or for 10 minutes in the oven at 250° F.

JAM

General Proportions: 1 lb. prepared fruit to $\frac{7}{8}$ lb. sugar ($1\frac{3}{4}$ c.). Make any desired combination of fruit. Put fruit in kettle and heat slowly, to avoid burning, for about 15 minutes. Add sugar and cook about $1\frac{1}{2}$ hours, or until thick. Pour in jars or jelly glasses according to directions for apple jelly.

Apple: Use $\frac{3}{4}$ apple and $\frac{1}{4}$ some other desired fruit, such as peaches, apricots, raisins.

Peach or Apricot: Combine in equal quantities with shredded pineapple, or use peach or apricot alone, adding 1 sliced lemon to each pound.

Raspberry and Strawberry: Add $\frac{1}{2}$ sliced lemon or orange to each pound of fruit.

FRUIT BUTTER

2 lb. fruit pulp	2 T. lemon juice
3 T. vinegar or fruit jelly	3 T. grated lemon rind
$1\frac{1}{2}$ lb. (3 c.) sugar	$\frac{1}{4}$ t. cloves, if desired
1 t. cinnamon, if desired	Few grains ginger, if desired

Use fruit pulp left from jelly-making or fresh fruit sauce. Cook with the other ingredients until smooth and thick. Fill jelly glasses according to directions for apple jelly.

CONSERVE

GRAPE CONSERVE

10 lb. grapes	8 c. (4 lb.) sugar
1 lb. seeded raisins	2 c. ($\frac{1}{2}$ lb.) walnut meats

Heat grapes until skins and seeds can be removed. Remove seeds and skins and cook skins until tender. Combine pulp and skins, add raisins and sugar and cook 20 minutes, or until thick. Add broken nut meats, 2 or 3 minutes before removing the conserve from the fire. Store in jelly glasses according to directions for apple jelly, leaving extra space at the tops of the glasses for paraffin.

Small recipe, 1 1/8 lb. grapes, 1/8 lb. raisins, 1/2 lb. sugar, 1/4 c. nuts.

PRUNE OR APRICOT CONSERVE

1 lb. dried prunes or apricots	1 c. seeded raisins
1 1/2 qt. (6 c.) water	1/2 c. cranberries
2 cans pineapple, cut fine	Juice and rind of 2 lemons
2 c. walnut meats, if desired	

Wash dried fruit and soak overnight; cook in the same water until soft. Remove stones from prunes. Mash to a pulp and add other fruit. Weigh fruit and add half its weight in sugar. Add 1 c. water and cook until thick and jelly-like (about 10 to 20 minutes). Store in jelly glasses according to directions for apple jelly, leaving one fourth inch at the top of each glass for paraffin.

Small recipe, one fourth of above amounts.

CHILI SAUCE

4 lb. ripe tomatoes	2 c. mild vinegar
1 pepper, finely chopped	4 T. sugar (1 brown if desired)
1 onion, finely chopped	1 T. salt
1 T. cinnamon	2 t. cloves
	2 t. allspice

Cook together for 40 minutes. Store in glass jars.

Small recipe, one fourth of given amounts.

APPENDIX

TABLE I:

BALDWIN-WOOD WEIGHT-HEIGHT-AGE TABLE FOR BOYS

Height (inches)	5 Yr. (lb.)	6 Yr. (lb.)	7 Yr. (lb.)	8 Yr. (lb.)	9 Yr. (lb.)	10 Yr. (lb.)	11 Yr. (lb.)	12 Yr. (lb.)	13 Yr. (lb.)	14 Yr. (lb.)	15 Yr. (lb.)	16 Yr. (lb.)	17 Yr. (lb.)	18 Yr. (lb.)	19 Yr. (lb.)
38	34	34													
39	35	35													
40	36	36													
41	38	38	38												
42	39	39	39	39											
43	41	41	41	41											
44	44	44	44	44											
45	46	46	46	46	46										
46	47	48	48	48	48										
47	49	50	50	50	50	50									
48		52	53	53	53	53									
49		55	55	55	55	55	55								
50		57	58	58	58	58	58	58							
51			61	61	61	61	61	61							
52			63	64	64	64	64	64	64						
53			66	67	67	67	67	68	68						
54				70	70	70	70	71	71	72					
55				72	72	73	73	74	74	74					
56				75	76	77	77	78	78	80					
57					79	80	81	81	82	83					
58					83	84	84	85	85	86					
59						87	88	89	89	90			90		
60						91									
61							92	92	93	94	95	96			
62							95	96	97	99	100	103	106		
63							100	101	102	103	104	107	111	116	
64							105	106	107	108	110	113	118	123	127
65								109	111	113	115	117	121	126	130
66									114	117	118	120	122	127	131
67										119	122	125	128	132	136
68										124	128	130	134	136	139
69											134	134	137	141	143
70											137	139	143	146	149
71											143	144	145	148	151
72											148	150	151	152	154
73												153	155	156	158
74												157	160	162	164
												160	164	168	170

* Prepared by Bird T. Baldwin, Ph.D., and Thomas D. Wood, M.D. Reproduced by permission of the Child Health Association, New York. See also Table II.

TABLE II

BALDWIN-WOOD WEIGHT-HEIGHT-AGE TABLE FOR GIRLS

Height (inches)	5 Yr. (lb.)	6 Yr. (lb.)	7 Yr. (lb.)	8 Yr. (lb.)	9 Yr. (lb.)	10 Yr. (lb.)	11 Yr. (lb.)	12 Yr. (lb.)	13 Yr. (lb.)	14 Yr. (lb.)	15 Yr. (lb.)	16 Yr. (lb.)	17 Yr. (lb.)	18 Yr. (lb.)
38	33	33												
39	34	34												
40	36	36	36											
41	37	37	37											
42	39	39	39											
43	41	41	41	41										
44	42	42	42	42										
45	45	45	45	45	45									
46	47	47	47	48	48									
47	49	50	50	50	50	50								
48		52	52	52	52	53	53							
49		54	54	55	55	50	50							
50		56	56	57	58	50	61	62						
51			59	60	61	61	63	65						
52			63	64	64	64	65	67						
53			66	67	67	68	68	69	71					
54				69	70	70	71	71	73					
55				72	74	74	74	75	77	78				
56					76	78	78	79	81	83				
57					80	82	82	82	84	88	92			
58						84	86	86	88	93	96	101		
59						87	90	90	92	96	100	103	104	
60						91	95	95	97	101	105	108	109	111
61							99	100	101	105	108	112	113	116
62							104	105	106	109	113	115	117	118
63								110	110	112	116	117	119	120
64								114	115	117	119	120	122	123
65								118	120	121	122	123	125	126
66									124	124	125	128	129	130
67									128	130	131	133	133	135
68									131	133	135	136	138	138
69										135	137	138	140	142
70											136	138	140	142
71											138	140	142	144

When taking measurements, remove the child's outdoor clothing, shoes, and coat. Take heights with a square, consisting of two flat pieces of wood joined at right angles (a chalk box will serve). The child is placed in a good erect position, with heels and shoulders against the wall or wide board, upon which has been marked or pasted an accurate measure. Age is taken to the nearest birthday.

TABLE III
AVERAGE HEIGHTS AND WEIGHTS — MEN †

AGE	5 ft. 0 in.	5 ft. 1 in.	5 ft. 2 in.	5 ft. 3 in.	5 ft. 4 in.	5 ft. 5 in.	5 ft. 6 in.	5 ft. 7 in.	5 ft. 8 in.	5 ft. 9 in.	5 ft. 10 in.	5 ft. 11 in.	6 ft. 0 in.	6 ft. 1 in.	6 ft. 2 in.	6 ft. 3 in.	6 ft. 4 in.	6 ft. 5 in.
15	107	109	112	115	118	122	126	130	134	138	142	147	152	157	162	167	172	177
20	117	119	122	125	128	132	136	140	144	148	152	156	161	166	171	176	181	188
25	122	124	126	129	133	137	141	145	149	153	157	162	167	173	179	184	189	194
30	126	128	130	133	136	140	144	148	152	156	161	166	172	178	184	190	196	201
35	128	130	132	135	138	142	146	150	155	160	165	170	176	182	189	195	201	207
40	131	133	135	138	141	145	149	153	158	163	168	174	180	186	193	200	206	212
45	133	135	137	140	143	147	151	155	160	165	170	176	182	188	195	202	209	215
50	134	136	138	141	144	148	152	156	161	166	171	177	183	190	197	204	211	217
55	135	137	139	142	145	149	153	158	163	168	173	178	184	191	198	205	212	219

TABLE IV
AVERAGE HEIGHTS AND WEIGHTS — WOMEN †

AGE	4 ft. 8 in.	4 ft. 9 in.	4 ft. 10 in.	4 ft. 11 in.	5 ft. 0 in.	5 ft. 1 in.	5 ft. 2 in.	5 ft. 3 in.	5 ft. 4 in.	5 ft. 5 in.	5 ft. 6 in.	5 ft. 7 in.	5 ft. 8 in.	5 ft. 9 in.	5 ft. 10 in.	5 ft. 11 in.	6 ft. 0 in.
15	101	103	105	106	107	109	112	115	118	122	126	130	134	138	142	147	152
20	106	108	110	112	114	116	119	122	125	128	132	136	140	143	147	151	156
25	109	111	113	115	117	119	121	124	128	131	135	139	143	147	151	154	158
30	112	114	116	118	120	122	124	127	131	134	138	142	146	150	154	157	161
35	115	117	119	121	123	125	127	130	134	138	142	146	150	154	157	160	163
40	119	121	123	125	127	129	132	135	138	142	146	150	154	158	161	164	167
45	122	124	126	128	130	132	135	138	141	145	149	153	157	161	164	168	171
50	125	127	129	131	133	135	138	141	144	148	152	156	161	165	169	173	176
55	125	127	129	131	133	135	138	141	144	148	153	158	163	167	171	174	177

† Courtesy of the Life Extension Institute and Funk & Wagnalls. From *How to Live*, by Fisher & Fish. Copyright by Funk & Wagnalls Company, New York and London.

Height and weight taken with shoes on and coat and vest or dress off.

TABLE V
HUNDRED-CALORIE PORTIONS ¹

	HUNDRED-CALORIE PORTION	DISTRIBUTION OF CALORIES			
	Measure	Weight Oz.	Protein	Fat	Carbo- hydrate
Beverages:					
Buttermilk (see Dairy Products).....					
Chocolate I (liquid $\frac{1}{2}$ milk)	$\frac{1}{2}$ cup (scant)	4.1	10	48	42
Chocolate II (all milk).....	$\frac{1}{3}$ cup	3.1	13	49	38
Cocoa I (liquid $\frac{1}{2}$ milk)....	$\frac{3}{8}$ cup	5.5	14	39	47
Cocoa II (all milk).....	$\frac{3}{8}$ cup	3.8	16	44	40
Eggnog.....	$\frac{1}{2}$ cup (scant)	3.7	21	48	31
Fruit punch.....	$\frac{1}{2}$ cup (scant)	1.8	1	1	98
Lemonade.....	$1\frac{1}{2}$ cups	11.0	-	-	100
Bread, Biscuit, Crackers, and Muffins					
Baking powder biscuits....	2 small biscuits	1.3	11	27	62
Bread, Boston brown.....	$\frac{3}{4}$ in. slice 3 in. diam.	1.8	10	10	80
Graham.....	3 slices $\frac{3}{8}$ in. $\times 2$ in. $\times 3\frac{1}{4}$ in.	1.4	14	6	80
Old New England corn....	piece $2\frac{1}{2}$ in. \times 1 in. \times 1 in.	1.0	8	30	62
White.....	2 slices 3 in. \times $3\frac{1}{2}$ in. \times $\frac{1}{2}$ in.	1.3	14	6	80
Whole Wheat.....	2 slices $2\frac{1}{2}$ in. $\times 2\frac{1}{4}$ in. \times $\frac{1}{4}$ in.	1.4	16	3	81
Crackers, graham.....	2 crackers	0.8	9	20	71
Oyster.....	24 crackers	0.8	10	22	68
Saltines.....	6 crackers	0.8	10	26	64
Soda.....	4 crackers	0.9	10	20	70
Croutons (toasted).....	27 croutons $\frac{1}{2}$ in. cubes	1.4	14	4	82
Griddle cakes.....	1 cake $4\frac{1}{2}$ in. diam.	1.8	14	25	61
Muffins, cornmeal.....	$\frac{3}{4}$ muffin	1.2	13	25	62
Graham.....	$\frac{3}{4}$ muffin	1.4	13	16	71
One egg.....	$\frac{1}{2}$ muffin	1.2	12	24	64
Twin mountain.....	$\frac{2}{3}$ muffin	1.0	9	36	55
Popovers.....	1 popover	2.0	18	27	55
Rolls, French.....	1 roll	1.3	12	8	80
Sandwich, club.....	$\frac{1}{6}$ sandwich	1.5	15	69	16
Toast, French.....	slice 3 in. \times 3 in. \times $\frac{1}{2}$ in.	1.4	10	48	42
Waffles.....	$\frac{2}{5}$ waffle 6 in. diam.	0.9	14	35	51
Zwieback.....	3 pieces $3\frac{1}{4}$ in. \times $\frac{1}{2}$ in. \times $1\frac{1}{4}$ in.	0.8	9	21	70

¹ From *Feeding the Family*, by Mary Swartz Rose. Reprinted by permission of The Macmillan Company, publishers.

TABLE V (continued)
 HUNDRED-CALORIE PORTIONS

	HUNDRED-CALORIE PORTION	DISTRIBUTION OF CALORIES			
	Measure	Weight Oz.	Protein	Fat	Carbo-hydrate
Cake and Cookies:					
Angel cake.....	piece 1 1/4 in. X 2 in. X 2 1/2 in.	1.3	12	1	87
Chocolate loaf cake.....	piece 2 1/2 in. X 2 1/2 in. X 7/8 in.	0.9	5	41	54
Chocolate drop cookies....	1 1/2 cookies 2 1/4 in. diam.	0.8	8	52	40
Cream-puff shells.....	1 1/2 puffs	0.8	10	68	22
Doughnuts.....	1/2 doughnut	0.8	6	45	49
Fruit cake.....	piece 1 7/8 in. X 1 7/8 in. X 3/8 in.	0.9	6	26	68
Gingerbread.....	piece 1 in. X 2 in. X 2 in.	1.2	8	22	70
Lady fingers.....	2-4 fingers	1.0	10	13	77
Macaroons.....	2 macaroons	0.8	6	33	61
Marguerites.....	2 crackers	0.9	10	41	49
Oatmeal cookies.....	3/4 cookie 3 in. diam.	0.7	11	21	68
One egg cake.....	1 3/4 in. cube	1.0	8	32	60
Plain cookies.....	2 cookies 2 1/4 in. diam.	0.9	6	33	61
Sponge cake.....	piece 1 1/2 in. X 1 1/2 in. X 2 in.	0.9	11	19	70
White Mountain icing.....	2 1/2 T.	1.0	1	-	99
Candies, Confections, and Sugars:					
Cherries, candied.....	10 medium cherries	1.0	1	-	99
Chocolate fudge.....	piece 1 1/2 in. X 3/4 in. X 1 in.	0.9	2	20	78
Chocolate nut caramels....	piece 1 in. X 1 in. X 4/5 in.	0.7	4	32	64
Chocolate, milk, sweetened.	piece 2 1/4 in. X 1 in. X 1/8 in.	0.7	7	58	35
Corn sirup.....	1 3/4 T.	1.5	-	-	100
Honey.....	1 T.	1.1	1	-	99
Maple sugar.....	4 t.	1.1	-	-	100
Molasses.....	1 1/2 T.	1.2	3	-	97
Pinoche.....	piece 1 in. X 1 in. X 1 3/5 in.	0.9	2	18	80
Sugar, white, granulated...	2 T. (scant)	0.9	-	-	100
White, loaf.....	3 1/2 lumps (full size)	0.9	-	-	100
White, powdered.....	2 T.	0.9	-	-	100
Brown.....	2 T.	0.9	-	-	100

TABLE V (continued)

HUNDRED-CALORIE PORTIONS

	HUNDRED-CALORIE PORTION	DISTRIBUTION OF CALORIES			
	Measure	Weight Oz.	Protein	Fat	Carbohydrate
Cereals:					
Cornflakes	1 1/4 cups	1.0	6	4	90
Cornmeal, cooked	3/3 cup	6.0	10	5	85
Farina, cooked	3/4 cup	6.0	12	4	84
Grapenuts	3 T.	1.0	12	2	86
Hominy, grits, cooked	3/5 cup	6.8	9	1	90
Macaroni, cooked	1 cup	5.2	15	2	83
Macaroni, tomato sauce	5 T.	3.6	10	36	54
Oatmeal, cooked	1 cup	7.9	17	16	67
Popcorn, popped	1 1/2 cups				
unpopped	1/8 cup	0.6	11	11	78
Puffed corn	1 1/4 cups	1.0	6	4	90
Puffed rice	1 1/3 cups	1.0	9	1	90
Puffed wheat	1 2/3 cups	1.0	15	3	82
Rice, steamed	3/4 cups	4.0	9	1	90
Rice fondue (see Eggs and Cheese Dishes)					
Wheat, shredded	1 biscuit	0.9	13	5	82
Custards, Puddings, and Ices:					
Boiled custard	1/3 cup (scant)	2.2	13	44	43
Brown Betty	1/2 cup	2.1	3	35	62
Chocolate blancmange	1/4 cup (scant)	1.9	8	33	59
Cornstarch blancmange	1/4 cup	2.7	9	24	67
Cottage pudding	slice 1 3/4 in. X 2 in. X 2 1/2 in.	1.1	7	26	67
Cup custard	1/3 cup	3.3	17	39	44
Lemon ice	1/2 cup (scant)	3.1	-	-	100
Lemon jelly	1/2 cup	3.8	9	-	91
Lemon milk sherbet	1/4 cup	1.9	4	12	84
Peach ice cream	1/4 cup	1.8	4	51	45
Prune soufflé	2/5 cup	1.8	10	-	90
Vanilla ice cream I (made with cream)	2 1/2 T.	1.6	4	63	33
Vanilla ice cream II (made with custard)	1/4 cup	2.0	6	55	39
Dairy Products and Fats:					
Bacon fat	1 T.	0.4	-	100	-
Butter	1 T. (scant)	0.5	1	99	-
Buttermilk	1 1/8 cups	9.9	33	13	54
Cheese, American pale	1 1/2 in. cube	0.8	26	71	3
Cottage	5 1/2 T.	3.2	76	9	15
Full cream	piece 2 in. X 1 in. X 3/8 in.	0.9	25	72	3

TABLE V (continued)

HUNDRED-CALORIE PORTIONS

	HUNDRED-CALORIE PORTION	DISTRIBUTION OF CALORIES				
		Measure	Weight Oz.	Protein	Fat	Carbo- hydrate
Dairy Products and Fats:						
Cream, thin (18% fat).....	¼ cup		1.8	5	86	9
thick (40% fat).....	1 ½ T.		0.9	2	95	3
whipped.....	2 T.		0.9	2	95	3
Milk, condensed, sweetened.....	1 ½ T.		1.1	11	23	66
Milk, condensed, un- sweetened.....	3 ¾ T.		2.1	23	51	26
skim.....	1 ½ cups		9.6	37	7	56
whole.....	¾ cup		5.1	19	52	29
Oleomargarine.....	1 T.		0.5	1	99	-
Olive Oil.....	1 T.		0.4	-	100	-
Eggs and Cheese Dishes:						
Eggs, à la goldenrod.....	¼ serving		2.0	18	42	40
raw (in shell).....	1 ⅓ eggs		2.7	36	64	-
scrambled.....	¼ cup		2.1	20	76	4
whites.....	7 whites		6.9	97	3	-
yolks.....	2 yolks		1.0	17	83	-
Cheese soufflé.....	½ cup		1.7	18	70	12
Macaroni and cheese.....	½ cup		2.1	17	39	44
Rice fondue with crackers..	1 ¼ saltines and 2 ½ T. sauce		1.4	22	48	30
Welsh rabbit.....	1 ½ T. rabbit and ½ slice toast		1.3	22	57	21
Fruits:						
Apple, baked, with 2 T. sugar.....	½ large apple		2.3	1	3	96
baked with whipped cream.....	½ serving		2.4	1	31	68
fresh.....	1 large		7.5	3	5	92
Applesauce.....	¾ cup		3.5	1	3	96
Apricots, canned.....	3 large halves and 2 T. juice		4.8	5	-	95
dried.....	9 halves		1.3	7	3	90
dried, stewed.....	¼ cup		2.7	4	2	94
Bananas.....	1 large		5.5	5	6	89
Blackberries, fresh.....	½ cup (50 berries)		6.1	9	16	75
stewed.....	¼ cup		2.2	2	4	94
Cantaloupe.....	1 melon 4 ½ in. diam.		18.0	6	-	94
Cherries, stoned.....	1 cup		4.5	5	9	86
Cranberry jelly.....	2 T.		1.5	-	1	99

TABLE V (continued)
 HUNDRED-CALORIE PORTIONS

	HUNDRED-CALORIE PORTION	DISTRIBUTION OF CALORIES			
		Weight Oz.	Protein	Fat	Carbo- hydrate
Fruits:					
Cranberries, fresh	2 cups	7.6	3	12	85
Currants, fresh	1½ cups	6.2	11	-	89
Dates, unstoned	3-4 dates	1.1	2	7	91
Figs, dried	1½ large	1.1	5	1	94
Grapes, Concord	1 large bunch	4.9	5	15	80
Grape juice	½ cup	3.5	-	-	100
Grapes, Malaga	22 grapes	3.7	5	15	80
Lemons	3 large	11.4	9	15	76
Lemon juice	1⅛ cups	9.0	-	-	100
Olives, green	6-8 olives	1.6	1	83	16
Oranges	1 large	9.5	7	2	91
Orange juice	1 cup	8.2	-	-	100
Peaches, fresh	3 medium	10.5	6	3	91
canned	2 large halves and 3 T. juice	7.5	6	2	92
Pears, canned	3 halves and 3 T. juice	4.7	2	4	94
Pears, fresh	2 medium	6.3	4	6	90
Pineapple, canned	1 slice and 3 T. juice or ¼ cup shredded	2.3	1	4	95
fresh	2 slices, 1 in. thick	8.2	4	6	90
Plums, fresh	3-4 large	4.4	5	-	95
Prunes	4 medium	1.4	3	-	97
stewed	2 prunes and 2 T. juice	2.8	2	-	98
Prune pulp	2 T.	1.4	2	-	98
Raisins	¼ cup	1.1	3	9	88
Raspberries	1⅛ cups	5.3	10	14	76
Rhubarb, fresh	4 cups of 1 in. pieces	15.3	10	27	63
stewed	½ cup	1.7	1	2	97
Strawberries, fresh	1⅓ cups	9.0	10	14	76
Meats and Fish cooked:					
Beef, dried	4 thin slices 4 in. × 5 in.	2.0	67	33	-
Hamburg steak, broiled	cake 2½ in. diam. ¾ in. thick	2.0	55	45	-
rib, lean, roasted	slice 5 in. × 2½ in. × ¼ in.	1.6	46	54	-

TABLE V (continued)
HUNDRED-CALORIE PORTIONS

	HUNDRED-CALORIE PORTION	DISTRIBUTION OF CALORIES				
		Measure	Weight Oz.	Protein	Fat	Carbo- hydrate
Meats and Fish, cooked:						
round, lean, boiled*			2.2	90	10	-
round, lean, pot roast*			1.6	62	38	-
round steak, Swiss style	slice 4 in. × 1 in. × 5/8 in.		1.2	35	48	17
sirloin steak, lean, broiled	slice 2 in. × 1 1/2 in. × 3/4 in.		2.0	47	53	-
sirloin steak, medium fat, broiled	slice 1 3/4 in. × 1 1/2 in. × 3/4 in.		1.3	31	69	-
stew with vegetables	2/5 cup		3.0	16	45	39
Fish						
Codfish, balls	1 ball 2 in. diam.		1.7	14	65	21
Halibut steak, broiled	piece 3 in. × 2 1/4 in. × 1 in.		3.0	61	39	-
Mackerel, Spanish, broiled			2.6	56	44	-
Salmon, canned	1/2 cup (scant)		1.8	45	55	-
Sardines, canned	3-6 sardines		1.7	46	54	-
Lamb, chops, broiled	1 chop (piece 2 in. × 2 in. × 1/2 in.)		1.6	40	60	-
leg roast	slice 3 1/2 in. × 4 1/2 in. × 1/8 in.		1.8	41	59	-
Pork, bacon	4-5 small slices		0.5	13	87	-
ham, boiled	slice 4 3/4 in. × 4 in. × 1/8 in.		1.3	29	71	-
Pork, sausage	1 2/3 sausages 3 in. long 3/4 in. diam. (after cooking)		1.1	20	78	2
Poultry						
Chicken, broiled			2.6	80	20	-
canned			0.9	23	77	-
creamed	1/4 cup (scant)		1.6	16	73	11
Turkey, roast			1.3	40	60	-
roast with stuffing			1.9	36	52	12
stuffing	1/5 cup		0.8	9	48	43
Shellfish						
Lobster, canned	3/4 cup		4.3	86	12	2
Oysters	2/3 cup solid or 6-15 oysters		7.2	49	24	27
Shrimp	1/2 cup		3.2	91	8	1
Veal, cutlets, breaded	2/5 serving		2.0	30	52	18
Liver			2.1	47	53	-
Nuts, edible portion:						
Almonds	12-15 nuts		0.5	13	76	11

* United States Department of Agriculture Bulletin 162, Office of Experiment Station.

TABLE V (continued)

HUNDRED-CALORIE PORTIONS

	HUNDRED-CALORIE PORTION	DISTRIBUTION OF CALORIES			
	Measure	Weight Oz.	Protein	Fat	Carbo- hydrate
Nuts, edible portion:					
Peanuts.....	20-24 single nuts	0.6	19	63	18
Peanut butter.....	2½ T.	0.6	19	69	12
Pecans.....	12 meats	0.5	5	87	8
Walnuts, English.....	8-16 meats	0.5	11	82	7
Pies:					
Apple.....	Sector 1½ in. at circumference*	1.6	3	41	56
Cranberry.....	Sector 1¾ in. at circumference†	1.4	2	18	80
Custard.....	Sector 2 in. at circumference*	1.9	9	32	59
Lemon meringue.....	Sector 1 in. at circumference*	1.0	5	27	68
Mince.....	Sector 1 in. at circumference*	1.2	8	39	53
Plain pastry.....	¼ of 1 crust, 9 in. diam.	0.7‡	6	58	36
Salads and Dressings:					
Boiled dressing.....	¼ cup	2.8	10	64	26
Egg salad.....	⅔ serving	1.4	14	85	1
French dressing.....	1½ T.	0.6	-	100	-
Fruit salad.....	¼ cup fruit and ½ T. dressing	1.5	3	75	22
Lettuce salad with French dressing.....	1 small serving	1.2	1	95	4
Mayonnaise dressing.....	1 T.	0.5	1	97	2
Potato salad.....	½ serving	1.7	3	68	29
Tomato and lettuce salad..	½ serving	2.7	3	86	11
Sauces:					
Hard sauce.....	1 T.	0.7	-	50	50
Lemon sauce.....	⅓ cup	1.5	-	30	70
White sauce.....	¼ cup	2.4	8	70	22
Soups:					
Asparagus, cream of.....	½ cup (scant)	4.0	17	56	27
Bouillon.....	4 cups	33.6	84	8	8
Celery, cream of.....	½ cup	3.6	11	61	28
Green pea, cream of.....	⅔ cup	5.2	16	46	38
Oyster stew.....	½ cup (scant)	3.5	18	58	24
Potato.....	½ cup (scant)	4.2	15	38	47

* Pie 9 inches in diameter. † Pie 8 inches in diameter. ‡ Weight uncooked, 0.9 ounces

TABLE V (continued)

HUNDRED-CALORIE PORTIONS

	HUNDRED-CALORIE PORTION	DISTRIBUTION OF CALORIES			
		Measure	Weight Oz.	Protein	Fat	Carbo- hydrate
Soups:					
Tomato (canned).....	$\frac{3}{4}$ cup	7.0	12	12	76
cream of.....	$\frac{3}{8}$ cup	3.2	11	63	26
Vegetables:					
Asparagus, fresh.....	20 large stalks 8 in. long	15.9	32	8	60
Beans, lima, fresh.....	$\frac{1}{2}$ cup	2.9	23	5	72
lima, buttered.....	$\frac{1}{4}$ cup	1.7	16	36	48
string.....	$2\frac{1}{4}$ cups of 1 in. pieces	8.5	22	7	71
Beets.....	beets 2 in. diam. ($1\frac{1}{2}$ cups sliced)	7.7	14	2	84
Cabbage, shredded.....	5 cups	11.2	20	9	71
Carrots.....	4-5 young carrots 3-4 in. long	10.1	10	5	85
Cauliflower.....	1 very small head	11.5	23	15	62
Celery.....	4 cups of $\frac{1}{4}$ in. pieces	19.1	24	5	71
Corn on cob.....	2 ears 6 in. long	9.0	12	9	79
Cucumbers.....	$2\frac{1}{2}$ cucumbers 7 in. long	23.5	19	12	69
Lettuce.....	2 large heads	18.5	25	14	61
Mushrooms, fresh.....	22 mushrooms 1 in. diam.	7.9	31	8	61
Onions, raw.....	3-4 medium	7.2	13	6	81
scalloped.....	$\frac{1}{3}$ cup	2.5	8	59	33
Parsnips, stewed.....	7 pieces $3\frac{1}{2}$ in. $\times 1\frac{1}{2}$ in. $\times \frac{1}{3}$ in.	5.8	10	7	83
Peas, canned.....	$\frac{3}{4}$ cup (drained)*	4.4	26	3	71
creamed.....	$\frac{1}{2}$ cup (scant)	2.7	18	37	45
Potatoes, sweet, raw.....	$\frac{1}{2}$ medium	3.6	6	5	89
sweet, baked.....	$\frac{1}{2}$ medium	3.0	6	5	89
white, baked.....	1 medium	3.0	11	1	88
white, mashed.....	$\frac{1}{2}$ cup (scant)	3.1	7	48	45
Radishes.....	3 doz. red button	12.0	18	3	79
Spinach, boiled, chopped... <i>à la crème</i>	$2\frac{1}{2}$ cups	21.0	12	8	80
	$\frac{3}{5}$ cup	4.1	10	70	20
Tomatoes, canned.....	$1\frac{3}{4}$ cups	15.6	21	8	71
Tomatoes, fresh.....	2-3 medium	15.5	16	16	68
stuffed.....	1 tomato	4.0	13	45	42
Turnips, creamed.....	$\frac{1}{2}$ cup	1.4	10	50	40
raw.....	2 cups $\frac{1}{2}$ in. cubes	9.0	13	5	82

* Water drained off estimated as 30 per cent can contents.

TABLE VI
FOOD VALUE OF AN AVERAGE SERVING OF CERTAIN FOOD MATERIALS¹

NAME OF FOOD	APPROXIMATE AMOUNT OF ONE SERVING			ENERGY FACTORS			TISSUE BUILDING FACTORS			GROWTH AND HEALTH FACTORS			
	Measure	Weight, oz.	Total calories	Protein	Fat	Carbohydrate	REGULATORY FACTORS			Relative distribution of vitamins*			
							Percentage of the total daily requirement for an average adult	Phosphorus, per cent	Iron, per cent	A	B	C	
Milk and Milk Products:													
Milk, whole.....	½ pt.	8½	170	34	88	48	11.5	44.1	17.2	3.9	++	++	++
Buttermilk.....	¾ pt.	8½	89	20	12	48	10.6	30.0	18.3	4.1	++	++	++
Cheese, American.....	cube 1 in.	¾	89	23	63	3	17.7	28.1	10.5	1.8	++	++	++
Cheese, cottage.....	3½ in.	2	52	49	2	11	17.4	8.5	14.0	.....	++	++	++
Cream, thin.....	2 T.	1	50	2	43	5	0.9	3.7	1.7	0.3	++	++	++
Butter.....	pat 1 T.	½	100	1	99	.....	0.2	0.3	0.1	0.2	++	++	++
Ice cream.....	½ C.	5	320	13	202	105	3.2	13.2	5.9	1.2	++	++	++
Fat and Salad Oils:													
Animal fat.....	1 T.	¾	100	.....	100	.....	.....	.....	.....	.....	-	-	-
Olive oil.....	1 T.	¾	100	.....	100	.....	.....	.....	.....	.....	-	-	-
Cottonseed oil.....	1 T.	¾	100	.....	100	.....	.....	.....	.....	.....	-	-	-
Bread and Cereals:													
Bread, white.....	1 slice 3 X 3½ X ½ in.	¾	50	7	3	40	2.5	0.8	1.3	1.2	?	+	+
Graham bread.....	1 slice 3½ X 3 X ¾ in.	½	33	5	2	26	1.6	0.9	2.1	2.1	+	++	+
Boston brown bread.....	½ in. slice, 3 in. diam.	1½	67	7	6	54	2.5	5.6	4.1	5.7	*	+	*
Bran, wheat.....	¼ cup	6	54	8	3	43	3.8	3.2	16.3	9.2	+	++	+
Corn meal, cooked.....	¾ cup	6	100	10	5	85	3.7	0.7	4.0	2.0	-	+	-
Hominy grits, cooked.....	¾ cup	4¾	70	6	1	63	2.3	0.2	1.4	1.2	-	+	*

¹ From *Food? Why? What? How?* (1925). Courtesy of the American Red Cross and the Postum Cereal Company.

* Presence of the vitamin not yet determined.

NOTE: To interpret the vitamin table + indicates that the food contains the vitamin; + + indicates a good source of the vitamin; + + + indicates an excellent source of the vitamin; minus (-) indicates that the food contains no appreciable amount of the vitamin; the question mark (?) indicates doubt as to presence or relative amount; the asterisk (*) indicates that evidence is lacking or appears insufficient.

TABLE VI (continued)
FOOD VALUE OF AN AVERAGE SERVING OF CERTAIN FOOD MATERIALS

NAME OF FOOD	APPROXIMATE AMOUNT OF ONE SERVING			ENERGY FACTORS				TISSUE BUILDING FACTORS			GROWTH AND HEALTH FACTORS		
	Measure	Weight, oz.	Total calories	Protein	Fat	Carbohydrate	Percentage of the total daily requirement for an average adult			Relative distribution of vitamins			
							Protein, per cent	Carbohydrate, per cent	Iron, per cent	A	B	C	
Bread and Cereals:													
Macaroni, cooked.....	½ cup	2½	50	7	1	42	2.6	0.4	1.5	1.1	*	+	*
Oatmeal, cooked.....	½ cup	5¼	67	11	11	45	4.0	1.7	5.0	4.3	+	+	+
Rice, brown, steamed.....	¾ cup	4	100	10	7	83	3.0	0.4	4.5	3.9	+	+	+
Rice, white, steamed.....	¾ cup	4	100	9	1	90	3.2	0.1	2.0	1.7	-	-	-
Eggs:													
Egg, whole, in shell.....	1 egg	2½	70	25	45	.....	9.0	4.7	6.5	9.5	+	+	+
Egg, white.....	1	14	13	13	1	.....	4.8	0.4	0.2	0.2	+	+	+
Egg, yolk.....	1	½	50	11	45	.....	3.4	3.0	5.0	8.6	+	+	+
Meat, Fish and Poultry:													
Bacon, cooked.....	4-5 small slices	½	100	13	87	.....	4.6	0.3	2.6	3.2	-	+	?
Beef, lean, round, broiled..	2 slices, 4 × 3 × 1½ in.	4	200	96	104	.....	34.2	2.0	19.6	24.0	-	+	-
Chicken, roast.....	1 slice, 4 × 2½ × ¾ in.	1½	100	51	49	.....	18.2	1.1	10.4	12.7	*	+	*
Fish, lean, broiled.....	1 slice, 4 × 2½ × 1 in.	4	133	81	52	.....	28.9	3.3	17.6	7.4	-	+	*
Ham, boiled.....	1 slice, ¾ × 6 × ¾ in.	2	150	44	106	.....	15.7	0.9	8.9	11.0	-	+	*
Lamb, chop, broiled.....	1 chop	1½	100	40	60	.....	14.2	0.9	8.1	10.0	-	+	*
Lamb, roast.....	1 slice, 3½ × 4½ × ½ in. medium size	1½	100	41	59	.....	14.6	0.9	8.4	10.2	*	+	*
Liver, calves, broiled.....	2½ servings	2½	100	62	38	.....	22.1	1.3	12.6	15.5	+	+	+

TABLE VI (continued)
FOOD VALUE OF AN AVERAGE SERVING OF CERTAIN FOOD MATERIALS

NAME OF FOOD	APPROXIMATE AMOUNT OF ONE SERVING			ENERGY FACTORS			TISSUE BUILDING FACTORS				REGULATORY FACTORS			GROWTH AND HEALTH FACTORS			
	Measure	Weight, oz.	Total calories	Distribution of calories			Protein, per cent	Cal- cium, per cent	Phos- phorus, per cent	Iron, per cent	Percentage of the total daily requirement for an average adult			Relative distribution of vitamins			
				Protein	Fat	Carbo- hydrate					A	B	C				
Meat, Fish and Poultry:																	
Mutton, roast.....	1 slice, 3 X 3 1/4 X 1/4 in.	1 1/2	100	33	67	11.7	0.7	6.7	8.2	- to +	+ *	+ *	?				
Oysters, raw.....	1/2 cup	5 1/2	75	37	18	13.2	11.9	17.4	44.6	- to +	+ *	+ *	+				
Pork chop, lean, broiled.....	1 chop	2 1/2	200	64	136	23.0	1.4	13.1	16.1	- to +	+ *	+ *	+				
Veal leg, lean, broiled.....	1 serving	4 1/3	150	105	45	37.4	2.2	21.2	26.1	- to +	+ *	+ *	+				
Vegetables:																	
Asparagus.....	4 stalks 4 in. long	1 1/2	10	3	1	11.1	1.8	1.3	3.0	*	*	*	*				
Beans, Lima, dried.....	1/4 cup	2	200	42	8	16.6	6.0	14.5	26.7	*	*	*	*				
Beans, Lima, fresh.....	1/2 cup	3	100	23	5	7.2	3.4	8.3	11.0	*	*	*	*				
Beans, dried.....	1/2 cup	1 3/4	171	45	8	11.8	12.0	17.7	23.1	+	+	+	+				
Beans, string, fresh.....	1/2 cup	1 1/3	15	3	1	11.2	2.5	1.4	2.7	+	+	+	+				
Beets.....	1/2 cup cubes	2	25	3	1	1.2	2.4	1.6	2.2	+	+	+	+				

TABLE VI (continued)
 FOOD VALUE OF AN AVERAGE SERVING OF CERTAIN FOOD MATERIALS

NAME OF FOOD	APPROXIMATE AMOUNT OF ONE SERVING			ENERGY FACTORS			TISSUE BUILDING FACTORS				GROWTH AND HEALTH FACTORS						
	Measure	Weight, oz.	Total calories	Protein	Fat	Carbohydrate	REGULATORY FACTORS				Relative distribution of vitamins						
							Percentage of the total daily requirement for an average adult	Protein, per cent	Calcium, per cent	Phosphorus, per cent	Iron, per cent	A	B	C			
Vegetables:																	
Cabbage, chopped.....	½ cup	1½	10	2	1	7	0.7	2.1	0.7	2.3	+	+	+	+	+	+	+
Carrots, cooked.....	2 medium	4	40	4	2	34	1.4	7.4	3.0	3.5	+	+	+	+	+	+	+
Cauliflower.....	½ small head	2½	20	5	3	12	1.7	12.0	3.0	2.0	+	+	+	+	+	+	+
Celery.....	¼ cup	1½	6	2	.....	4	0.1	3.8	0.9	1.1	+	+	+	+	+	+	+
Corn, fresh.....	1 ear 6 in.	4½	50	6	4	40	2.2	0.4	3.9	2.6	+	+	+	+	+	+	+
Corn, canned.....	½ cup	3½	100	11	11	78	4.4	0.9	7.7	5.3	+	+	+	+	+	+	+
Cucumber.....	¾ cucumber	3½	16	3	2	11	1.0	2.1	2.3	1.2	*	+	+	+	+	+	?
Dandelion greens.....	½ cup	4½	75	12	11	52	4.2	19.3	6.6	22.0	+	+	+	+	+	+	+
Lentils, dried.....	¾ T.	1½	150	44	4	102	15.8	6.9	14.3	24.7	+	+	+	+	+	+	+
Lettuce.....	¾ head	2½	12	3	2	7	1.1	4.0	2.0	0.3	+	+	+	+	+	+	+
Okra.....	2	2	20	3	1	16	1.1	6.7	0.8	.....	+	+	+	+	+	+	+
Onions.....	5 to 6 pods	7½	100	13	6	81	4.7	10.3	7.0	6.7	-	+	+	+	+	+	+
Parsnips.....	3 to 4 medium	3	50	5	3	42	1.8	6.8	4.4	3.0	-?	+	+	+	+	+	+
Peas, dried.....	½ cup slices	2½	253	70	6	177	25.0	9.8	23.0	27.8	+	+	+	+	+	+	+
Peas, fresh.....	¾ cup	1½	50	14	2	34	5.0	2.1	4.8	5.7	+	+	+	+	+	+	+
Potatoes, white, boiled																	
15 min.....	1 medium	3½	100	11	1	88	3.8	2.4	5.2	10.4	+	+	+	+	+	+	+
Potatoes, sweet, baked																	
1 medium.....	1 medium	6	200	12	10	178	4.1	4.7	5.0	5.4	+	+	+	+	+	+	+
Rutabaga, raw.....	¾ cup	2	17	2	1	14	0.8	4.7	1.8	.....	+	+	+	+	+	+	+
Spinach, cooked.....	¾ cup	5½	25	3	2	20	3.1	10.5	5.4	25.1	+	+	+	+	+	+	+
Squash, cooked.....	½ cup	3½	55	4	5	46	2.4	3.2	1.4	4.8	+	+	+	+	+	+	+

TABLE VI (continued)
FOOD VALUE OF AN AVERAGE SERVING OF CERTAIN FOOD MATERIALS

NAME OF FOOD	APPROXIMATE AMOUNT OF ONE SERVING			ENERGY FACTORS			TISSUE BUILDING FACTORS		REGULATORY FACTORS								
	Measure	Weight, oz.	Total calories	Protein	Fat	Carbohydrate	Percentage of the total daily requirement for an average adult			Relative distribution of vitamins							
							Protein, per cent	Calcium, per cent	Phosphorus, per cent	Iron, per cent	A	B	C				
Vegetables:																	
Tomatoes, fresh or canned	1 small	3½	25	4	4	17	1.4	1.9	2.1	2.9	+	+	+	+	+	+	
Turnips, cubes, raw	½ cup	2¼	25	3	1	21	1.2	6.0	2.2	2.1	-	+	+	+	+	+	
Fruits, Fresh:																	
Apples	¼ large	3¼	50	2	3	45	0.4	0.9	0.7	1.6	+	+	+	+	+	+	
Banana	1 medium	4½	75	4	4	67	1.4	1.0	1.8	3.0	+	+	+	+	+	+	
Blackberries	½ cup	6	100	0	16	75	3.2	4.3	4.4	6.9	*	*	*	*	*	*	
Cantaloupe	½ melon	9	50	3	2	47	1.1	3.3	1.4	2.4	*	*	*	*	*	*	
Cherries, stoned	½ cup	1½	25	1	2	22	0.4	0.9	0.7	0.8	*	*	*	*	*	*	
Cranberries, fresh	½ cup	2½	25	1	3	21	0.3	1.4	0.5	2.1	*	*	*	*	*	*	
Grapefruit	½ large	7½	100	7	4	89	1.6	5.9	2.7	3.9	*	*	*	*	*	*	
Grapes, white	22	3½	100	5	15	80	1.9	2.8	2.4	2.1	*	*	*	*	*	*	
Huckleberries	½ cup	2½	50	2	4	44	0.6	2.0	0.4	4.0	*	*	*	*	*	*	
Lemon juice	1 T.	½	5	1	5	8	0.4	0.4	0.1	0.1	?	?	?	?	?	?	
Limes, green	4 medium	½	50	1	41	8	0.3	3.0	0.1	3.2	*	*	*	*	*	*	
Oranges	1 medium	7½	75	5	2	68	1.7	9.8	2.3	1.9	+	+	+	+	+	+	
Orange juice	½ cup	4	50	6	50	100	1.0	5.0	1.4	1.5	+	+	+	+	+	+	
Peaches	3 medium	10½	100	6	3	91	2.4	5.7	4.3	4.9	*	*	*	*	*	*	
Pears	2 medium	6½	100	4	0	90	1.3	3.0	3.1	3.1	*	*	*	*	*	*	
Pineapple, thick	2 slices 1 in.	8½	100	4	6	90	1.3	6.1	4.8	7.7	+	+	+	+	+	+	
Plums	3-4 large	4½	100	5	5	95	1.7	3.6	2.9	3.9	*	*	*	*	*	*	
Raspberries	½ cup	1¾	33	3	5	25	1.2	3.6	1.9	2.0	*	*	*	*	*	*	
Rhubarb	1 cup	3½	25	2	7	16	0.9	7.0	2.5	7.2	*	*	*	*	*	*	

TABLE VI (continued)
FOOD VALUE OF AN AVERAGE SERVING OF CERTAIN FOOD MATERIALS

NAME OF FOOD	APPROXIMATE AMOUNT OF ONE SERVING			ENERGY FACTORS				TISSUE BUILDING FACTORS				GROWTH AND HEALTH FACTORS		
	Measure	Weight, oz.	Total calories	Distribution of calories			Protein, per cent	Carbo- hydrate	Iron, per cent	Phos- phorus, per cent	Cal- cium, per cent	REGULATORY FACTORS		
				Protein	Fat	Carbo- hydrate						A	B	C
Fruits, Fresh:														
Strawberries.....	$\frac{3}{8}$ cup	$4\frac{1}{2}$	50	5	7	38	1.8	7.8	2.7	6.8	*	+		+
Fruits, Dried:														
Apricots.....	9 halves	$1\frac{1}{2}$	100	7	3	90	2.7	3.4	3.3	3.5	*	*		*
Dates, unstoned	3-4	1	100	3	7	91	0.8	2.8	1.2	5.7	*	*		*
Figs.....	3 large	$2\frac{1}{2}$	200	10	2	188	3.8	15.2	5.6	12.7	*	*		*
Prunes.....	4 medium	$1\frac{1}{2}$	100	3	...	97	1.0	2.7	2.6	6.7	+	+		-
Raisins.....	$\frac{1}{4}$ cup	1	100	3	9	88	1.0	2.8	2.9	9.3	-	+		-
Nuts:														
Almonds.....	12-15 nuts	$\frac{1}{2}$	100	13	70	11	4.6	5.5	5.4	4.0	+	+		*
Peanuts.....	20-24 single nuts	$\frac{3}{4}$	100	19	63	18	6.7	1.9	5.5	2.4	+	+		*
Pecans.....	12 meats	$\frac{1}{2}$	100	5	87	8	1.8	1.8	3.4	2.3	*	+		*
English Walnuts.....	8-16 meats	$\frac{1}{2}$	100	11	82	7	3.7	1.9	1.1	2.0	*	+		*
Sugar and Sweets:														
Sugar.....	1 T.	$\frac{3}{8}$	50	.....	.....	50	.....	.....	.....	.....	-	-		-
Honey.....	1 T.	1	100	1	.....	99	0.2	0.3	0.4	2.0	-	+		*
Maple Sirup.....	2 T.	$1\frac{1}{2}$	133	.....	.....	133	.....	7.3	0.3	8.9	*	+		*
Molasses.....	2 T.	$1\frac{1}{2}$	133	4	.....	129	1.6	14.7	1.5	22.6	*	+		*
Corn Sirup.....	$1\frac{3}{4}$ T.	$1\frac{1}{2}$	100	.....	.....	100	.....	.....	.....	.....	*	+		*
Gingerbread, plain.....	piece, 2 \times $1\frac{3}{8}$ \times 2 in.	$2\frac{3}{8}$	200	14	42	144	6.0	11.7	3.2	18.0	*	*		*
Sponge Cake, 2 eggs, hot water.....	piece, 3 \times $2\frac{3}{4}$ \times $\frac{3}{8}$ in.	$1\frac{1}{2}$	150	11	10	129	4.6	1.6	2.5	2.9	*	*		*

TABLE VII

APPROXIMATE NUMBER OF HUNDRED-CALORIE PORTIONS IN COMMON FOOD MATERIALS AS PURCHASED*

Group I. Vegetables and Fruits

MATERIALS	NUMBER OF HUNDRED-CALORIE PORTIONS	MATERIALS	NUMBER OF HUNDRED-CALORIE PORTIONS
Vegetables, fresh:		Tomatoes.....	1½ per No. 2 can.
Asparagus.....	1 per lb.	Peas.....	2½ per lb.
Beans, lima, shelled.....	5½ per lb.	Do.....	3 per No. 2 can.
Do.....	7 per qt.	Vegetables, dried:	
Beans, string.....	1¾ per lb.	Beans, or cowpeas.....	15¼ per lb.
Do.....	1½ per qt.	Peas.....	16 per lb.
Beets.....	1½ per lb.	Fruits, fresh:	
Cabbage.....	1 per lb.	Apples.....	2 per lb.
Carrots.....	1½ per lb.	Do.....	24 per pk.
Cauliflower.....	1½ per lb.	Bananas.....	3 per lb.
Do.....	2 per medium-sized head (1¾ lb.).	Cherries.....	3½ per lb. or per qt.
Celery.....	¾ per lb.	Cranberries.....	2 per lb. or per qt.
Corn.....	11 per doz. medium-sized ears.	Currants.....	2½ per lb. or per qt.
Cucumbers.....	¾ per lb.	Grapes.....	3½ per lb. or per qt.
Lettuce.....	¾ per lb.	Lemons.....	1½ per lb.
Do.....	¾ per medium-sized head.	Do.....	4½ per doz. medium-sized.
Mushrooms.....	2 per lb.	Muskmelon.....	1 per lb. or 1 per medium-sized.
Okra.....	1½ per lb.	Oranges.....	1¾ per lb. or 10 per doz. medium-sized.
Onions.....	2 per lb.	Peaches.....	1½ per lb. or 6 per doz.
Parsnips.....	2½ per lb.	Pears.....	2½ per lb.
Peas.....	2½ per lb.	Plums.....	3¾ per lb.
Do.....	20 per pk.	Raspberries.....	3 per lb. or per qt.
Potatoes, Irish.....	3 per lb.	Strawberries.....	1¾ per lb. or per qt.
Do.....	45 per pk.	Watermelon.....	¾ per lb.
Potatoes, sweet.....	4½ per lb.	Fruits, canned:	
Do.....	63 per pk.	Cherries.....	4 per lb.
Pumpkin.....	½ per lb.	Do.....	5 per No. 2 can.
Radishes.....	1 per lb.	Peaches.....	2 per lb.
Rhubarb.....	¾ per lb.	Do.....	2½ per No. 2 can.
Spinach.....	1 per lb.	Pears.....	3½ per lb.
Do.....	5 per pk.	Do.....	4½ per No. 2 can.
Squash.....	1 per lb.	Pineapples.....	7 per lb.
Tomatoes.....	1 per lb.	Do.....	4½ per No. 2 can.
Turnips.....	1¼ per lb.	Fruits, dried:	
Turnip tops.....	2 per lb.	Apples.....	13 per lb.
Vegetables, canned:		Dates.....	14 per lb.
Beans, string.....	1 per lb.	Figs.....	14½ per lb.
Do.....	1¼ per No. 2 can.	Prunes.....	11½ per lb.
Beans, baked.....	6 per lb.	Raisins.....	14 per lb.
Do.....	7 per No. 2 can.	Fruits, miscellaneous:	
Corn.....	4½ per lb.	Olives, green or ripe.....	10 per lb. or per pt.
Do.....	6 per No. 2 can.		
Tomatoes.....	1 per lb.		

* From *Food Proportions in the Diet*. (1923). U.S. Department of Agriculture Farmers' Bulletin 1313.

TABLE VII (continued)

Group II. Foods Depended upon for Efficient Protein

MATERIALS	NUMBER OF HUNDRED-CALORIE PORTIONS	MATERIALS	NUMBER OF HUNDRED-CALORIE PORTIONS
Dairy products:		Fish, fresh:	
Milk, whole.....	3 per lb. or 6 per qt.	Bass.....	2 per lb.
Milk, skim.....	3 per qt.	Codfish.....	1½ per lb.
Buttermilk.....	3 per qt.	Halibut, steak.....	4½ per lb.
Milk, condensed, un- sweetened.....	8 per lb.	Mackerel, Spanish.....	3½ per lb.
Milk, condensed, sweetened.....	15 per lb.	Perch.....	2 per lb.
Milk, dried, whole.....	23 per lb.	Salmon.....	6 per lb.
Milk, dried, skim.....	16 per lb.	Shad.....	3½ per lb.
Cheese, ordinary.....	19½ per lb.	Shad roe.....	6 per lb.
Cheese, cottage.....	5 per lb.	Trout, brook.....	2¼ per lb.
Eggs.....	9 per doz.	Fish, smoked or salted:	
Meats:		Cod, salt (boneless).....	5 per lb.
Beef, average.....	10 per lb.	Herring, smoked.....	7½ per lb.
Beef, chuck.....	7½ per lb.	Mackerel, salt.....	10 per lb.
Beef, corned.....	12½ per lb.	Fish, canned:	
Beef liver.....	5½ per lb.	Salmon.....	6½ per lb.
Beef ribs.....	11 per lb.	Sardines.....	9 per lb.
Beef, round.....	7¼ per lb.	Tuna fish.....	9½ per lb.
Beef, sirloin.....	9½ per lb.	Shellfish, fresh:	
Beef tongue.....	5½ per lb.	Lobster.....	1½ per lb.
Lamb, average.....	10 per lb.	Oysters.....	2 per lb.
Mutton, average.....	12 per lb.	Do.....	4 per qt.
Pork, whole side, average.....	22 per lb.	Scallops.....	3½ per lb.
Pork, except items in V, average.....	13 per lb.	Shellfish, canned:	
Veal, average.....	5½ per lb.	Lobster.....	4 per lb.
Poultry:		Shrimps.....	5 per lb.
Chicken, broilers.....	3 per lb.	Legumes:	
Fowl.....	7½ per lb.	Peanuts, unshelled.....	19 per lb.
		Peanuts, shelled.....	11 per qt.
		Do.....	25 per lb.
		Peanut butter.....	27½ per lb.

Group III. Cereal Foods

Bread.....	12 per lb.	Macaroni.....	16 per lb.
Do.....	9 per loaf, 16 oz. dough, 12-14 oz. baked.	Oatmeal.....	18 per lb.
Cereals, flaked.....	15 per lb.	Rice.....	16 per lb.
Cornmeal.....	16 per lb.	Rolls.....	12 per lb.
Crackers.....	19 per lb.	Rolls, 2-ounce size.....	18 per doz.
Flour, wheat.....	16 per lb.	Tapioca.....	16 per lb.
Flour, buckwheat.....	16 per lb.	Wheat, shredded.....	16½ per lb.

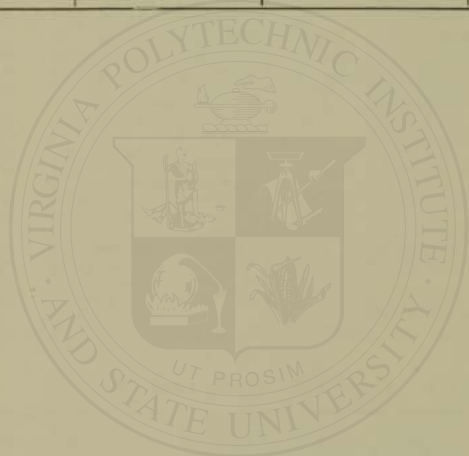
Group IV. Sugars and Sugary Foods

Candy, average.....	17 per lb.	Sirup, corn.....	54 per qt.
Honey.....	15 per lb.	Sirup, maple.....	49 per qt.
Do.....	55 per qt.	Sugar, granulated.....	18 per lb.
Molasses.....	13 per lb.	Sugar, maple.....	15 per lb.
Do.....	50 per qt.	Chocolate, milk.....	22½ per lb.
Sirup, corn.....	14½ per lb.	Chocolate, sweet.....	22 per lb.

TABLE VII (continued)

Group V. Fats and Fat Foods

MATERIALS	NUMBER OF HUNDRED-CALORIE PORTIONS	MATERIALS	NUMBER OF HUNDRED-CALORIE PORTIONS
Fats, table and cooking:		Nuts:	
Butter.....	34 per lb.	Almonds, unshelled..	16 per lb.
Lard.....	41 per lb.	Almonds, shelled....	29 per lb.
Oil.....	41 per lb.	Brazil nuts, unshelled	16 per lb.
Suet.....	34 per lb.	Brazil nuts, shelled...	32 per lb.
Cream, 18 per cent.....	9 per lb. or per pt.	Butternuts, shelled...	32 per lb.
Cream, 40 per cent.....	17 per lb or per pt.	Coconut in shell, with-	
Fat meats:		out milk.....	14 per lb.
Bacon.....	26 per lb.	Pecans, shelled.....	33 per lb.
Pork, salt.....	28½ per lb.	Walnuts, California,	
Pork sausage.....	21 per lb.	shelled.....	32 per lb.
		Chocolate.....	28 per lb.



INDEX

Abbreviations.....	353	Baking:	
Afternoon tea, at the hotel.....	314	butter cakes.....	436
Albumenized beverages, for invalids	364, 365	cleaning fowl for.....	420
American chop suey.....	403	sponge cakes.....	440
Angel food cake.....	440	Baking-flour mixtures, temperatures and	
Appetizer, fruit as.....	8	times.....	370
Apple:		Baking-powder biscuit.....	373
baked.....	358	Baking-powder recipes.....	49
candied.....	359	Banana ice cream.....	459
composition.....	13	Bananas:	
fried.....	359	baked.....	358
spiced.....	359	composition.....	13
Apple cobbler.....	446	serving.....	357
Apple dumplings.....	375	Barbecue sauce.....	423
Apple jam.....	474	Bavarian creams.....	456
Apple jelly.....	471	Beans:	
Apple pectin extract.....	471	baked.....	404
Apple pie.....	446	composition.....	83
Apple salad.....	430	Beef (<i>see also</i> Carving):	
Apple sauce.....	358	chart of cuts.....	161
Apple-sauce cake.....	437	composition of.....	156
Apricot conserve.....	475	time required for roasting.....	416
Apricot ice cream.....	459	Beef suet, composition of.....	94
Apricot jam.....	474	Beef tea.....	385
Apricots, preserved.....	473	Beefsteak, carving.....	205
Arrangement, of kitchen.....	249	Berry cobbler.....	446
Ash (<i>see also</i> Minerals):		Berry muffins.....	373
in cereals.....	39	Beverages:	
in potatoes.....	184	breakfast.....	29-33
Asparagus salad.....	429	in school lunch.....	111
Au gratin dishes.....	122, 402	Biscuit (<i>See also</i> Quick breads).....	373-75
Au gratin vegetables, creamed or		Biuret test, for protein.....	229
scalloped.....	390	Blanc-mange.....	449
Bacon:		Body-building foods.....	4
on the breakfast menu.....	60	Body tissues, foodstuffs and.....	216
composition of.....	94	Boiled custard.....	451
broiled.....	419	Boiled fish.....	424
Bacon omelet.....	381	Boiling:	
Bacteria, a cause of the spoiling of foods	336	cereals.....	367
Baked beans.....	404	vegetables.....	389
Baked chicken.....	422	Bones, cooking for soup.....	169
Baked custard.....	452	Boston brown bread.....	375
Baked eggs.....	379	Bouillon.....	385
Baked fish.....	425	Bran, in grain.....	38
Baked fruits.....	130	Bran muffins.....	373
Baked ham.....	417	Bread (<i>see also</i> Quick breads, Yeast	
Baked rice, Italian.....	403	breads):	
Baked vegetables.....	393	breakfast.....	46-52
		brown.....	375

- Bread:**
- with dinner 187
 - etiquette in eating 280
 - flour for making 98
 - for luncheon and supper 98-102
 - graham 412
 - kinds of wheat flour 98
 - left-over 102
 - nut 376
 - place of, in diet 102
 - plain light 410
 - proportions for quick breads 370
 - quick breads 102
 - spoon 375
 - steps in making 410-11
 - whole wheat 412
 - yeast as leavening agent 101
 - yeast breads, ingredients for 100
 - score card for 100
- Breaded veal chops 416**
- Breakfast beverages:**
- coffee 33
 - tea 31-33
 - water 29
- Breakfast breads 46-52**
- hot breads 46
 - quick breads 47-52
 - toast 46, 47
- Breakfast foods, cereal 37-44**
- buying cereals 44
 - carbohydrate family 41
 - cooking of 41, 42
 - food value 39
 - fuel value 39
 - general composition 39, 40
 - serving 43
- Breakfasts 1-70**
- beverages 29-36
 - cereal breakfast foods 37-44
 - eggs and bacon 55-61
 - fruit 8-18
 - hotel 313
 - importance of 3-4
 - menus, American 2, 5-6
 - of other countries 2
 - milk 19-28
 - preparation and service 62-70
 - serving cereals 43
 - serving eggs 60
 - serving quick breads 51
- Breakfast room, the 262**
- Breakfast table, how to set 288**
- Broiled chicken 422**
- Broiled steak 416**
- Broiled tomatoes 393**
- Broiled trout 424**
- Broiling 415, 416**
- cleaning fowl for 420
- Brown Betty 451**
- Brown bread, Boston 375**
- Brown sauce 397**
- Brown soup stock 385**
- Brownies 443**
- Buckwheat, composition of 40**
- Budget, food 238-40**
- Buffet supper, the 139-41**
- Butter, composition of 94**
- Butter balls 400**
- Butter cakes, ingredients and proportions 193-96**
- mixing and baking 435-38
- Butter creams 466**
- Butter sauces 398**
- Butter spreader, use of 278**
- Buttered vegetables 389**
- Buttermilk, composition of 25**
- Butterscotch 465**
- Butterscotch sauce 399**
- Building foods 109**
- Buying:**
- beef 160-64
 - canned goods 235
 - cereals 44
 - dried food 236
 - fish 177
 - fruit 14
 - lamb and mutton 165, 166
 - meat 160-70
 - pork 165, 167, 168
 - shellfish 120
 - veal 164, 165
 - vegetables 80
- Buying, economical 239**
- Buying guide 355**
- Cabbage, value of 79**
- Cabbage salad 428**
- Cabinets, kitchen 251**
- Cafeteria, school 110**
- Cake, method of mixing butter cakes 435**
- Cakes:**
- butter 193-96
 - fancy 301
 - sponge 130
- Cakes and cookies, cookery 435-44**
- Calcium:**
- sources 225, 490-93
 - test for 230
- Calories (see also Hundred-Calorie portions):**
- how many needed 222, 223
- Candies 462-66**

- Candied cinnamon rolls. 413
- Candied orange peel. 466
- cookery. 462-66
- crack degree. 465
- hard ball. 465
- nut confections. 301
- packing. 300
- proportions and ingredients. 300
- recipes. 462-66
- rules for. 299
- soft ball. 462
- temperatures. 297, 298
- Candy, stick, composition of. 127
- Canned apricot salad. 430
- Canned foods, the use of. 337
- Canned fruit. 12
- Canned goods, buying. 235
- Canning. 335
- equipment for. 338
- methods. 340
- steps. 341
- time-tables. 467-70
- Canning, oven. 470
- Canning and preserving. 467-75
- Caramel custard. 452
- Caramel frosting. 439
- Caramel ice cream. 459
- Caramel nut ice cream. 459
- Caramel sauce. 399
- Carbohydrate family, the. 41-42
- Carbohydrates (*see also* Food values, and Hundred-Calorie portions). 480-93
- in cereals. 39
- in common foods. 109
- in eggs. 55
- in milk. 20, 22
- in potatoes. 184
- in sugar and other sweets. 128
- Care of eggs. 58
- fish. 177
- fruit. 14
- meat. 159, 160
- milk. 24
- silver. 268
- vegetables. 80
- Carrot salad. 429
- Carrots, value of. 79
- Carving. 203-13
- beef. 205-08
- lamb. 210
- mutton. 210
- pork. 208
- roast chicken. 212
- roast turkey. 212
- veal. 208
- Casserole dishes. 121, 403-04
- Casserole or Italian hash. 419
- Celery:
- composition. 83
- stuffed. 434
- Cellulose, in common foods. 109
- Cereal foods. 495
- Cereal grains, composition of. 220
- Cereals:
- calories. 39
- with dried fruit. 367
- in mold. 367
- left-over. 368
- recipes. 366
- table for cooking. 366-68
- Charlottes. 456
- Cheese:
- composition and food value. 56, 118
- cookery. 119
- cottage. 431
- kinds. 118
- Cheese balls. 434
- Cheese dishes. 401-02
- Cheese omelet. 381
- Cheese salads. 428
- Cheese sauce. 397
- Cheese straws. 433
- Cherry jelly. 472
- Chicken:
- à la King. 402
- baked. 422
- barbecued. 423
- broiled. 422
- fried. 422
- roast. 422
- roast, carving. 212
- selection of. 173
- stewed for pie or with dumplings. 423
- stuffing for. 422
- what to serve with. 175
- Chicken gumbo. 405
- Chicken salad. 427
- Children:
- daily needs. 325, 326
- desirable luncheon foods for. 136
- food allowances for. 223, 324-33
- periodical additions to dietary. 332
- Chili sauce. 475
- China, table. 266-267
- Chocolate. 25, 26
- fondant candies dipped in. 46
- hot. 361
- iced. 362
- Chocolate Bavarian. 456
- Chocolate blanc-mange. 449
- Chocolate bread pudding. 450
- Chocolate cake. 437

- Chocolate cookies..... 442
 Chocolate custard..... 452
 Chocolate frosting..... 438, 439
 Chocolate ice cream..... 459
 Chocolate mousse..... 461
 Chocolate nut ice cream..... 459
 Chocolate pie..... 447
 Chocolate sauce..... 339
 Choice caramels..... 465
 Chop suey, American..... 403
 Chowders..... 123, 405
 Christmas dinner, a..... 307
 Cinnamon rolls..... 374, 412
 Cinnamon toast..... 369
 Citrus pectin extract..... 472
 Classification:
 of articles of food..... 218, 494-96
 of vegetables..... 78, 494
 Cleaning fish..... 424
 Cleaning poultry..... 420
 Clear jelly..... 455
 Clear soups..... 384
 Cloths, table..... 266
 Clove creams..... 463
 Club breakfasts..... 5
 Club sandwiches..... 409
 Cocoa..... 25, 29
 hot..... 361
 iced..... 362
 Cocoa rice pudding..... 450
 Coconut cream pie..... 447
 Cod, composition of..... 177
 Codfish balls..... 425
 Coffee..... 33-34
 hot..... 361, 362
 iced..... 362
 Coffee ice cream..... 459
 Coffee-shop breakfast..... 5
 Cold slaw..... 429
 Cold storage..... 335
 Cold-pack method of home canning..... 340
 Combination salad..... 429
 Combinations, vegetable..... 183
 "Company" dinner, the..... 148
 Composition (*see also* Food values, and
 Hundred-Calorie portions):
 beverages..... 480
 breads..... 480
 cake and cookies..... 481
 candies..... 481
 cereals..... 39, 40, 220, 482
 cheese..... 118, 483
 cocoa and chocolate..... 26, 480
 custards, puddings and ices..... 482
 dairy products and fats..... 482-83
 eggs..... 55, 56, 483
 Composition:
 fish..... 177, 484-85
 foods containing much fat..... 94, 221, 496
 fruits..... 13, 483-84
 meats..... 156, 484-85
 milk..... 19, 25, 483
 nuts..... 91, 485-86
 pies..... 486
 potatoes..... 184, 487
 poultry..... 174, 485
 protein foods..... 220, 495
 salads and dressings..... 486
 sauces..... 486
 shellfish..... 485
 soups..... 486-87
 sugars..... 127, 220, 481, 495
 vegetables..... 83, 218, 494
 Compromise style of table service..... 286
 Conserves..... 350, 474
 Consommé..... 385
 Containers, for preserved foods..... 349
 Contrasts, in food..... 147
 Conveniences, kitchen..... 257
 Conversation, at the table..... 275
 Cook book, the..... 353-475
 beverages..... 361-65
 cakes and cookies..... 435-44
 candies..... 462-66
 canning and preserving..... 467-75
 cereals..... 366-68
 cookies and cakes..... 435-44
 custards..... 449-54
 desserts..... 435-61
 eggs..... 378-82
 entrées for luncheon or supper..... 401-09
 frozen desserts..... 457-61
 fruit..... 357-60
 fruit desserts..... 449-54
 gelatin desserts..... 455-56
 meats..... 415-19
 pastry..... 445-48
 poultry and fish..... 420-26
 preserving and canning..... 467-75
 puddings, custards, fruit desserts..... 449-54
 quick breads..... 369-77
 rolls..... 410-14
 salad dressings, etc..... 427-34
 salads..... 427-34
 sandwiches..... 410-14
 sauces..... 396-400
 soups..... 383-86
 vegetables..... 387-95
 yeast bread..... 410-14
 Cooked apple salad..... 430
 Cooked frosting..... 439
 Cooked fruit whips..... 452

- Cooked salad dressing.....93, 433
 Cookies.....442-44
 Cookery:
 cereals.....41, 42, 366
 cheese.....119
 eggs.....59
 fish.....178, 424-26
 dried fruit.....16
 fresh fruit.....15
 invalid.....319-22
 meat.....169
 meats, general rules.....415
 potatoes.....185
 poultry.....174
 poultry and fish.....420-26
 principles of.....41
 rice.....186
 spinach and other greens.....391
 sugar.....297
 tender meats.....415
 tough meats.....417
 vegetable.....82, 389-91
 water in.....30
 working schedule for.....64
 Corn:
 composition of.....40, 83
 diagram of grain.....38
 Corn dodgers, Southern.....377
 Corn pone.....377
 Corn pudding.....395
 Cornmeal muffins.....373
 Southern.....376
 Cornmeal waffles.....372
 Cornstarch pudding.....449
 Cost of food, the (*see also* Buying, and
 Marketing).....239
 Cottage cheese.....431
 composition of.....56
 Courses:
 breakfast.....63
 dinner.....148
 luncheon or supper.....137
 Courtesy:
 at the table.....273-82
 in the school lunchroom.....283
 Cover, individual.....287, 289
 Crab apples, preserved.....473
 Cranberry ice.....460
 Cranberry jelly.....471
 Cranberry sauce.....360
 Cream:
 composition of.....25
 whipped.....400
 Cream cheese, composition of.....56
 Cream frosting.....438
 Cream loaf.....464
 Cream puffs.....448
 Cream soups.....383
 Creamed dishes.....122, 405
 Creamed eggs.....378
 Creamed fish.....425
 Creamed spinach.....391
 Creamed vegetables.....390, 391
 Creamy omelet.....382
 Creole Spanish steak.....418
 Croquettes.....123, 407
 Croutons.....369
 Crown roast, lamb or pork, carving.....211
 Crust, for meat or chicken pie.....374
 Crystallization, in sugar cookery.....298
 Cucumber sauce.....398
 Cup cakes.....438
 Currant jelly.....471
 Custard sauce.....399
 Custards.....131, 451-52
 frozen.....191
 Daily needs, the child's foods.....325, 329-30
 Dates, stuffed.....464
 Decorations, table.....291
 Deep fat, frying in.....406
 Desserts:
 butter cakes.....193
 dinner.....190-96
 following salads.....90
 frozen desserts.....190
 fruit desserts.....130
 gelatin desserts.....192
 luncheon or supper.....126-31
 Devil's food (cake).....437
 Digestibility:
 eggs.....57
 fried foods.....23
 meat.....158
 Digestion, good, rules for.....226
 Dining-car, the.....311
 Dining-room, the.....262-64
 Dinner menu, types of.....147
 Dinners.....145-215
 bread.....187
 Christmas.....307
 desserts.....190-99
 fish and poultry.....173-81
 hotel.....314
 how to set the table.....290
 meat.....155-72
 menus.....145-54
 potatoes.....184
 preparing and serving.....200-15
 rice.....186
 salads.....187
 Thanksgiving.....306

- Dinner vegetables 182-89
- Disaccharides 42
- Dish-washing hints 356
- Divinity fudge 462
- Double boiler, in cooking cereals 366
- Double fudge 462
- Doughnuts 376
- Drawing, or cleaning, of fowl 420
- Dressed poultry, selection of 173
- Dressing for fish, poultry 422-26
- Dressing, of poultry 174
- Dressings, salad 93, 432
- Dried food, buying 236
- Dried fruit II, 16, 359
- cereal with 367
- Dried milk 400
- Dried vegetables 394
- Drop biscuit 374
- Drying, a way of preserving foods 335
- Duchess potatoes 394
- Dumplings 375
- Economical buying, summary of 239
- Egg nog 363
- Egg salads 428
- Egg sauce 398
- Egg white:
- composition of 55
- in invalid beverages 365
- Egg yolk:
- composition of 55
- in invalid beverages 365
- Eggs:
- à la goldenrod 378
- baked 379
- breakfast 60
- care of 58
- coddled 379
- comparative value of milk and 57
- composition of 55, 56, 220, 483
- cookery 59
- digestibility 57
- fried 380
- hard-cooked 378
- nutritive value 56
- poached 379
- preserving 335
- recipes 378-82
- scrambled 380
- soft-cooked 378
- storage of 58
- tests for freshness 57
- Eggs and bacon 55-60
- Emergency bouillon 385
- Endosperm, in grain 38
- Energy factors, in common foods 488-93
- Energy foods 109
- Energy requirements, daily 223
- Energy value (see also Composition, Food value, and Vitamins):
- fruit 8
- meats 157
- milk 23
- vegetables 79
- English style, of table service 285
- Entrées 117-23, 401-09
- Etiquette, table 273-83
- Evaporated milk 400
- Expenditures, for meat, ways of reducing 170
- Extenders, meat 418-19
- Extractives, flavor of meat due to 158
- Failure:
- in cake-making 195
- with sponge cake 441
- Family dinner, the 148
- Family festivals 306
- Family luncheon, the 138
- Fancy cakes 301
- Fancy creams 191
- Fats (see also Composition, Food Values, and Hundred-Calorie portions):
- composition of 221
- composition of foods containing large amounts 94
- in cereals 39
- in common foods 109, 480-93, 496
- in eggs 55, 57
- in milk 20, 21
- in potatoes 184
- test for 229
- Fiber, in cereals 39
- Fig ice cream 459
- Fig preserves 474
- Fig pudding 449
- Figs, dried, composition 13
- Filled angel-food cake 441
- Fillet, of beef, carving 206
- Fillings:
- cake 195, 438
- cocoa cream 448
- turnovers 375
- Finger foods, etiquette of 280
- Fireless cooker:
- in cooking cereals 366
- roasting in 417
- Fish:
- baked 425
- boiled 424
- buying 177
- care of 177
- chowder 405

- Fish:
- cleaning..... 424
 - composition..... 177, 484-85
 - cooking..... 424-26
 - cucumber sauce..... 398
 - egg sauce..... 398
 - fried..... 425
 - place in the diet..... 176
 - what to serve with..... 178
- Fish hash..... 425
- Fish salad..... 427
- Fish and poultry..... 173-79
- Flat silver..... 268
- the use of..... 277-80
- Floating island..... 452
- Flour:
- for bread-making..... 98
 - kinds of wheat flour..... 98-100
- Flour mixtures..... 50, 370
- Flowers, as table decoration..... 303
- Foamy sauce..... 399
- Fondant..... 463
- candy centers dipped in..... 464
- Fondant roll..... 464
- Food (*see also* Composition):
- for children..... 324-33
 - for the sick..... 318-22
 - measurement of..... 222-25
 - suitable for school lunch..... 109
- Food budget, the..... 238-40
- Food laws..... 236
- Food preservation..... 335-50
- jelly making and preserving..... 346-50
 - ways of preserving foods..... 335
- Food value (*see also* Composition, and Hundred-Calorie portions):
- average serving of common foods..... 488-93
 - breakfast cereals..... 39
 - cakes..... 195
 - cheese..... 118
 - cocoa and chocolate..... 26
 - frozen desserts..... 191
 - fruits..... 492-93
 - gelatin..... 192
 - hot dishes..... 117
 - meats..... 156
 - milk..... 21
 - milk and eggs compared..... 57
 - nuts..... 493
 - potatoes..... 184
 - poultry..... 174
 - quick breads..... 51
 - rice..... 188
 - salads..... 86
 - sugar and other sweets..... 124, 493
 - vegetables..... 487, 491-92
- Food and Drugs Act, Federal..... 236
- Foodstuffs and body tissues..... 216
- Forequarter of beef..... 162
- Fork, use of..... 276, 277, 279
- Formal dinner, the..... 148
- Formal luncheon, the..... 138, 309
- Fowl (*see also* Chicken, and Poultry):
- drawing or cleaning..... 420
 - methods of cooking..... 421
 - trussing..... 421
- Frappés..... 190, 461
- French omelet..... 382
- French salad dressing..... 93, 432
- French toast..... 369
- Fresh fruit..... 357-58
- Freshness of eggs, test for..... 57
- Fried chicken..... 422
- Fried eggs..... 380
- Fried fish..... 425
- Fried foods, digestibility of..... 123
- Fried potatoes..... 393
- Fritters..... 407
- Frostings, cake..... 438
- Frozen desserts..... 190-92, 457-62
- frappés..... 461
 - ice creams..... 458-60
 - mousse..... 461
 - sherberts..... 461
 - water ices..... 460
- Frozen fruit salad..... 430
- Frozen pudding..... 191
- Fruit (*see also* Cook Book, and Preserving):
- appetizer..... 8
 - breakfast..... 14
 - buying..... 14
 - calories..... 9, 483-84
 - canned..... 12, 13
 - care of..... 14
 - composition..... 13, 483-84
 - cooking..... 15, 16
 - dried..... 11, 359
 - with cereal..... 367 - energy value..... 8
 - fresh..... 357-58
 - hundred calorie portions..... 9, 483-84
 - laxative..... 8
 - luncheon dessert..... 131
 - mineral content..... 9
 - recipes..... 357-64
 - school lunch..... 111
 - serving..... 357
 - sugar in cooking..... 17
 - time-table for canning..... 467
 - vitamins..... 9
- Fruit butter..... 395, 474

- Fruit cake..... 437
- Fruit cups..... 453
- Fruit desserts..... 130-31, 452-54
- Fruit jellies..... 455
- Fruit punch..... 304
- Fruit roll..... 130
- Fruit salads..... 429
- Fruit tapioca..... 450
- Fruit whips..... 130
- Fruits and vegetables, composition and use..... 218, 483-84, 487
- Frying:
- cleaning fowl for..... 420
- in deep fat..... 406
- Fudge..... 462
- Fuel foods..... 4
- Fuel value (*see also* Composition, Energy value, and Vitamins):
- bread..... 102
- cereals..... 39
- milk..... 23
- salads..... 88
- Garnishing, general rules for..... 302
- Gelatin desserts..... 192-93, 455-56
- Germ, in grain..... 38
- Giblets, in cleaning fowl..... 421
- Ginger-ale cup..... 363
- Ginger snaps..... 442
- Glassware, table..... 267, 268
- Glazed vegetables..... 391
- Good usage, the importance of..... 285
- Gold cakes..... 436
- Graham bread..... 412
- Grain:
- structure of..... 38
- Grape conserve..... 474
- Grape jelly..... 471
- Grape juice..... 364
- Grapes:
- composition..... 13
- skinning..... 357
- Grapefruit, serving..... 357
- Grapefruit marmalade..... 473
- Grapefruit salad..... 430
- Gravies and sauces, in meat cookery... 169
- Gravy:
- brown..... 397
- giblet..... 423
- milk..... 423
- Green peppers, stuffed..... 390
- Green salads..... 429
- Green vegetables..... 78
- Greens, cooking of..... 391
- Griddle cakes:
- sour-milk..... 372
- Griddle cakes:
- sweet-milk..... 372
- Growth and health factors, in common foods (*see also* Composition, Energy value, Food value, and Vitamins)..... 488-93
- Guest, hints for..... 282
- Gumbos..... 123, 405
- Ham:
- baked..... 417
- carving..... 208
- composition of..... 156
- Hard sauce..... 399
- Hashed brown potatoes..... 393
- Height of working surfaces, in kitchen.. 251
- Herring, smoked, composition of..... 177
- Hindquarter of beef..... 163
- Home canning..... 338-43
- equipment for..... 338
- methods..... 340
- steps..... 341
- Hominy waffles..... 372
- Honey, composition of..... 127
- Host, hints for..... 282
- Hostess, hints for..... 282
- Hot breads (*see also* Quick breads, and Yeast breads)..... 46
- Hot-pack method..... 341
- Hot vegetable dishes, for luncheon..... 82
- Hotel, the..... 312
- Hundred-Calorie portions (*see also* Calories, and One-Hundred-Calorie portions)..... 480-87
- approximate number in common foods as purchased..... 494-96
- cereal foods..... 495
- fats..... 496
- protein foods..... 495
- sugars..... 495
- vegetables and fruits..... 494
- Ice creams..... 191, 458-60
- Ice and salt, proportions for freezing desserts..... 457
- Icing, decorative, for cake..... 439
- Individual cover, the..... 287
- Infants:
- feeding..... 326, 329
- modification of milk..... 365
- Ingredients (*see also* Proportions):
- cakes..... 193, 194, 436-38
- candy-making..... 300
- custards..... 451
- ice creams..... 458
- quick breads..... 47

- Ingredients:
 yeast breads 100
- Inspection of meat, Federal 159
- Interior finish, of kitchen 248
- Invalids:
 albumenized beverages for 364
 feeding 318-22
- Invert sugar 298
- Iron:
 sources of 227
 test for 230
- Italian baked rice 403
- Italian hash 419
- Jam 350, 474
- Jelly, clear 455
- Jelly-making 346-48, 470
 extraction of juice 346
 jelly test 347
 proportion of sugar 347
 score card 348
 selection of fruit 346
- Jelly omelet 381
- Jelly, fruit, composition 13
- Junket 456
- Kisses 444
- Kitchen, the 244-59
 arrangement of equipment 249-52
 doors 247
 importance 244
 interior finish 248-49
 score card 258
 selection of equipment 252-58
 size and shape 245
 windows 245
- Knife, use of 276, 277, 279
- Knuckle of veal, carving 208
- Labor-saving devices, kitchen 256
- Lady Baltimore filling, for cakes 439
- Lamb:
 carving 210
 chart of cuts 166
 mint sauce for 398
 time for roasting 417
- Lamb chop, composition of 156
- Lamb and mutton cuts, preparation 165
- Lard, composition of 94
- Laxatives:
 fruit 8
 salads 88
 vegetables 77
 whole-wheat bread 102
- Leavens and leavening agents 47
 yeast 101
- Left-overs 120
 bread 102
 cereals 368
- Leg of lamb, carving 210
- Leg of veal, carving 208
- Lemon bread pudding 451
- Lemon ice 460
- Lemon ice cream 460
- Lemon jelly 455
- Lemon juice 364
- Lemon mint jelly 455
- Lemon pie 447
- Lemon sauce 398
- Lemon whey 363
- Lemonade 363
- Lettuce, value of 79
- Lime, daily amount needed 225
- Linens, table 264-65, 287
 removal of stains 269
- Liquid diet, for invalids 319
- Live poultry, selection of 173
- Liver and bacon 419
- Liver and onions 419
- Loaves, luncheon 404-05
- Loin, of veal, carving 208
- Loin roast of beef, carving 207
- Loin roast of pork, carving 209
- Luncheon or supper 71-144
 baked beans 404
 breads 98-105
 casserole dishes 403
 cheese dishes 401
 chicken à la King 402
 chowders 405
 comparison with dinner desserts 190
 creamed dishes 403, 405
 desserts 126-33
 foods fried in deep fat 406
 formal 309
 gumbo 405
 hot dishes 117-25
 hotel 313
 luncheon loaves 404
 main dish 401-09
 menus 71-76
 omelets 401
 preparing and serving 134-44
 relation to other meals 73
 salads 88-97
 sandwiches 409
 school lunch 106-16
 shellfish 408
 soufflés 401
 table, how to set the 289, 290
 types 136
 vegetables 77-87, 402

- Luncheon or supper:
 vegetables served in comparison with
 dinner..... 183
- Macaroni..... 119, 367
- Macaroni and cheese..... 402
- Macaroon ice cream..... 460
- Mackerel, composition of..... 177
- Maid service, at table..... 290
- Main hot dish, for luncheon or supper
 (*see also* Luncheon)..... 117-23
- cheese..... 118
- food value..... 117
- macaroni and spaghetti..... 119
- preparing..... 120
- recipes..... 401-09
- shellfish..... 119
- variety..... 117
- vegetables..... 82
- Maple sugar, composition of..... 127
- Marguerites..... 444
- Marinating, in preparation of salads..... 92
- Marketing..... 64, 232-40
- buying specific foods..... 235
- general suggestions..... 234
- luncheon or supper..... 137
- stores..... 232, 233
- Marmalade..... 349, 473
- Mashed vegetables..... 389
- Mayonnaise salad dressing..... 93, 432
- Meal time, drinking water at..... 30
- Meals (*see also* Breakfast, Dinner, and
 Luncheon):
- for children..... 329-30
- selection and serving of foods..... 228
- Measures..... 353-56
- Meat..... 155-70, 219, 484-85
- breakfast..... 60
- buying..... 160-69
- care of..... 159
- composition..... 156
- cooking..... 169-70, 415-19
- digestibility..... 158
- kinds..... 155
- place in the diet..... 158
- ways of reducing expenditure for..... 170
- why we like..... 155
- Meat loaf..... 404
- Meat pie..... 418
- Meat salads..... 427
- Meat stock..... 384
- Meat and dumplings..... 418
- Meat and vegetable stew..... 418
- Menus (*see also* Breakfast, Dinner, and
 Luncheon):
- fish..... 176
- Menus:
- formal luncheon..... 309
- picnic..... 308
- points that make them attractive..... 145
- Thanksgiving and Christmas..... 307
- Meringue for lemon pie..... 447
- Meters, gas and electric..... 257
- Mild vegetables..... 78
- Milk (*see also* Composition)..... 19-26, 219, 483
- breakfast..... 24
- calories..... 23
- carbohydrate..... 22
- care of..... 24
- cocoa and chocolate..... 25
- composition..... 19, 25
- cookery..... 24
- dried..... 400
- evaporated..... 400
- fat in..... 21
- food value..... 21
- fuel or energy value..... 23
- minerals..... 22
- modification for infants..... 365
- Pasteurization..... 20
- products..... 23
- protein..... 21
- regulations..... 20
- vitamins..... 23
- Milk shakes..... 363
- Milk sherbet..... 191, 461
- Milk toast..... 369
- Mineral ash, test for..... 229
- Minerals (*see also* Composition)..... 488-93
- bread..... 102
- cabbage, carrots, lettuce, potatoes,
 spinach, and tomatoes..... 79
- common foods..... 109
- eggs..... 55, 57
- fruit..... 9
- meats..... 157
- milk..... 20, 22
- potatoes..... 185
- salads..... 88
- vegetables..... 77, 79, 82
- Mint ice..... 460
- Mint orange jelly..... 472
- Mint sauce..... 398
- Mixing:
- butter cakes, methods..... 435
- custards..... 451
- sponge cakes..... 440
- Mock Hollandaise sauce..... 397
- Modification of milk for infants..... 365
- Modifications, in cake-making..... 194
- Molasses, composition of..... 127
- Molds, a cause of the spoiling of foods.. 336

- Monosaccharides 42
 Mousse 191, 461
 Muffin method, of mixing butter cakes 435
 Muffins:
 Southern cornmeal 376
 standard recipe 373
 Mush, fried 368
 Mushroom sauce 397
 Mutton, time for roasting 417
 Mutton and lamb cuts 165

 Napkins 265
 etiquette of 281
 Noodle soup 385
 Nut bread 376, 412
 in sandwiches 414
 Nut cake 437
 Nut confections 301
 Nut and raisin bread 412
 Nuts as food 90
 composition 91
 salted 466
 Nutritive value, (*see* Composition,
 Energy value and Food value)

 Oatmeal bread 412
 Oatmeal cookies 442
 Oatmeal muffins 373
 Oats, composition of 40
 Occupations, daily energy requirements
 of 223
 Olive oil, composition of 94
 Omelets 122, 380-81, 401
 creamy 382
 French 382
 puffy 381
 One-crust apple pie 446
 One-Hundred-Calorie portions (*see also*
 Calories, and Hundred-Calorie
 portions) 480-87
 cereals 39
 eggs 55
 fruit 9
 milk and its products 23
 Onion, composition 83
 Open sandwiches 409
 Open-kettle method, of home canning . . 340
 Orange Bavarian 456
 Orange frosting 438
 Orange ice 460
 Orange ice cream 460
 Orange jelly 455
 Orange juice 364
 Orange marmalade 473
 Orange mint jelly 455
 Orange omelet 381
 Orange-peel creams 464
 Orange salad 430
 Orangeade 363
 Oranges, serving 357
 Oriental punch 364
 Oven canning 470
 Oven temperatures. *See* Temperatures.
 Oysters 119
 composition of 177
 fried 408
 loaf 404
 scalloped 408
 stew 386
 stuffing for chicken, turkey 423

 Packing candy 300
 Pan-broiling 415, 416
 Pan-frying 415
 Pantries, kitchen 251
 Parboiling vegetables 389
 Parfaits 191
 Parker House rolls 412
 Parsnip, composition 83
 Party refreshments, suggested 309, 310
 Pasteurization, of milk 20
 Pastry 131
 cookery 445-48
 Peach cobbler *See* 446
 Peach ice cream 459
 Peach jam 474
 Peaches, preserved 473
 Peanut butter, composition of 91
 Peanut candy 465
 Peanut cookies 442
 Pear salad 430
 Pears, preserved 473
 Pectin, testing in jelly-making 346
 Pectin extracts and their use 347, 471-72
 Peppermint creams 463
 Peppermint ice cream 460
 Perfection salad, fruit or vegetable 431
 Phosphorus:
 sources 490-93
 test for 230
 Pickled beets, time-table for canning . . . 467
 Picnic menus 307-09
 Pies, kinds of 445
 Pimentos, time-table for canning 467
 Pineapple:
 serving 357
 with cottage cheese salad 428
 Pineapple beverage 363
 Pineapple ice 460
 Pinoche 463
 Plain omelet 380
 Plain pastry 445

- Plain sponge cake..... 440
- Planning:
- breakfast..... 63
 - dinner..... 145-51
 - luncheon or supper..... 72-74, 134
 - three meals a day..... 145
- Plum jelly..... 471
- Plum pudding..... 449
- Poached eggs..... 379
- Pocketbook rolls..... 412
- Polysaccharides..... 42
- Popovers..... 371
- Pork:
- carving..... 208
 - chart of cuts..... 167
 - time for roasting..... 417
- Pork chop, composition of..... 156
- Pork cuts..... 168
- Posture, at the table..... 275
- Potatoes:
- au gratin..... 392
 - baked..... 393
 - composition and food value..... 79, 83, 184
 - Duchess..... 394
 - fried..... 393
 - hashed brown..... 393
 - scalloped..... 392
 - stuffed..... 393
 - ways of preparing..... 185
- Potato balls..... 395
- Potato bread..... 412
- Potato muffins..... 373
- Potato salad..... 429
- Poultry..... 173
- composition and food value..... 174
 - cooking..... 174
 - dressing..... 174
- Poultry and fish..... 173-79
- cookery..... 420-26
- Preparation:
- cake-making..... 194
 - desserts for luncheon..... 130
 - forequarter of beef..... 162
 - fruit for breakfast..... 14
 - hindquarter of beef..... 163
 - lamb and mutton cuts..... 165
 - mixture to be frozen for ices..... 458
 - pork cuts..... 168
 - salads..... 91-93
 - shellfish..... 120
 - tea and coffee..... 32
 - vegetables..... 387-89
- Preparation and serving:
- dinner..... 200-13
 - luncheon or supper..... 134-41
- Pre-school child, feeding the..... 328
- Preservatives, for foods..... 335
- Preserves..... 348-50, 473-75
- Preserving. *See* Canning.
- Pressure canner:
- home canning..... 342
 - time-table for canning non-acid vegetables..... 469-70
- Pressure cooker:
- in cooking cereals..... 366
 - parts..... 339
- Processing, in home canning..... 342
- Proportions (*see also* Cook Book, and Ingredients):
- cakes..... 193, 194, 435
 - cake fillings and frostings..... 438
 - candy..... 300
 - ice and salt in freezing desserts..... 457
 - jam..... 474
 - mousse..... 461
 - quick breads..... 48, 370
 - sauces and gravies..... 396
 - sponge cakes..... 440
 - uncooked fruit whips..... 452
 - water ices..... 460
- Protective foods..... 4, 109, 488-93
- Proteins (*see also* Food values, and Hundred-Calorie portions):
- cereals..... 39
 - common foods..... 109, 219, 480-93
 - eggs..... 55, 56
 - foods depended upon for..... 495
 - meats..... 156
 - milk..... 20, 21
 - potatoes..... 184
 - poultry..... 174
 - salads..... 88
 - tests for..... 229
- Prune conserve..... 475
- Prune whip..... 452
- Prunes:
- stewed or steamed..... 359
 - stuffed..... 464
 - with cottage cheese salad..... 428
- Pudding sauces..... 398-400
- Puddings, as luncheon dessert..... 130
- Puddings, custards and fruit desserts..... 130, 395, 449-54
- Puffs, vegetable..... 390
- Puffy omelets..... 381
- Punch:
- frozen..... 191
 - fruit..... 364
 - Oriental..... 364
- Quick breads:
- breakfast..... 47

- Quick breads:
 luncheon or supper..... 102
 recipes.....369-77
- Rabbit, Welsh..... 401
- Raisin bread..... 412
- Raisin fudge..... 463
- Raisins:
 composition..... 13
 steamed..... 360
- Ramekins:
 oysters in..... 408
 vegetables in..... 394
- Raspberry ice..... 460
- Raspberry jam..... 474
- Raspberry mousse..... 461
- Receptions and teas..... 310
- Recipes. *See* Cook Book, and names of various dishes.
- Refreshments, party..... 309
- Refrigeration, a way of preserving foods 335
- Refrigerator, the..... 253, 254
- Regulating foods..... 4, 488-93
- Regulations:
 food..... 237
 meat..... 160
 milk..... 20
- Regulatory foods..... 109
- Removing cakes from pans..... 436, 441
- Rib roast of beef, carving..... 207
- Rice..... 186
 composition..... 40
 Italian baked..... 403
- Rice pudding..... 450
- Rice waffles..... 372
- Rice and cheese..... 402
- Roast beef, carving..... 207
- Roast chicken..... 422
 carving..... 212
- Roast lamb, crown, carving..... 211
- Roast loin of pork, carving..... 209
- Roast pork, crown, carving..... 211
- Roast turkey, carving..... 212
- Roasting..... 415, 416
 cleaning fowl for..... 420
- Rolled chocolate cookies..... 443
- Rolled rib roast of beef, carving..... 207
- Rolled wafers..... 443
- Rolls..... 412
 in sandwiches..... 414
- Roquefort dressing..... 432
- Round roast of beef, carving..... 207
- Rump roast, of beef, carving..... 207
- Russian style, of table service..... 284
- Rye, composition of..... 60
- Saddle of lamb or mutton, carving..... 211
- Salad dressings..... 93, 432
- Salads:
 accompaniments for..... 93
 cheese and egg..... 428
 desserts to follow..... 90
 dinner..... 187
 fruit..... 429
 gelatin..... 430
 materials..... 89
 meat..... 427
 minerals..... 88
 nuts as food..... 90
 vegetable..... 428
 vitamins..... 88
- Salmon loaf..... 404
- Salted nuts..... 466
- Sandwiches:
 accompaniments to salads..... 433
 American cheese..... 414
 butter..... 413
 celery..... 413
 chicken..... 414
 chopped celery..... 413
 chopped crisp bacon..... 413
 chopped peanuts..... 413
 chopped green pepper..... 413
 club..... 409
 combination..... 413
 cottage cheese..... 414
 cream cheese..... 413
 date..... 413
 ginger, preserved..... 413
 ham..... 414
 jelly..... 414
 nut..... 414
 olive..... 413
 open..... 409
 raisin..... 414
 school lunch..... 110
 sliced tomatoes and mayonnaise..... 413
 toasted..... 409
- Sauces..... 396-400
 barbecue..... 423
 brown..... 397
 butter..... 398
 butterscotch..... 399
 caramel..... 399
 cheese..... 397
 Chili..... 475
 chocolate..... 399
 custard..... 399
 foamy..... 399
 hard..... 399
 lemon..... 398
 mock Hollandaise..... 397
 mushroom..... 307

- Sauces:
- pudding 398
 - strawberry 399
 - tender meats 417
 - tomato 397
 - white 383
- Sautéd tomatoes 393
- Sautéing 415
- Scalloped apples 451
- Scalloped eggs 379
- Scalloped fish 425
- Scalloped oysters 408
- Scalloped vegetables 390, 391
- School child, feeding the 328, 330
- School lunch, the 106-12
- foods needed by boys and girls 109
 - importance 106-08
 - lunch brought from home 110-12
 - school cafeteria 110
- School lunchroom, courtesy in 283
- Score card:
- jelly 348
 - kitchen 258
 - yeast breads 100
- Scrambled eggs 380
- Seating, at the table 294
- Service, table (*see also* Breakfast, Dinner, and Luncheon) 285-94
- carving 203-13
 - etiquette 275
 - seating at the table 294
 - serving the meal 291
 - setting the table 286
- Servings, approximate number in common measures 355
- Setting the table 286-91
- breakfast 288
 - dinner 290
 - luncheon 289
- Shellfish 119-20, 408
- buying 120
 - preparation 120
- Shelves, kitchen 252
- Sherbet 191, 461
- Shortcakes 130, 374, 453
- Shortening 49
- Shrimp, fried 408
- Shrimp salad 427
- Silver:
- care of 268
 - required for breakfast 62
 - the use of 277-80
- Sink, kitchen 252
- Sirup, for waffles or griddlecakes 373
- Skim milk, composition of 25
- Soda biscuit 373
- Soda recipes, in making quick breads 49
- Soft ball candies 462
- Soft custard 451
- Soft diet, for invalids 319
- Soufflés 121, 401
- Soups:
- clear 384
 - cream 383
 - making from bones 169
 - recipes 383-86
 - stock 384
 - vegetable 82, 384
- Southern corn dodgers 377
- Southern cornmeal muffins 376
- Spaghetti 119
- Spanish dressing 432
- Spanish omelet 382
- Spice cake 437
- Spinach, value of 79
- Spoiling, of foods, causes of 336
- Sponge cakes 130, 440-41
- Sponge method, in making bread 410
- Sponges, gelatin 456
- Spoon bread 375
- Spoons, use of 280, 281
- Stains, removal from table linen 269
- Standing rib roast of beef, carving 207
- Starch:
- principles of cookery 41
 - test for 229
- Starchy vegetables 78
- Steak, beef:
- broiled 416
 - composition of 156
 - Swiss 418
- Steamed puddings 449
- Steamed vegetables 392
- Stew:
- meat and vegetable 418
 - oyster 386
- Stewed chicken 423
- Stock soups 384, 385
- Storage, of eggs 58
- Storing, canned fruits and vegetables 343
- Stove, kitchen 252
- Straight-dough method, in making bread 410
- Strawberry, composition 13
- Strawberry Bavarian 456
- Strawberry ice 460
- Strawberry jam 474
- Strawberry mousse 461
- Strawberry salad 430
- Strawberry sauce 399
- Strong vegetables 78
- Strong-flavored vegetables, boiling 389
- Stuffed celery 434

- Stuffed dates..... 464
 Stuffed eggs..... 428
 Stuffed potatoes, baked..... 393
 Stuffed prunes..... 464
 Stuffed tomatoes..... 428
 Stuffed vegetables..... 122, 390
 Stuffing:
 baked fish..... 426
 chicken..... 422
 turkey..... 422
 Substitutions, in cake making (*see also*
 Ingredients)..... 194
 Sugar:
 addition to cooked fruit..... 17
 composition..... 127, 220
 food value..... 128
 place in diet..... 128
 principles of cookery..... 297
 production and manufacture..... 126
 source of protein..... 495
 test for..... 229
 Sugars:
 complex..... 42
 double..... 42
 simple..... 42
 Sundaes..... 191
 Supper, or luncheon (*see Luncheon*) 71, 144
 Swedish wafers..... 434
 Sweetbreads..... 405
 Sweet pickled peaches, pears, or crab-
 apples..... 473
 Sweet potatoes..... 185
 with marshmallows..... 394
 Swiss eggs..... 380
 Swiss steak..... 418
 Table:
 set for breakfast..... 62, 288
 set for dinner..... 290
 set for formal dinner..... 200
 set for formal luncheon..... 139
 set for luncheon..... 289
 Table, kitchen..... 253
 Table decorations..... 291
 Table linen..... 287
 Table service..... 285-94
 Tapioca custard..... 450
 Tartar sauce..... 433
 Tarts..... 448
 Tea..... 31-33
 hot..... 362
 iced..... 362
 Teas and receptions..... 310
 Temperatures, oven:
 baking flour mixtures..... 370
 breakfast breads..... 50, 51
 Temperatures, oven:
 cake-baking..... 436
 sugar cookery..... 297, 298
 Tender cuts of meat, cooking..... 169, 415
 Tenderloin of beef, carving..... 206
 Testing cake..... 195, 441
 Thanksgiving dinner..... 306
 Thin crisps..... 443
 Thousand Island dressing..... 93, 433
 Timbale cases..... 403
 Time-table:
 baking flour mixtures..... 370
 broiling and pan-broiling..... 416
 cake-baking..... 436
 canning fruits..... 467
 canning non-acid vegetables with
 pressure canner..... 469-70
 cereal..... 366
 roasting..... 416
 vegetable..... 387
 Tissue-building factors, in common
 foods..... 488-93
 Toast..... 46, 47, 369
 cinnamon..... 369
 French..... 369
 milk..... 369
 sweet..... 369
 Toast cases..... 403
 Toast sticks..... 369
 Toasted sandwiches..... 409
 Toddler, feeding the..... 327, 330
 Tomatoes:
 broiled or sautéed..... 393
 scalloped..... 392
 time-table for canning..... 467
 value of..... 79
 Tomato jelly, for salad..... 431
 Tomato sauce..... 397
 Tomato and lettuce salad..... 428
 Tongue, of veal, carving..... 208
 Tough meats, cooking..... 169, 417
 Trout, broiled..... 424
 Trussing, of fowl..... 421
 Turkey, roast:
 carving..... 212
 stuffing for..... 422
 Turkey salad..... 427
 Turnovers, meat..... 375
 Tutti frutti..... 463
 Two crusts, standard recipe for..... 445
 Uncooked frosting..... 438
 Uncooked fruit whips..... 452
 Utensils, kitchen..... 253-56
 Variety, in main hot dish for luncheon or
 supper..... 117

- Veal:
 carving..... 208
 chart of cuts..... 164
 time for roasting..... 417
 Veal chops, breaded..... 416
 Veal salad..... 427
 Vegetables:
 baked..... 383
 buying..... 80
 care of..... 80
 classification..... 78
 composition..... 83
 cookery..... 82
 cooking of spinach and other
 greens..... 391
 dried..... 394
 egg sauce..... 398
 energy value..... 79
 hot dishes..... 82
 how they aid health..... 77
 luncheon..... 77-87
 methods of cooking..... 389
 preparation..... 387
 ramekins..... 394
 recipes..... 387-95
 school lunch..... 111
 steamed..... 392
 stuffed..... 122
 time-table for cooking..... 387
 Vegetable salads..... 428
 Vegetable soups..... 384
 Vegetables and fruits, composition and
 use..... 218, 494
 Vitamins..... 488-93
 bread..... 102
 cabbage, carrots, lettuce, potatoes,
 spinach, and tomatoes..... 79
 common foods..... 109
 eggs..... 55, 57
 fruit..... 9-11
 meats..... 157
 milk..... 20, 23
 potatoes..... 184
 salads..... 88
 tables..... 217, 488-93
 vegetables..... 77, 79, 82
 Waffles:
 cream..... 372
 sour-milk..... 371
 sweet-milk..... 371
 Waiting on table, rules for..... 292
 Waitress:
 service by..... 290
 service without..... 292
 Waldorf salad..... 430
 Walnut, composition of..... 91
 Washington cream pie..... 437
 Water:
 in the body..... 29
 in cereals..... 39
 in common foods..... 109
 in cookery..... 30
 in eggs..... 55
 in milk..... 20
 in potatoes..... 184
 test for..... 230
 when to drink..... 30
 Water-bath canners..... 338, 342
 Water ices..... 190, 460-61
 Water supply, safe..... 30
 Weight-height tables:
 boys..... 477
 girls..... 478
 men..... 479
 women..... 479
 Weights, standard..... 354
 Welsh rabbit..... 401
 Wheat:
 composition of..... 40
 diagram of grain..... 38
 Wheat flour, kinds of..... 98-100
 Whipped cream..... 400
 mayonnaise dressing..... 432
 White of egg, composition of..... 55
 in invalid beverages..... 365
 White cakes..... 436
 White fruit cake..... 437
 White sauce..... 383, 396
 Whole milk, composition of..... 25
 Whole-wheat bread..... 412
 Wintergreen creams..... 463
 Working areas, in kitchen..... 249
 Working surfaces, in kitchen, height of..... 251
 Xanthoproteic test, for protein..... 229
 Yeast:
 a cause of the spoiling of foods..... 336
 leavening agent..... 101
 Yeast breads:
 ingredients for..... 100
 plain light bread..... 410
 rolls and sandwiches..... 410-14
 score card..... 100
 Yolk of egg, composition of..... 55
 in invalid beverages..... 365



$\frac{1}{4}$ cup of KLIM to 1 cup of water



