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## COMPUTING FOOD FOR AN AVERAGE AMERICAN FAMILY

By Lucy Cordiner, Division of Agricultural Extension

The present high price of food stuffs makes it necessary for housewives to acquaint themselves with the quantity of materials required to meet the physical needs of the various members of the family and to formulate a weekly ration, or list of supplies and quantities to be purchased.

With such a plan it has been found that a family can be more efficiently and more cheaply fed, and that there is less waste. The rations given in the following pages have been found practical and are recommended for the use of housewives and others who purchase for families.

The body requires many different kinds of food in order that all its parts, the skin, the muscles, the bones, and the various glands may be built up and kept in repair. It is necessary, too, that all the fluids of the body, such as the blood, the digestive juices, and the fluid in the joints, be of the proper composition and healthy. When for any reason the types of food materials are restricted, the body loses its power of resistance, ceases to grow or to be properly repaired, and becomes a prey to disease. The quantity of food required differs according to the age, the sex, and the amount of work done by each individual. A man lumbering in the northern woods requires far more food than one who sits on a bench and mends shoes. The boy engaged in playing football and exercising in the gymnasium requires more food than one who takes no such exercise, but works in an office or store.

### Foods Requiring Special Storage Space

It is frequently advisable to buy supplies for a period of several months as prices are lower when large quantities are purchased. If this is done, special means of storing should be available. Potatoes, cabbages, onions, and root vegetables can be purchased at reduced prices in the fall if quantities exceeding a bushel be bought. They should be kept in a cool dry place. Potatoes may be kept in a bin or box. Cabbages may be wrapped in paper and stored root end up, on a shelf. Roots may be buried in sand in a box. If it is impossible to buy enough for the entire winter, it may be a matter of economy to buy for a month.

Flour and cereals should be kept in metal cans or bins.

Sugar and salt should be kept in cans or jars which can be closely covered.

Fats should be kept in metal pails or glass jars away from all substances of pronounced odor.

Canned goods and cured meats may be kept in any dry cool place.

**Some Foods of Good Value Which May Be Purchased at Relatively Low Prices**

Broken rice	Bread two days old
Ungraded (but clean) beans and peas	Buttermilk
Eggs not sorted as to color and size	Skim milk
Bulk breakfast foods	

**Some Foods Which Are Always Relatively Expensive**

Ready-to-serve breakfast foods  
Meats and vegetables prepared at a delicatessen or cooked-food shop.

**Some Cheap Portions of Meat Which Require Care in Cooking**

The heel (a solid boneless piece of beef cut from the lower part of the round or hind quarter)  
The heart  
The kidneys  
The tripe

**Some Foods Which May Be Kept in Relatively Large Quantities**

Cereals	Salt
Flour	Vinegar
Pepper	Baking powder
Sugar and syrup	Baking soda
Staple vegetables, canned goods, cured meats, etc.	

**Some Foods Which Can Be Kept Only a Relatively Short Time**

Fresh milk  
Fish and meat. These should be purchased the day they are to be used unless there is a very good place sufficiently cold in which to store them.  
Compressed yeast, fresh fruits, green vegetables, etc.

**Some Materials Which Have No Value as Food But Which Give Flavor and Make the Diet More Enjoyable**

Pepper	Spices of all kinds
Vinegar	

**Some Beverages Which Should Not Be Allowed for Children**

Tea	Coffee
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**Some Inexpensive Cereals Which Are Particularly Valuable as Breakfast Foods**

Oatmeal	Cracked wheat
Cornmeal	Rolled barley
Hominy or samp	Rolled rye
Pearl barley	

**Some Cereals of Value in the Preparation of Desserts**

Rice	Dried bread crumbs
Cornmeal	Cornstarch
Tapioca	

TABLE I. SOME COMMON FOODS GROUPED ACCORDING TO CHIEF FOOD CONSTITUENT\*

(A well-planned meal should have each of these groups represented.)

Protien foods	Starchy foods	Sugary foods	Fatty foods	Fruits and watery vegetables	
Lean meat	Bread	Sugar	Butter	Apples	Greens
Poultry	Crackers	Sirup	Cream	Oranges	String beans
Fish	Macaroni	Honey	Lard	Berries	Green peas
Oysters	Tapioca	Jelly	Drippings	Pears	Cabbage
Milk	Rice	Candy	Olive oil	Melons	Tomatoes
Cheese	Cereal breakfast	Preserves	Cottonseed and	Rhubarb	Turnips
Eggs	foods	Marmalade	salad oils	Dates	Asparagus
Legumes	Hominy		Fat meat	Figs	Salsify
Dried peas,	Bananas		Oleomargarine	Raisins	Squash
beans,	Starchy vege-		Bacon	Prunes	Lettuce
soy beans,	tables		Chocolate	Apricots	Carrots
peanuts					
Nuts					

\* Tentative subdivision of foods suggested by States Relation Service, U. S. Dept. of Agr.

### SOME FOOD FACTS

**Milk.**—Milk is a most important food. Children must have it, adults need it. Never give a child less than one-half pint of milk each day. His body needs from a pint to a quart. Adults need half a pint each day. Clean milk protects health and stimulates growth. There is no substitute for milk.

**Meat.**—Eggs, cheese, or fish may be used instead of meat.

**Vegetables.**—Children need vegetables because they contain lime, iron, and other minerals. Root vegetables such as carrots, beets, parsnips, and rutabagas are necessary. Green vegetables should be served often, especially if there are children in the family. They contain essential minerals and are better than medicine in promoting health.

**Fruits.**—Fruits are needed because of the minerals they contain as well as for sweets. For small children it is advisable to purchase fruits which are to be cooked as they are less likely to cause digestive troubles.

The balanced ration is recognized as absolutely essential to the health and physical development of livestock. It is equally essential to the welfare of the human family but it is commonly thought difficult to plan balanced meals. All foods are readily placed in one of the five essential groups and a recognition of this grouping makes the planning of balanced meals comparatively easy. Only by recognizing that proteins, starches, sugars, fats, and minerals must be represented in the diet, and by knowing the food stuffs which are rich in these will we overcome the present popular diet which results in children who are undernourished and men and women who are lacking in disease-resisting power. A study of Table I will familiarize the housewife with the proper classification of common foods. One or more foods from each of the five groups should appear on the table daily.

### FOOD VALUES

The simplest unit by which the energy value of foods may be measured is the calorie. Housewives have been slow to study and utilize this unit of measuring food efficiency. Table II shows the caloric value of the more common foods. Its importance is chiefly as a reference. It also enables one easily to compute the energy value of any foods or groups of foods.

TABLE II. CALORIC VALUE OF VARIOUS FOOD STUFFS\*

Foods	Calories per ounce	Calories per pound
Butter .....	217.9	3,488
Peanut butter .....	171.3	2,487
Lard .....	283.5	4,082
Suet .....	214.0	3,425
Bread, white.....	73.4	1,174
Cereals		
Cornmeal .....	100.8	1,613
Cornstarch .....	102.0	1,632
Hominy .....	100.5	1,608
Macaroni .....	101.5	1,624
Rolled oats .....	112.6	1,803
Rice .....	99.4	1,591
Wheat flour (patent).....	100.2	1,603
Fruits		
Apples, fresh .....	13.4	214
Bananas .....	18.1	290
Dates .....	88.6	1,416
Figs .....	89.8	1,437
Grapes .....	20.5	328
Oranges .....	10.6	169
Peaches (canned) .....	21.5	344
Pears .....	16.0	256
Prunes .....	72.6	1,161
Raisins .....	87.9	1,407
Meat		
Beef, round .....	44.3	709
Mutton, leg .....	45.0	720
Pork, loin .....	54.6	873
ham .....	67.0	1,073
bacon .....	162.3	2,597
Veal, round .....	31.4	503
shoulder .....	29.1	466
Fish, trout .....	23.3	373
pickerel .....	12.9	206
bass .....	15.6	249
Milk		
Whole .....	19.6	314
Skimmed .....	10.4	166
Buttermilk .....	10.1	162
Potatoes (as purchased).....	19.0	304
Other vegetables (as purchased)		
Dry navy beans.....	97.7	1,564
Beets .....	10.6	167
Carrots .....	9.9	159
Corn, canned .....	27.8	445
Onions .....	12.4	199
Parsnips .....	14.7	236
Peas .....	15.7	251
Potatoes .....	19.0	304
Turnips .....	7.7	124
Spinach .....	6.8	108
Lettuce .....	5.4	87
Sirup .....	81.0	1,295
Sugar .....	113.4	1,814

\* Taken from "Laboratory manual of dietetics" by Dr. Mary Swartz Rose.

Tables III to XII have been prepared with a view to suggesting balanced rations for people of different age and sex, who are engaged in different occupations. While the quantities may appear small to many, they are sufficient to meet the various physical needs described.

Method of Using Tables

Find the total amount of food needed for the week by adding the quantities required by each member of the family or group. This will give the quantity to be purchased. The caloric value given is that required by the average American of the age, sex, and activity named in the schedule.

TABLE III. BALANCED RATION FOR MAN DOING MODERATE WORK—3,300 CALORIES  
(Suitable also for active boy from 14 to 16 years)

Daily	Foods	Weekly	Monthly
¼ oz.	Butter .....	3½ oz.	.....
¼ oz.	Peanut butter .....	3½ oz.	.....
½ oz.	Cooking fats .....	3½ oz.	1¾ lbs.
12 oz.	Bread .....	6, 1-lb. loaves	.....
6 oz.	Cereals (breakfast and dessert) .....	2½ lbs.	10¼ lbs.
2 oz.	Flour for cooking .....	¾ lb.	3¼ lbs.
4 oz.	Fruit, dried and fresh .....	1¾ lbs.	7 lbs.
6 oz.	Meat (includes eggs, cheese, and fish) ..	2½ lbs.	.....
½ pt.	Milk .....	3½ pts.	.....
1 lb.	Potatoes .....	7 lbs.	28 lbs.
8 oz.	Other vegetables (suggest dividing equally between roots, onions, cabbage, and fresh green vegetables. ¼ lb. dried beans per week .....	3½ lbs.	13½ lbs.
1 oz.	Sugar .....	7 oz.	1¾ lbs.
½ oz.	Sirup .....	3½ oz.	1 lb.

TABLE IV. BALANCED RATION FOR WOMAN DOING MODERATE WORK (HOUSEWORK)—  
3,000 CALORIES  
(Suitable also for boy from 12 to 14 years)

Daily	Foods	Weekly	Monthly
½ oz.	Butter .....	3½ oz.	.....
½ oz.	Peanut butter .....	3½ oz.	.....
½ oz.	Cooking fats .....	3½ oz.	1¾ lbs.
8 oz.	Bread .....	3½ lbs.	.....
4 oz.	Cereals (breakfast and dessert) .....	1¾ lbs.	7 lbs.
2 oz.	Flour .....	14 oz.	1¾ lbs.
4 oz.	Fruit, dried and fresh .....	1¾ lbs.	7 lbs.
4 oz.	Meat .....	1¾ lbs.	.....
½ pt.	Milk .....	3½ pts.	.....
12 oz.	Potatoes .....	5¼ lbs.	21 lbs.
8 oz.	Other vegetables (suggest roots, onions, cabbage, and fresh green vegetables) ..	3½ lbs.	15½ lbs.
1 oz.	Sugar .....	7 oz.	1¾ lbs.
½ oz.	Sirup .....	3½ oz.	1 lb.

TABLE V. BALANCED RATION FOR PERSON BETWEEN 70 AND 80 YEARS—  
1,700 CALORIES

Daily	Foods	Weekly	Monthly
½ oz.	Butter .....	3½ oz.	.....
½ oz.	Peanut butter .....	3½ oz.	.....
½ oz.	Cooking fats .....	3½ oz.	1¾ lbs.
6 oz.	Bread .....	2¾ lbs.	.....
3 oz.	Cereals (breakfast and dessert).....	1½ lbs.	6¼ lbs.
2 oz.	Flour for cooking.....	¾ lb.	3½ lbs.
4 oz.	Fruit, dried and fresh.....	1¾ lbs.	7 lbs.
2 oz.	Meat (every other day or 3 times a week) .....	¾ lb.	.....
1/12 doz.	Eggs (4 times a week).....	1/3 doz.	.....
½ pt.	Milk .....	3½ pts.	.....
10 oz.	Potatoes .....	4½ lbs.	18 lbs.
6 oz.	Other vegetables .....	1½ lbs.	5¼ lbs.
1 oz.	Sugar .....	7 oz.	1¾ lbs.

TABLE VI. BALANCED RATION FOR GIRL FROM 12 TO 16 YEARS OR WOMAN DOING  
SUCH WORK AS SEWING—2,200 CALORIES

Daily	Foods	Weekly	Monthly
½ oz.	Butter .....	3½ oz.	.....
½ oz.	Peanut butter .....	3½ oz.	.....
½ oz.	Cooking fats .....	3½ oz.	1¾ lbs.
8 oz.	Bread .....	4 lbs.	.....
3 oz.	Cereals (breakfast and dessert).....	1¾ lbs.	5 lbs.
2 oz.	Flour for cooking.....	¾ lb.	3½ lbs.
8 oz.	Fruit .....	3½ lbs.	.....
4 oz.	Meat (includes eggs and cheese).....	1¾ lbs.	.....
½ pt.	Milk .....	3½ pts.	.....
¾ lb.	Potatoes .....	5¼ lbs.	21 lbs.
6 oz.	Other vegetables .....	2½ lbs.	10 lbs.
1 oz.	Sugar .....	7 oz.	1¾ lbs.
½ oz.	Sirup .....	3½ oz.	1 lb.

TABLE VII. BALANCED RATION FOR CHILD FROM 9 TO 12 YEARS—2,300 CALORIES

Daily	Foods	Weekly	Monthly
½ oz.	Butter .....	3½ oz.	.....
½ oz.	Peanut butter .....	3½ oz.	.....
	Cooking fats .....	2 oz.	¾ lb.
8 oz.	Bread .....	4 lbs.	.....
3 oz.	Cereals (breakfast and dessert).....	1¾ lbs.	5 lbs.
2 oz.	Flour for cooking.....	¾ lb.	3½ lbs.
8 oz.	Fruit .....	3½ lbs.	.....
4 oz.	Meat (includes egg and cheese).....	1¾ lbs.	.....
1 ½ pts.	Milk .....	5¼ qts.	.....
¾ lb.	Potatoes .....	5¼ lbs.	21 lbs.
6 oz.	Other vegetables .....	2½ lbs.	10 lbs.
1 oz.	Sugar .....	7 oz.	1¾ lbs.
½ oz.	Sirup .....	3½ oz.	1 lb.

TABLE VIII. BALANCED RATION FOR CHILD FROM 6 TO 9 YEARS—1,900 CALORIES

Daily	Foods	Weekly	Monthly
½ oz.	Butter .....	¼ lb.	.....
½ oz.	Peanut butter .....	¼ lb.	.....
2½ oz.	Cereals .....	1½ lbs.	4¼ lbs.
4½ oz.	Bread .....	2 lbs.	.....
4 oz.	Fruit .....	1¾ lbs.	6 lbs.
1 oz.	Meat .....	½ lb.	.....
1 pt. to 1 qt.	Milk .....	7 pts. to 7 qts.	.....
6 oz.	Potatoes .....	3 lbs.	12 lbs.
6 oz.	Other vegetables .....	2½ lbs.	10 lbs.
1 oz.	Sugar .....	7 oz.	1¾ lbs.
½ oz.	Sirup or jam.....	4 oz.	1 lb.

TABLE IX. BALANCED RATION FOR CHILD FROM 4 TO 6 YEARS—1,600 CALORIES

Daily	Foods	Weekly	Monthly
1 oz.	Butter .....	7 oz.	.....
3 oz.	Cereals .....	1½ lbs.	6¼ lbs.
2¼ oz.	Bread .....	1 lb.	4 lbs.
1 oz.	Fruit, dried .....	½ lb.	2 lbs.
1 oz.	Meat .....	½ lb.	.....
1 pt. to 1 qt.	Milk .....	7 pts. to 7 qts.	.....
4 oz.	Potatoes .....	2 lbs.	8 lbs.
3 oz.	Other vegetables .....	2 lbs.	8 lbs.
½ oz.	Sugar .....	¾ lb.	1 lb.
1 oz.	Sirup or jam.....	8 oz.	2 pts.

TABLE X. BALANCED RATION FOR CHILD FROM 2 TO 4 YEARS—1,400 CALORIES

Daily	Foods	Weekly	Monthly
1 oz.	Butter .....	7 oz.	.....
2 oz.	Cereals .....	1¼ lbs.	5 lbs.
2¼ oz.	Bread .....	1 lb.	4 lbs.
1 oz.	Fruit, dried .....	7 oz.	1¾ lbs.
1 oz.	Meat or eggs.....	¾ lb.	.....
1 pt.	Milk .....	3½ qts.	.....
4 oz.	Potatoes .....	2 lbs.	8 lbs.
3 oz.	Other vegetables .....	1¾ lbs.	7 lbs.
¾ oz.	Sugar .....	¾ lb.	½ lb.
½ oz.	Sirup .....	4 oz.	1 pt.

TABLE XI. WINTER RATION SUITABLE FOR A MAN DOING VIGOROUS OUTDOOR WORK  
IN EXTREMELY COLD CLIMATE—5,500 CALORIES

	Weekly
Butter .....	1 lb.
Cereals (oatmeal, cornmeal, and rice).....	3½ lbs.
Fat .....	1 lb.
Flour .....	7 lbs.
Fruits (raisins, apricots, apples, and prunes.....)	1 lb.
Meat and fish.....	4 lbs.
Milk .....	2 qts.
Dried beans or peas.....	1¾ lbs.
Potatoes .....	24 lbs. to ½ bu.
Root vegetables 9 lbs, onions and cabbage 3 lbs.....	12 lbs.
Sugar .....	¾ lb.
Sirup .....	¾ lb.
Coffee .....	¾ lb.

Table XII is an example of a family ration computed by adding the rations shown in Tables III, IV, V, VIII, and IX, a total daily allowance of 11,400 calories, for a man and wife doing moderate work, and children of 8 and 5 years and grandfather aged 70 years.

TABLE XII. RATION FOR MAN AND WIFE, CHILDREN 5 AND 12 YEARS, AND  
GRANDFATHER 70 YEARS

(Compiled from Tables III, IV, V, VIII, and IX)

Daily	Foods	Weekly	Monthly
3 oz.	Butter .....	1 lb. 5 oz.	5¼ lbs.
2 oz.	Peanut butter or substitute.....	14 oz.	3½ lbs.
2 oz.	Cooking fats .....	14 oz.	3½ lbs.
2 lbs.	Bread .....	14 lbs.	.....
1¼ lbs.	Cereals* .....	10½ lbs.	42 lbs.
8 oz.	Flour for cooking.....	3½ lbs.	14 lbs.
1 lb. 5 oz.	Fruit .....	9 lbs.	36 lbs.
14 oz.	Meat .....	6¼ lbs.	24½ lbs.
	Eggs†(for grandfather).....	1/3 doz. or more	.....
4 pts. or 3 qts.	Milk .....	14 to 21 qts.	.....
3¼ lbs.	Potatoes .....	23 lbs.	92 lbs.
2 lbs.	Other vegetables .....	14 lbs.	56 lbs.
4½ oz.	Sugar .....	2 lbs.	8 lbs.
2½ oz.	Sirup .....	1 pt.	4 pts.

\* Cereals used for breakfast, for dessert, and for quick breads.

† When eggs and cheese are used the quantity of meat may be reduced.