food for groups of young children cared for during the day

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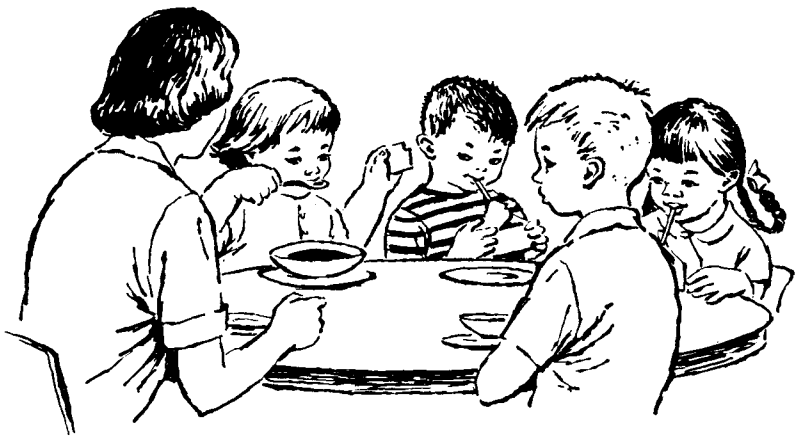

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SOCIAL and REHABILITATION SERVICE • Children's Bureau

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foreword

SINCE ITS CREATION, the Children's Bureau has been concerned that so many children who are away from their homes and mothers for a part or all of the day do not receive good substitute care. The absence of this care threatens the very foundation of the lives of many of these children. To fill this gap, communities need to assume their responsibility and make this needed care possible.

One big problem of such an undertaking is the feeding of these children so that their nutritional needs are met. A greater part of this bulletin—***Food for Groups of Young Children Cared for During the Day***—is devoted to that phase of the day-care program. However, this bulletin's help does not stop there. We in the Bureau feel that knowing how and under what conditions to serve food to children is just as important as knowing what to serve them. To reflect that thought ***Food for Groups of Young Children Cared for During the Day*** considers not only the selection and serving of food, but also stresses the importance of helping children develop good eating habits and to have pleasant associations with food and eating. The earlier children form desirable attitudes and learn to enjoy eating, the better the chances are that these positive traits will stay with them throughout their lives.

This bulletin replaces Children's Bureau Publication No. 285, ***Food for Young Children in Group Care,*** which was written by Miriam E. Lowenberg.

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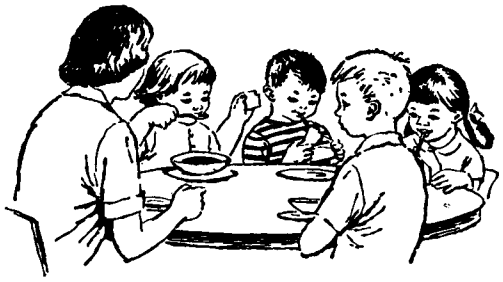

food for groups of young children cared for during the day

EACH DAY hundreds of thousands of children spend from a few hours to a full day away from their own homes with other children in day care centers, day nurseries, nursery schools, play schools, or day camps.

An important part of the program of these centers—which may be operated by a single individual, a group of individuals, an agency or an organization—is the feeding of these children.

Young children need certain foods for growth and health. Eating such foods during childhood will have a lot to do with their health in later years.

So those of you who are in charge of feeding children in day care centers have an important responsibility. It is more than just having something for the children to eat. Your job also is to select food which will meet their nutritional needs, prepare it so that its value and flavor are retained, serve it attractively, make the mealtime a pleasant sociable occasion, and help the boys and girls develop good eating habits which will stay with them throughout life.

The majority of children in these centers are between 3 and 6 years of age. This pamphlet contains suggestions to help those responsible for food service meet the food needs of these preschoolers. References, listed in the back of the pamphlet, contain suggestions for meeting the food needs of older children.

It is preferable to have one person responsible for food service. In centers with no dietitian on the staff, this may be the director or a food service supervisor, or the director may delegate the major responsibility to the cook. When the director or some other staff member shares with the cook the responsibility for planning and preparing the food, they should work closely together. Dietitians, home economists or nutritionists with local health or welfare departments, hospitals, or other community agencies may be called upon for consultation and help with special problems.

DEVELOPING GOOD EATING HABITS

LEARNING TO like food and finding eating fun depend to a great extent on the way food is offered.

Food is more than just nourishment. The atmosphere in which it is served and eaten affects the child's associations with food as much as the food itself does.

Children, even of the same age, have had different experiences with food. The eating patterns of a certain child's family may be quite different from those of the other children in the group.

Parents and staff of day care centers should work together closely in helping children learn to like the foods they need and in seeing that their needs are being met.

Children's appetites, like adults', vary from meal to meal. One day they may polish off a large plateful and the next day seem bored with the whole idea of food. Don't expect them to eat every meal with the same enthusiasm.

Small children may go through periods of wanting to eat the same food over and over, then quite suddenly will refuse to eat that particular food. These "jags" are usually temporary if there is no emphasis placed on them. They can usually be allowed to run their course.

Requiring that a specified food or amount of food be eaten may cause problems. Withholding desserts or other foods as punishment or giving them as a reward places exaggerated importance on particular foods. Desserts planned to meet part of the child's nutritional needs can be an important part of the meal.

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Make eating as easy as possible. Serve food in a form that is easy for young children to manage. Bite-size pieces and finger foods are well liked by children and suitable for small hands. Meat cut in bite-size chunks, vegetables cut in strips, and sections of fruit are easy for children to handle.

Provide dishes and eating utensils that are attractive, durable, and of suitable size and shape for small hands. Small, flat-bottom cups for water, milk, and juices are easy to hold and will help avoid many spills. Heavy-duty plastic dishes and stainless steel flatware are practical for use with small children.

Don't expect little children to eat as skillfully as adults. Prepare for some spilling by using washable tabletops, covers, or mats. As youngsters develop coordination they will learn to handle food and utensils with skill. It takes practice, encouragement, and time to learn to eat neatly and with acceptable table manners.

Provide a cheery, comfortable dining room. A bright, well-ventilated eating area, equipped with suitable child-sized tables and chairs, adds much to the child's comfort at mealtime. Seating children in small groups of four to six with an adult makes mealtime more of a family-type social occasion.

Serve food as soon as the children are at the table. Children look forward to coming to their meals and finding their places at the table. But they will get restless if they have to sit and wait for the food.

Food should be served in moderate-size portions with the understanding that seconds are available. The person who serves the plates needs to be familiar with the amounts of food each child customarily eats. This may be the cook who puts the food on the plates before they are brought to the table, or it may be a staff member serving the food "family style" at the table. A heaping plate may discourage an otherwise good appetite. On the other hand, an insecure child may need assurance that sufficient food is available if he desires larger servings or second helpings.

Introduce children to new foods. Give them the opportunity to eat a variety of foods. Giving less familiar foods gradually helps to broaden their liking for foods and to build good food habits. Introducing a new food in a very small quantity such as taste-size servings, along with a meal of familiar foods, makes children feel more friendly toward it. Don't be discouraged if the children refuse it the first time it is offered. Wait a while and offer it again.

Make mealtime a relaxed and friendly occasion. See that children get enough rest and have a daily program that is not overstimulating so they won't be tired at mealtime. Provide a quiet time just before their meals. Encourage interesting and pleasant table conversation among the boys and girls who are old enough to eat well

and talk at the same time. Discourage talking about personal dislikes for food. Children readily sense the attitudes that other children and adults who eat with them show toward their food. Good habits are often "caught rather than taught."

Small children often get restless before the meal period is over. It may be well to make legitimate excuses for them to get up and move around, such as having them take their plates from the table to a counter and bring their dessert back to the table. Such opportunities to help often please the small child and give him a sense of responsibility. Encourage children to participate when they are ready for such activity. Small pitchers of water or fruit juice are a delight to young children when they can fill their own cups or glasses.

It is surprising how few problem eaters there are in centers for children. Many factors probably contribute to this—the regularity of the meals, the convenience of serving arrangements, the example of other children enjoying their food, and the healthy hunger of youngsters who have had a busy, happy morning together. An active, healthy child usually looks forward to his meals with pleasure. There is something contagious about the enthusiasm children in groups bring to their meals. Staff and children alike enjoy this part of the day.

However, in any group of children, some undoubtedly will have eating problems. The way a child feels about himself and his world shows up quickly in his approach to food. A child's appetite may be affected by factors other than those connected with mealtime, such as his emotional security, his physical condition, and his surroundings. A lonely, unhappy child may have a poor appetite at first and later go to the opposite extreme by overeating.

Some such problems may be quickly solved when the child adjusts to his new surroundings and sees other children enjoying food in a group, when the mealtime atmosphere is happy, and when the adults do not become overanxious about his behavior.

Other problems may persist. Perhaps one had existed for some time before the child came to the center. It is important to try to understand what is causing the difficulty before attempting to change the child's behavior.

Talk the problem over with the child's parents. Together you may learn what the child is trying to express in his reaction to food. If the problem continues, the parents will likely want to seek the help of a physician. If an examination by a physician shows there is no physical basis for the difficulty, he may suggest other sources of help.

MEETING FOOD NEEDS

THE FOOD REQUIREMENTS of a child are greater in proportion to his size than those of an adult. An adult's food must supply him with energy, maintain his body processes and repair his wornout tissues. A child's food must do all these things and more. It must also build new tissues as year by year he grows taller and gains in weight. Everything a child eats should contribute toward meeting these needs.

Certain essentials in food, called nutrients, are necessary to perform these functions. These essential nutrients are proteins, fats, carbohydrates, vitamins, minerals, and water.

Most foods contain more than one of these nutrients. However, no one food furnishes all of them in adequate amounts or proper proportions to maintain health. A combination of foods is needed to provide a well-balanced diet.

To select the best from the foods available, it is well for you to be familiar with the nutrients different foods provide and what these nutrients do for the body. The chart on page 46 gives this information.

It isn't necessary to actually count up the daily amount of each nutrient in your menus, because food plans have been worked out which show the quantities of various types of foods needed to provide a well-balanced diet. A plan to meet the total day's needs is given on page 14. A plan which may be used by those centers serving only one

meal and two snacks and which meets one-third the day's needs is given on page 13. The serving sizes given in these plans should be used as guides only, rather than a firm rule. The appetites of preschoolers fluctuate. They should be encouraged to eat, but not forced to clean their plates at every meal. It is important that they learn to like good foods even if it takes time to do so.

The sample food plans may be used in planning meals for preschool children. Such plans meet most of a child's needs. As he grows older his increasing needs for proteins, vitamins, minerals, and energy may be met by serving him larger amounts of milk, meat, eggs, fruit, vegetables, enriched or whole grain bread and cereals, butter and other fats.

Vitamin D, needed throughout the growth period, is not supplied in sufficient quantity in foods. Sunshine is a good source of vitamin D. However, in most parts of the United States, children don't get enough sunshine the year round to provide the quantity of vitamin D needed for growth of their bones and teeth. Some sources of vitamin D are fish liver oil, vitamin D concentrate, and vitamin D milk. The kind and amount needed should be prescribed by a physician.

To plan menus it is well to use a menu planning form similar to that on page 15. If you are serving one meal and two snacks, you will use only that section of the form. Use prepared forms or rule off large sheets of white paper and write the menu pattern at the left of the paper.

Some commercial firms provide pads of menu planning forms without cost. Check with your wholesale distributors concerning the availability of such forms and how you might receive them. When planning, refer to the food plans on pages 13 and 14 to be sure you are including required foods.

It is possible to vary your menus and still provide good nourishment for a child. To insist upon his eating a specified food may cause feeding difficulties. Any food plan must be flexible. The actual foods selected to meet a child's needs may vary according to the foods available in different parts of the country and among people of different cultural, racial, and religious backgrounds. Green leafy vegetables may mean one kind of greens in the South and another in New England. Your choice of meat and vegetables and plan for preparing them may be quite different if your center is located in the middle of an Italian district than if it were located in a Jewish district.

Some children with special health problems require modifications of the standard menu. A center should admit these children only if it can supply the foods they need to meet the modification prescribed by a physician.

Plan each meal with the total daily needs of the children in

mind—whether the foods are eaten at home or in the center. Planning for the total day's food needs calls for cooperation with the child's parents.

The number and kind of meals and snacks served at the center will depend on the number of hours the children are present, the quantity of food eaten before they arrive, the time it is eaten, and the meals they have when they return home. The at-home and away-from-home meals should supplement each other.

In planning to meet a child's needs, it will help you and his parents to exchange information on his eating.

It is important to have a general idea of the kinds and quantities of food he has at home, as well as the time the family meals are served. The child's mother can do a better job of planning the family meals if she knows what he is eating away from home. It is a good idea to give her a copy of the weekly menus being served, or post a copy where she can see it. Also, let her know at what hours meals and snacks are served. By having this information, she can better carry out her responsibility for supplementing your menus so the total day's needs are met.

Schedule mealtimes primarily to meet the children's needs and space them so there are no unduly long periods without food. The longest span without a regular meal is usually between the evening meal and breakfast. This should be no longer than 12 to 14 hours.

Children arriving before 8 in the morning and having little or no food at home need a breakfast soon after they get to the center. Make this a substantial meal, such as fruit or juice, cereal or toast, and a glass of milk.

Children in group care from 5 to 7 hours a day should have one-third to one-half of their food needs for the day met at the center. A hot meal served at the center is preferable to a cold lunch brought from home. Children and parents often get home too late in the evening to have a substantial supper meal. Therefore, the noon meal, served at the center, should be the main meal of the day. In addition to this main meal, most young children need snacks between meals.

Food provided to children in group care 8 to 9 hours a day should furnish at least two-thirds of their day's food needs. This may be included in two regular meals and one or two snacks.

Because many children eat small quantities of food, they need regularly scheduled snacks between meals. Snacks are not given to encourage nibbling between meals. Snack time should be a regularly planned time and include foods which contribute to the child's food needs. Snacks should be simple and nourishing, served at least 1 or 1½ hours before regular meals, and of such character that they won't interfere with the child's appetite for regular meals.

Because of the longer period of time between the noon and

evening meals, the afternoon snack may be more substantial than the morning snack. This might include a glass of milk with a simple bread-and-butter sandwich or plain crackers or cookies. Foods suitable for morning snacks are fruit juices (preferably citrus), pieces of fresh fruit or raw vegetable sticks, and a plain cracker or cookie. Sweetened carbonated beverages and candy should not replace foods needed for growth and health.

The noon-meal food plan given on page 13 may also be used in planning packed lunches for a picnic or outing or when it is necessary for a child to bring a lunch from home. Following this pattern, the meat, bread and butter may be prepared as a sandwich. Serve the vegetables raw. An apple or other fruit in season and a cup of milk will round out the meal.

Meals for children should provide not only the food essentials that they need each day, but should also look attractive and satisfy the children's taste and appetite.

Tips on planning

These tips may be helpful in meal planning:

1. **Plan menus to meet children's food needs and within limitations of your budget, kitchen staff, and equipment.**

   Staying within your budget requires careful planning. Use foods in season when they are plentiful and usually cost less. Study marketing information for current good buys. If you are eligible and receive U.S. Department of Agriculture donated foods, their proper use may result in considerable savings.

   The number and skill of your kitchen staff will influence your menus. If you are short-staffed, you will want to avoid putting several items on the menu which are time-consuming to prepare.

   The type and size of equipment will affect your menus. With limited oven space it is wise to avoid planning dishes to be baked at the same time if they require different baking temperatures.

2. **Plan for variety.**

   There are several ways to get variety.

   (*a*) *Color:* Children like colorful foods. Color contrasts add to the eye appeal of the meal. Touches of bright colors, if only a garnish, pep up an otherwise colorless plate. For

garnishes, a small amount of some colorful food may be used—sprigs of parsley, carrot circles or strips, unpeeled apple slices or wedges, radishes, watercress or other edible green leaves, strips of pimento, berries, cherries, or other colorful fruits.

(*b*) ***Flavor:*** Don't plan a meal of all strongly flavored foods or of all bland flavored foods. Children often are more sensitive to strong flavors than adults are. It is usually best not to have more than one strongly flavored food in a meal.

(*c*) ***Texture:*** Texture of foods is best described by the words "crisp," "soft," and "chewy." Even at an early age, children show a liking for crisp foods. Babies like to eat crisp bacon or crisp toast. Soon they like chewy foods such as a piece of meat. Many children who won't eat cooked vegetables like raw vegetable sticks. It is well to combine some of the soft foods with the crisp and chewy. A good rule to follow is to combine textures in a meal—one crisp, one chewy, and one soft food. Children are sensitive to the texture of food and usually dislike lumpy or gummy foods. Puddings not properly prepared may have such undesirable textures.

(*d*) ***Shape and Size:*** Contrasts in shape and size of foods make a great deal of difference in the way a meal looks and the ease with which it is eaten. Children will usually eat scrambled eggs better if they are piled in a mound rather than the same amount flattened out in a thin layer. A plate is more tempting if foods of different shapes are used.

Prepare food in a form that children can easily handle, such as some finger foods and bite-size pieces.

(*e*) ***Varying Combinations:*** Avoid getting in a rut on go-together foods. Don't use the same vegetables every time you have a certain meat dish on the menu. Don't serve the same foods on certain days each week.

(*f*) ***Methods of Preparation:*** Menus can be varied a great deal by preparing available foods in different ways. Building up a file of recipes for various methods of preparing the same food will prevent menus from becoming monotonous. Getting suggestions from others and keeping a list of the most popular ways of preparing foods will help you in planning. A suggested form and start on such lists is given on page 11.

Meat Dishes		
Beef	**Fish**	**Poultry**
Beef stew Dried beef creamed Ground beef patty Casserole Liver baked loaf Pot roast	Baked fillets Haddock Halibut Creamed fish Codfish Salmon Tuna Fish Loaf Fish Souffle	Baked Chicken Chicken a la King Creamed Chicken Fricassee Chicken Roast Turkey

(g) *New Foods:* Give children an opportunity to become acquainted with a variety of foods. As mentioned earlier, new foods should be introduced in smaller amounts along with a meal of more familiar foods.

3. **Plan with consideration of food habits.**

Foods selected will vary according to the food habits and foods available in different parts of the country or among children from families of varying cultural, racial, or religious backgrounds. Occasionally include favorites suggested by the children or their parents. A child, new to the center, may adjust to his surroundings more readily if offered a familiar food.

4. **Plan for simple surprises.**

Simple surprises such as a piece of fruit hidden in the bottom of a baked custard will add much to the child's mealtime pleasure, without increasing preparation time a great deal.

5. **Plan for special occasions.**

Festive occasions are fun at any age. Young children especially enjoy birthday and holiday treats. Remember that half the fun is in the planning and the happiest parties

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are those in which the children can share in the planning and preparation.

6. Plan the same menus for children and staff.

The meals adequate for children are suitable as a basis for the staff as well. The staff may be served the same menu but given larger amounts and only tea or coffee added. It simplifies planning and preparation to serve the same menu to all. A better feeling will be created among the children if the staff eating with them are served the same meals.

7. Plan ahead with cycle menus.

Good menus don't just happen. They require careful planning in advance of mealtime. A good system for planning menus in advance is called cycle menu planning. Cycle menus are a set of carefully planned menus which you repeat every 3 to 6 weeks and rotate in a pattern. If availability and cost of foods vary in different seasons of the year in your locality, you will want to plan a separate set of cycle menus for each season of the year.

To plan cycle menus, you first decide on a length of time each set of menus will cover. Are you going to repeat every 3, 4, or 6 weeks? The period you decide on should not be so short that it becomes obvious that you are repeating menus, nor so long that you have frequent repetition of food combinations within the cycle. A 3-week period is usually a satisfactory length of time.

One of the biggest advantages in cycle menu planning is the time saved. Other advantages are more carefully planned menus, better control of money through improved purchasing, better balanced and more varied menus, easier advance planning of work schedules, and more uniform and better food prepared with standardized procedures.

Procedures for actually planning cycle menus are:

Step 1. Start with the protein-rich dishes, since these are usually the basis for your meals. Have this protein-rich dish each day of the 3 weeks, or whatever period you have chosen. Be sure that this main dish provides the required amount of protein-rich foods or supplement it with another dish providing protein. For example, if you have vegetable soup as your main dish, very little protein will be provided. Meat stock, itself, has little food value. Therefore, accompany the soup by a good source of protein, such as meat,

cheese, or peanut butter, which might be served in a sandwich.

Step 2. The next step is to select the vegetables and salads for each day of the 3-week period. After your main dishes have been planned, the rest of the meal may fall in line easily.

Step 3. Choose a dessert such as fruit or pudding to balance the meal.

Step 4. Add bread, butter, and beverage.

Step 5. Plan the snacks.

Step 6. Review each day's menu, carefully checking with the food plan to make sure foods required for nutritional adequacy have been included and there is sufficient variety within each day's menu and throughout the total period.

As the menus are actually used, make a note of suggested changes and of anything that went wrong. Record the amounts of food used and popularity of the items. At the end of the 3 weeks or other period decided on, go back to the first week, make changes needed, and repeat the menus.

After these have been tested, start working on the second, third, and fourth sets for other seasons of the year, following the same procedures used for the first set of menus.

From time to time you will make changes in these menus to try new recipes, to use any leftover foods on hand, to

Food plan for one meal, two snacks

Midmorning Snack	
Fruit or fruit juice (preferably citrus)	⅓ to ⅔ cup.
Crackers	1 cracker.
Noon Meal	
Meat, poultry or fish	2 to 4 tablespoons (1 to 2 ounces).
Vegetables (include a good source of vitamin A (see p. 47)	2 to 4 tablespoons cooked and 2 to 4 strips raw.
Bread	½ to 1 slice.
Butter or margarine	½ to 1 teaspoon.
Fruit or pudding	¼ to ½ cup.
Milk	½ to 1 cup.
Midafternoon Snack	
Milk	½ to 1 cup.
Plain cracker, cookie or bread-and-butter sandwich	1 to 2 crackers or cookies.

Meal planning form

Breakfast	Monday	Tuesday	Wednesday	Thursday	Friday
Fruit or juice Cereal or egg Toast Butter or margarine Milk					
A.M. Snack Fruit, juice or raw vegetables Plain cracker or cookie	Orange Juice Plain Cookie	Tomato Juice Cracker	Raw Apple Wedges	Mixed Vegetable Juice Cracker	Grapefruit Juice Cracker
Noon Meal Meat, poultry or fish Vegetables Salad Bread Butter or margarine Fruit or pudding Milk	Beef Stew with Vegetables Shredded Lettuce Bread – Butter Rice Pudding Milk	Baked Chicken Steamed Rice Buttered Peas Celery Sticks Bread - Butter Whipped Gelatin Dessert Milk	Liver Loaf Whipped Potato Buttered Green Beans Carrot Strips Bread - Butter Ice Cream Milk	Pot Roast Beef Creamed Corn Buttered Greens Vegetable Salad Bread Butter Orange Sections Milk	Salmon Patty Escalloped Potatoes Sliced Tomatoes Bread - Butter Tapioca Pudding Milk
P.M. Snack Milk Plain cracker, cookie or bread and butter sandwich	Milk Cracker	Milk Bread and Butter Sandwich	Milk Cracker	Milk Plain Cookies	Milk Graham Cracker
Evening Meal Protein-rich dish -- mainly meat, eggs, fish, poultry, dried beans or peas, cheese, peanut butter Vegetable or salad Bread Butter or margarine Dessert Milk					

take advantage of current good buys and donated foods, and to plan extras for holidays, special occasions, and surprises.

Cycle menus should be used as a guide and convenience—not a fixed pattern. As you repeat the menus, you will evaluate them and may see ways to improve them.

Allow time when planning your menus to make a market order. You will find it quicker and easier to draft a market order when the menus are fresh in your mind.

A daily food guide for children

Foods	Amount Each Day [1]	Average Size Serving, 3–6 years [2]
Milk Group		
Milk (fluid whole, evaporated, skim, dry, buttermilk)	Children under 9, 2–3 cups	½ to 1 cup
Dairy products such as: Cheddar cheese, cottage cheese, and ice cream	May be used sometimes in place of milk	
Vegetable-Fruit Group	Choose 4 or more servings including:	
A citrus or other fruit or vegetable high in vitamin C [3]. Grapefruit, orange, tomato (whole or in juice), raw cabbage, broccoli, fresh strawberries, guava, mango, papaya, cantaloup	1 serving each day—usually ½ cup or a portion as ordinarily served such as a medium orange, half grapefruit	⅓ to ⅔ cup
A dark green or deep yellow vegetable for vitamin A [3]. You can judge fairly well by color—dark green and deep yellow apricots, broccoli, cantaloup, carrots, greens, pumpkin, sweet potatoes, winter squash	1 serving at least every other day, usually ½ cup of vegetable	2 to 4 tablespoons
Other fruits and vegetables including potato	2 servings, count as 1 serving ½ cup of fruit or vegetable	2 to 4 tablespoons
Meat Group	Choose 2 or more servings	
Meat, fish, poultry, egg As alternate: dry beans, dry peas, lentils, nuts and peanut butter	Count as serving: 2 to 3 ounces of lean cooked meat, poultry or fish, without bone or 2 eggs or 1 cup cooked dry beans, peas, etc., or 4 tablespoons peanut butter	2 to 4 tablespoons

See footnotes at end of table.

A daily food guide for children—Continued

Foods	Amount Each Day [1]	Average Size Serving, 3–6 years [2]
Bread and Cereal Group	Choose 4 or more servings	
Whole grain, enriched or restored bread and cereals, and other grain products as cornmeal, grits, macaroni, spaghetti, and rice	Count as a serving: 1 slice of bread; 1 ounce ready-to-eat cereal; ½ cup to ¾ cup cooked cereal, cornmeal, grits, macaroni, noodles, rice or spaghetti	½ to 1½ slices bread or ¼ to ½ cup cereal
Plus Other Foods		
Sugars, oils, margarine, butter and other fats may be used in many ways to complete meals and to satisfy appetites		
Vitamin D	400 International Units	
Sufficient vitamin D may be obtained from foods such as vitamin D fortified milk		

[1] Serving sizes may differ—small for young children, larger (or seconds) for older and very active children.
[2] Use as guide only. Each individual child may not eat the exact amounts listed.
[3] See sources, p. 47.

FOOD PURCHASING

ECONOMY in purchasing food depends on making wise choices and making careful use of what you purchase. There are no definite rules that can be applied to all foods and all situations to tell you what a good buy is, but it often helps to keep some general ideas in mind. For example:

Food is a bargain only when it can be used profitably. The most economical quality to buy depends on the use you are going to make of it. For example, it isn't necessary to buy the most expensive grade of meat for making stew. For some menus, the less expensive items are just as satisfactory as fancy quality. However, consider differences in waste before buying food of poor quality. If there is considerable waste in preparing it, or if it is unpalatable and not actually eaten and enjoyed, there is no saving.

When you buy small units of food, the price per unit is usually higher than when you buy in large units. Check contents of the package and compare the cost per serving. In buying large quantities, be sure your storage space is adequate. It is not economical to buy in large quantities if storage space is too limited or the food cannot be used while in top-quality condition.

If you are feeding a large group, it is well to get prices

from more than one dealer. Investigate different sources of food supply. Be sure you are comparing the same grade and weight of product. If one dealer's price is much lower, it may be quality or weight that makes the difference. Study the labels carefully.

In comparing cost of food in different forms—such as fresh or frozen, boneless or bone-in—consider the cost per usable serving or portion rather than the cost per pound or other unit. The amount of waste in one form may offset a lower price.

Keep a chart of seasonal foods so you will know when certain foods are in greater abundance. Foods in season usually provide top quality at a lower price.

Be specific in placing orders and be sure you get what you pay for. Checking food carefully when it is delivered may save you money. Check the quality, quantity, and the count or weight to see that it is in line with what you ordered. If it is not, call the dealer and make arrangements for replacement with suitable items, or ask that your account be credited. Don't pay for things not received or for items that are not what you ordered.

Make your market order a permanent record on quantity, quality, and cost of purchases. A suggested form is given on page 19. This information will help you the next time you place an order and will help you determine your food cost. Also, it may be used for nutritional information. Group foods of a kind together, such as they are in the chart on page 42. Include donated foods with your market order so you will have a record of their use.

The market order

Sizes and amounts to buy will depend on the number of children you are feeding, your budget, the amount and kind of storage space available, the perishability of the product, and the period of time the order is to cover.

To make your market order, you will need to know:

1. Your menus.
2. The number of children and staff to be fed and size of servings to be used for each.
3. An inventory of foods on hand.
4. Food buying guides (see page 49).

5. Recipes to be used.

6. Current market information.

On a worksheet, list each item needed and the number of times it appears on the menus during the period you are purchasing for. Check each item on the menu as you list it on the worksheet. Keep foods of a kind together, such as meats, vegetables, fruits, etc. Using the buying guide on page 49 and checking your inventory of supplies on hand, determine the total quantity which needs to be purchased.

Transfer the total quantity of each item needed from the worksheet to your market order.

Your worksheet for your market order may look like this:

Date September 1-21, 19--

Food	Number of times on menu	Quantity for 25 children and staff	Total quantity needed
Peaches, sliced	4	1 No. 10 can x 4	4 No. 10 cans
Pear, halves	3	1 No. 10 can x 3	3 No. 10 cans

Compiling this information may seem a time-consuming job, but once compiled it will save time because you can use it over and over.

Quantities of food to buy

When using tables that suggest quantities to buy, it is well to remember purchase units vary in yield. The yield of meat will vary with the amount of bone, fat, gristle, shrinkage, and method of preparation and cooking.

Meats with little or no bone and fat will provide approx-

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Market order

Date	Description	Dealer	Unit	Unit price	Quantity	Total price	Comments

imately five to six servings per pound suitable for small children, and approximately three to four servings per pound for adults.

Meat with a medium amount of bone and fat will provide approximately four to five servings per pound for small children, and two to three servings per pound for adults.

Very bony cuts of meat will provide approximately three to four servings per pound for small children, and one to two servings per pound for adults.

The yield of fresh fruits and vegetables will vary, depending on the quality and amount of waste.

The yield of canned fruits and vegetables will vary, depending on the quality and drained weight of solids.

The number of slices of bread per loaf will vary with different bakeries, depending on the thickness of slices.

Buying guides in the appendix suggest quantities to buy for 10, 25, and 50 children. Additional quantities will be needed for the adult staff members served.

Because there will be some variation in yield, most figures have been rounded to the nearest half or whole unit.

Buying meat

Meat, as well as being the most expensive item on the menu, is usually the food around which the entire meal is planned. To determine the "best buys" of meat requires familiarity with grades and cuts of meat and suitable preparation methods.

Two kinds of purple stamps may be found on meat. These are made of vegetable dye and are harmless.

1. **The USDA inspection stamp**

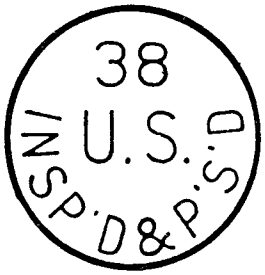
   This USDA stamp is found on meat which is shipped from one State to another and assures wholesomeness and safety of the meat. Meat that is shipped from one State to another must be inspected for wholesomeness and stamped "U.S. Inspected and Passed."

2. **The USDA grade stamp**

   This USDA stamp is found on meat that has been federally graded. Although this grading is voluntary, an increasing

amount of the meat being marketed is being federally graded. Federally graded meat must first be inspected for wholesomeness.

The grade stamp tells you the cooking and eating quality of the meat. Meats are graded according to the age and sex of the animal, the character and amount of fat covering and distributed through the lean, and the proportion of lean to bone. Many meatpackers have brand names that correspond to the USDA grades. The USDA grades for beef are Prime, Choice, Good, Standard, Commercial, and Utility. Official grades for lamb are Prime, Choice, Good, Utility, and Cull. Grades for veal are Prime, Choice, Good, Standard, Utility, and Cull. At the present time, grade identification does not appear on retail cuts of pork.



The two most important things to consider when purchasing meat are grade and cut. The grade and cut you choose will depend on how you are planning to prepare it. For practical purposes, different grades and cuts are of similar food value but differ in flavor, tenderness, amount and kind of fat, and the proportion of meat to bone.

Top grades of meat such as Prime and Choice are more expensive, but require less cooking to make them tender. Lower grades of the same cut require longer cooking time and moist heat. It is more economical to buy lower grades for grinding, stew, or pot roasts. For broiling or dry-heat roasting, the higher grades are preferred.

The tenderness of the meat is influenced by the part of the animal from which it comes. Cuts of meat tender enough to cook by dry heat, such as broiling or dry-heat roasting, are usually the most expensive. Less tender cuts are economical for long cooking with moist heat, such as is required for stews and pot roasts.

Suitable cuts to buy for various dishes are given in the buying guide on page 51.

Since the average cook is not skilled in cutting meat, it may be advisable to buy meats already cut and ready to cook.

Many meatpackers today are offering prefabricated meats. These are ready-to-cook meat items such as boneless roasts or portion cut in specified uniform portion sizes. You may, for example, order 24 hamburger patties, each weighing 2, 3, or 4 ounces. Portion-cut meats are most frequently sold frozen. You can easily prepare the exact number of servings as needed because they are ready for cooking and may be cooked without thawing. You can also easily determine the cost per serving. You are actually buying your meat by the serving.

Boneless cuts of meat may be priced higher per pound than those with bone in, but with greater yield may be lower priced per serving. One-quarter pound of boneless meat may give you as many servings as one-half pound of meat purchased with the bone in.

When ordering meat be sure to specify the cut and grade. When purchasing ground meat it is also well to specify the percentage of fat content. For example, if ground beef has more than approximately 15 percent fat the shrinkage will be excessive.

The buying guide in the appendix indicates the quantity to buy in order to serve 10, 25, and 50 children approximately 2 ounces of cooked lean meat. Additional amounts will need to be included for the number of staff members you are feeding.

Buying poultry

Poultry is a good source of protein and usually popular with children.

Official poultry grades are U.S. grades A, B, and C. Lower grades usually have less meat in proportion to bone and have meat of poorer quality than higher grades.

Purchase table-dressed or eviscerated poultry. Such poultry has been drawn and cleaned inside and out and ready for cooking. Eviscerated poultry is available whole or cut into pieces or halves.

Eviscerated whole or cut-up poultry may be bought fresh killed or frozen. If you buy frozen poultry, be sure it is completely frozen.

The kind of poultry to buy will depend on the use you are going to make of it.

Fowl—4½ to 5 pounds (female). These may be used for soup or stew, or when you want meat for casseroles or creamed chicken dishes.

Roaster—over 3½ pounds (male). These may be roasted whole in the oven.

Fryers—2 to 3½ pounds. These may be purchased whole or cut in pieces and be oven baked, broiled, or fried.

Broilers—1½ to 2½ pounds. These may be purchased whole, cut in pieces, or halved, and either broiled, baked in the oven, or fried.

Turkeys—toms or hens. Turkeys may be bought and cooked whole, halved, or cut in pieces. There is less shrinkage and less cooking time required if turkey is cut up before it is cooked.

For most purposes, the larger kinds of poultry are usually more economical as there is more edible meat in proportion to the amount of bone.

Buying fish

In selecting fresh fish for small children, use caution to choose boneless fish or fish from which the bone can easily be removed.

In most markets now, you can buy dressed or pan-dressed fish in the following forms:

1. Scaled, cleaned, and ready to cook.
2. Scaled, cleaned, most bone removed, and cut in fillets or sticks.
3. Scaled, cleaned, and sliced cross section as fish steaks.

Because the fillets and sticks are usually boneless, they are more suitable for serving to small children.

Fish may be purchased frozen or fresh. When buying frozen fish, be sure it is completely frozen. Frozen fish that has thawed should be cooked immediately.

Canned fish is either boneless or contains soft, edible bones, and is therefore suitable for use with small children. While there are many varieties of canned fish on the market today, the most frequently used are tunafish and salmon.

Tunafish is available as grated or flake, chunks, and solid pack. The principal difference among these is in the size of the pieces. Grated or flake tuna, the smallest pieces, is the least expensive.

Pink salmon is less expensive than red salmon, has the same food

value, and is suitable for use in such dishes as fish loaves, croquettes, fishcakes.

Buying fruits and vegetables

Whether you buy fruits and vegetables fresh, canned, or frozen will depend on the cost per serving, as each is of equal nutritive value. When comparing cost, consider loss of weight in preparation and cleaning and the time spent.

Fresh. The grades of fresh fruits are based on the size, shape, color, and absence of defects and damage. It is usually more economical to buy fresh fruits and vegetables of good quality as there will be less waste. Buy the quality, size, and amount most suitable for your use and storage facilities. Know when fruits and vegetables are in season and how to judge their quality by appearance.

Frozen. Frozen fruits and vegetables are becoming more popular because frequently they cost no more than fresh, save considerable preparation and time in labor, the quality is usually consistent, and there is no waste. Frozen fruits and vegetables should be kept frozen until ready to cook in order to retain maximum flavor, color, and texture.

Canned. The USDA grades of canned fruits and vegetables are: Grade A (U.S. Fancy), grade B (U.S. Choice or Extra Standard), grade C (U.S. Standard). Most packers use brand names to indicate quality. Certain brand names represent the different USDA grades. Learn the packer's brands and the grades they represent.

Since nutritive value is the same, the grade most economical to buy depends on the purpose for which it is to be used. Variations in grade are:

Lower grades, such as B and C. Just as wholesome and nutritious as higher grade—but broken pieces, which are less uniform in size. Use in cooking in mixed dishes or other dishes where appearance is not of primary importance.

Since fruits and vegetables are often cut in bite-size pieces for small children, perfect pieces are not necessary. Therefore, the lower grades will be suitable for most uses in day care centers.

Higher grade, such as A. More uniform in size, few broken

pieces, few blemishes. For special use where appearance is of primary importance, as in some desserts or salads.

Some suitable grades to buy for various uses are:

Fruits. Fruit juice—Grade A (Fancy).

Sauce and salads—Grade B (Choice).

Fruitcup and gelatin mixes—Grade C (Standard).

Puddings and pies—Pie Pack (Substandard).

Vegetables. Cooked vegetables—Grade B (Extra Standard).

Soup, sauce, stews—Grade C (Standard).

For example, if you buy canned tomatoes to serve as a hot vegetable, you might want a higher grade than when you buy canned tomatoes to be mixed in a casserole or sauce.

Variations, other than the grades to specify when purchasing canned fruits and vegetables, are:

Style—such as whole, halves, sliced, or diced.

Type—the characteristics of the particular item, such as sweet or sour cherries.

Size of pieces—such as large, medium, or small.

Amount of food in the can—either the number of pieces found in the container or the number of cups contained.

If you are serving 25 or more children, it will likely be more economical to buy large-size containers, such as No. 10 cans, providing you can store and use that amount. For occasions where you need only a fraction of a large can, you may want to have some of the smaller cans on hand. The table given on page 48 in the appendix is a guide to the size of can to purchase.

Buying eggs

Fresh eggs. Eggs are purchased according to grade and size. The four U.S. consumer grades are: U.S. grades AA, A, B, and C, and indicate quality only. Select the grade most suitable for the use you intend to make of it.

U.S. grades AA and A are top quality and are best used for poaching, frying, and cooking in the shell, when appearance and fine flavor are important.

U.S. grades B and C are good eggs, although the white may be thin and spread when broken and the yolk is flatter and breaks more easily. These grades cost less and are suitable for most purposes, such as in baking, scrambling, and combining with other foods.

Eggs are grouped in six sizes—jumbo, extra large, large, medium, small, and peewee—depending on the total weight of a dozen eggs. The four sizes most commonly found in the market are: extra large, large, medium, and small.

The following table shows USDA minimum weights for each:

Jumbo—30 ounces per dozen	**Medium—21 ounces per dozen**
Extra large—27 ounces per dozen	**Small—18 ounces per dozen**
Large—24 ounces per dozen	**Peewee—15 ounces per dozen**

Quality and size are not related in any way. A certain grade of egg has the same quality whether the eggs are small or large. The size eggs that are best buys depends on the current price. This chart is a guide to which size egg is the best buy:

If EXTRA LARGE eggs of one grade cost	—then LARGE eggs of this grade are a better buy at *less* than	—and MEDIUM eggs of this grade are a better buy at *less* than	—and SMALL eggs of this grade are a better buy at *less* than
cents per dozen	*cents per dozen*	*cents per dozen*	*cents per dozen*
59	51	45	38
64	56	49	41
69	60	53	44
74	64	56	47
79	69	61	51
84	73	64	54

(Adapted from USDA, "How To Buy Eggs by USDA Grades and Weight Classes.")

It is well to remember that grades are guides to quality, and weights are guides to size. Pick the grade most suitable for the use you have in mind and the size that is the best current buy.

Shell color does not affect flavor or quality. Brown shell eggs and white shell eggs are equal in nutritive value and cooking quality.

Fresh eggs are perishable and should be kept under refrigeration.

Dried eggs. Dried eggs are eggs from which most of the water has been removed. Dried whole eggs that have been stored properly have practically the same food value as shell eggs. Purchase dried eggs for use *only in thoroughly cooked dishes.* (See section on "Food Preparation.")

Frozen eggs. If you have facilities for keeping frozen foods you may want to consider use of frozen eggs. Eggs are available frozen whole, frozen whites, or frozen yolks. During some seasons of the year they may be cheaper than fresh eggs and solve the problem of what to do with the yolk if you have a recipe calling for only whites of eggs. In substituting frozen for fresh, use the following amounts:

One pound of whole frozen eggs for 9 to 11 shell eggs.

One pound of frozen whites for 17 to 20 egg whites.

One pound of frozen yolks for 21 to 24 egg yolks.

The smaller number in each range represents large eggs and the larger number represents medium eggs.

Buying milk

Fresh milk. The best choice for drinking purposes is grade "A" pasteurized homogenized milk. It may have vitamin D added.

Pasteurization destroys disease-producing organisms and reduces the number of other bacteria that cause raw milk to sour.

Homogenized milk is treated so the particles of fat or cream are broken up and distributed evenly.

Vitamin D milk is milk in which the vitamin D content has been increased to 400 units per quart.

Be sure the dairy you are buying from supplies safe pasteurized milk. Do not use raw milk. Check with your local health authority on local laws regulating dairies, on serving milk from original containers or from dispensers, and on use of dried milk.

Nonfat dried milk. Nonfat dried milk is whole milk from which the water and fat have been removed. It costs less than fresh milk and can be used easily and economically in cooking. Its food value is similar to that of fresh skim milk.

Evaporated milk. Evaporated milk is also an economical buy for cooking purposes. Since evaporated milk is concentrated, for

most uses it should be diluted with equal quantities of water. After a can is opened, the milk must be refrigerated. Practically all the evaporated milk on the market has vitamin D added.

Condensed milk. Condensed milk is also concentrated. Unlike evaporated milk, it contains added sugar.

Buying butter or margarine

Margarine fortified with vitamin A is as nutritious as butter and costs less. Many States have regulations controlling the use of margarine in place of butter as a spread. Find out about the laws in your State and how they apply to group-care facilities.

Buying breads and cereals

Enriched and restored bread and cereals are made from refined cereals that have had certain minerals and vitamins added so they approximate the nutritive value of whole-grain cereals. Read the labels carefully to determine if bread is enriched or whole grain. Bread which is dark in color is not necessarily whole grain. It may be made of a combination of refined and whole-grain flour. Many States have laws requiring that white bread and flour be enriched.

FOOD STORAGE

THE AMOUNT AND TYPE of storage space available will influence your purchasing practices. Storing food properly will help prevent spoilage and will help preserve nutritive value, flavor and appearance of food. Food-storage loss is money loss. Food-storage areas should be used for food items only.

Store food in the proper place as soon as it is delivered. Arrange storage so most recent purchases will be used last. Mark the date of delivery on packages and follow the rule of first in, first out of storage.

To assure recommended temperatures are maintained in storage areas, keep thermometers located in the warmest zone and where they

can easily be seen. Storage areas should be kept clean and in good repair.

Keep storage rooms locked or otherwise controlled so that children and unauthorized persons cannot gain entrance to them.

Refrigerator storage

Much of the food you will buy is perishable and must be kept refrigerated at about 40° F. If you have more than one refrigerator, it is preferable to use separate units for (1) milk, other dairy products, and eggs; (2) fruits and vegetables; (3) meat, poultry, fish.

Store foods so you have adequate circulation of air. Overcrowding prevents proper cooling.

It is particularly important that cream-filled and custard-filled pies and pastries, and dishes containing eggs, meat, milk, or mayonnaise, be kept refrigerated.

Freezer storage

Frozen foods have made meal preparation easier. Select frozen foods carefully, making sure they are solidly frozen. Store foods purchased frozen at 0° F. or lower and keep frozen until time to use them. Keep frozen foods only a few days at temperatures above 0° F. Thaw frozen foods in a refrigerator at a temperature of 45° F. or below, or under cold running tap water, or quick thaw as part of the cooking process. Frozen foods which have thawed should be used immediately and not refrozen. When freezing food yourself, carefully wrap it to keep out air. Loss of moisture can ruin a good product.

To estimate the capacity of your freezer, use an average figure of 30 to 35 pounds of food per cubic foot of space.

Staples and canned goods storage

Store foods, not requiring refrigeration, in a dry, clean, well-ventilated, and screened room at a temperature between 60° to 70° F.

Store no food item on the floor. Place all supplies on shelves or on platforms at least 6 inches off the floor. Where space permits, such platforms should also be at least 18 inches from the wall.

Use tightly covered, metal containers for such items as sugar, dried milk, flour, and cereal.

Some fresh vegetables such as dry onions and potatoes keep well without refrigeration.

Storage of leftovers

Plan so you will have as few leftovers as possible. Spoilage cannot always be detected by looking at food. Any cooked or otherwise perishable food left over from a meal should be placed in shallow pans, refrigerated immediately, and used within 24 hours.

Storage of packed lunches

Provide refrigerated storage for lunches brought from home by the children.

Storage of poison and toxic materials

Toxic and poison materials and compounds such as insecticides, rodenticides, bleaches, petroleum products, etc., should be kept and stored in a locked cabinet in a room separate from those rooms where food is stored, prepared, or served.

Inventories

Accurate inventories of supplies on hand are useful in preparing market orders and will help determine your food cost.

There are two types of inventories:

1. **Perpetual.**—A perpetual inventory is a running inventory where items are recorded at the time they are placed in or removed from storage. For centers large enough to have one person responsible for receiving and issuing food, this type of inventory is preferable. With this record you will know the exact quantity of an item on hand at the time you place your purchase order.
2. **Physical.**—A physical inventory requires taking an actual count of supplies in storage areas periodically.

Suggested inventory forms are given on page 32.

Inventory forms

Physical Inventory

Date_____

Name	Brand or description	Unit	Unit cost	Quantity	Total cost

Perpetual Inventory

Name of Product_____

Purchased					Issued					
Date	Brand	Unit and quantity	Unit price	Total price	Date	Brand	Unit cost	Quantity	Total cost	Stock left on hand

FOOD PREPARATION

PROPER PREPARATION is the key to a good meal. Nutritional adequacy depends not only on good planning, selection, and storage of food, but also on how it is prepared and cooked. Good food may be ruined or wasted by being improperly prepared. Children's sense of taste is keen and they are good judges of whether food is well cooked.

To save nutritive value, flavor, and appearance of food, as well as make it safe to eat, select suitable preparation methods and plan to prepare it close to serving time. Valuable nutrients and quality are lost in "holding" food after it is prepared. Keep the natural flavor of foods as much as possible. Most seasonings should be used to bring out the flavor—not to hide it. Foods for young children should not be too highly seasoned. They need to learn the natural flavors of food. They usually prefer dishes that are mild flavored, simply prepared, and served at temperatures not extremely hot or cold.

The use of standard tested recipes takes guesswork out of preparation. Failures in quantity cooking are costly in materials, time, and reputation. For quality and uniformity in cooking for large groups, use standard recipes. They can also be used in deciding how much food to purchase.

You may want to keep the recipes in a card file or in a note-

book. It is well to file them according to types of dishes, such as meat dishes, salads, desserts, etc.

Fill each 5- by 8-inch card for a standard tested recipe with the following information: The measure or weight of each ingredient, the type and size of pan to be used, the method of preparation, the temperature and time for cooking or baking, the size and number of portions obtained, notes on the appearance and acceptability of the dish. A suggested form is given on page 38.

Quantity recipes are available free from some commercial firms. Check with your wholesale distributors as to the availability of such recipes and how you might get on the mailing list to receive them.

Standard cooking utensils are just as essential as standard recipes to assure a uniform yield each time the recipe is prepared.

Meat preparation

To have meat tender and juicy it must be properly cooked. Cook meat at low temperatures and do not overcook. The shrinkage will be at a minimum, making it more palatable and giving you more servings.

The method of preparing meat will depend on the cut and quality you have purchased. There are two basic methods of cooking meat:

1. Dry-heat methods are usually used for the most tender cuts. With dry-heat methods, no liquid is added. This may be broiling, pan broiling, frying, or roasting.

Broiling is cooking with direct heat. The temperature may be controlled by adjusting the heat or the distance between the heat and the meat.

Pan broiling is cooking in a heavy pan or griddle with little or no added fat. For small children, pan broiling is preferable to frying in quantities of fat.

Roasting is cooking meat in the oven in an uncovered pan and without added liquid. Cook it at about 300°–325° F. with the fat side up. A meat thermometer is useful in indicating when the meat is done. Insert the pointed end in the thickest part of the meat so that the bulb does not touch either bone or fat. Use of a meat thermometer will prevent waste from overcooking and will assure the meat being cooked to a safe degree of doneness.

2. Moist-heat methods are best for less tender cuts of meat re-

quiring more cooking. With methods such as braising and stewing, a cover is used and usually moisture is added. Keep the amount of liquid at a minimum, barely enough to cover the bottom of the pan, and replenish as needed.

When braising, the meat is browned in a small amount of fat, then cooked in a covered pan, with or without liquid, either on top of the stove or in the oven. It is not always necessary to add liquid, because the steam may provide enough moisture if the pan is tightly covered. Pot roasting is braising large, thick pieces of meat. Meat for stews may be browned, then simmered.

Simmering is cooking slowly for a long period of time in a covered pan with barely enough liquid added to cover and at a temperature slightly below boiling.

Never serve pork or pork products rare or underdone. Pork should be thoroughly cooked throughout. A meat thermometer is the most reliable method for testing thoroughness of cooking.

When roasting poultry, it is well to use a meat thermometer to insure its being cooked thoroughly throughout. Insert in center of thickest part of the meat. Do not interrupt the roasting process once it is started.

If poultry, such as turkeys or geese, is to be served with stuffing, it is advisable to cook the stuffing separately from the meat.

Whether frozen meats are cooked in the frozen state or thawed prior to cooking makes little difference in the taste. There are, however, some nutritive losses in the drip where meat is allowed to thaw prior to cooking. Meat which has been frozen should be used promptly after thawing. If you prefer to thaw it before cooking, let it thaw in the refrigerator. Nutritive losses will be less, loss of juices less, danger of spoilage less. To thaw large roasts in the refrigerator, allow about 5 hours per pound. Allow longer cooking time if meat is to be cooked from the frozen state.

To roast meat without first thawing it, cook it in the oven at 300°–325° F. until it thaws enough to insert the meat thermometer. After the thermometer has been inserted, roast until it reaches the desired degree of doneness.

Vegetable preparation—fresh, frozen and canned

Nutritive losses may be high if vegetables are not prepared properly. Some vitamins are destroyed by heat. Some vitamins and

minerals dissolve in water. Vegetables should be thoroughly washed but not allowed to stand in water for long periods of time. To preserve as much as possible of the nutrients and the natural flavor and color, cook vegetables in the least amount of water, and only until tender—don't overcook them. Have the water boiling when you add the vegetables. The cooking water from many vegetables may be saved and used in soups or sauces, or served as a vegetable juice. Cook vegetables as close to serving time as possible.

Frozen vegetables become tender with shorter cooking time than fresh ones. Keep them frozen until cooking time. Place them in a very small amount of boiling water, return to the boiling point, and boil gently until tender.

Commercially canned vegetables do not need cooking. If they are to be served warm, they only need heating. Drain the liquid off and either boil it down to an amount that can be served with the vegetable or use it in making soups, sauces, or vegetable juice.

Botulism, a highly fatal type of food poisoning, is most frequently associated with improperly canned nonacid or low-acid foods (vegetables and meats). The use of foods canned outside of a regular commercial cannery should be avoided to the extent possible. If it is necessary to use nonacid or low-acid foods which have been processed by other than commercial canning methods, such foods should be boiled for at least 5 minutes prior to being tasted or served. During the boiling period, the food should be stirred so that every particle will reach boiling temperature, thus assuring destruction of any botulinum toxin which may be present. Such foods should be boiled even if they are subsequently to be served cold.

Dried vegetables most often used are various types of beans, split peas, and lentils. Dried beans and peas that are not quick-cooking may be boiled in water for 2 minutes, removed from the heat, and left to soak 1 hour or longer before completing the cooking.

Small children usually like raw vegetables. They should be well cleaned and crisp and may be served raw as finger foods or salads.

Fruit preparation

Fruits may be served raw or cooked. Most children like to eat sections of raw fruits. Wash thoroughly and remove all tough skin or stringy parts. For small children, it is wise to pit such fruits as prunes, plums, and cherries.

If fresh fruit is to be cooked, cooking in a covered pan at low temperatures will best preserve its flavor. If the fruit requires sweet-

ening, a minimum amount of sugar may be added just before it is taken off the stove.

Dried fruit purchased in bulk usually requires soaking. After thoroughly washing the fruit, soak it in water until it is plump. Cook it in the water in which it was soaked. Packaged dried fruit does not require soaking.

Leftover canned fruit juices may be used in fruit punch, molded desserts, or in pudding sauces.

Milk preparation

Milk will scorch or curdle if cooked at a high temperature or too long a time. To heat milk for cooking, place it in a double boiler.

The economy of using nonfat dried milk in cooking has been mentioned. Nonfat dried milk may be added to the other dry ingredients in a recipe and water added to the other liquids. One-fourth cup of many types of nonfat dried milk added to the dry ingredients and one cup of water added to the other liquids is equivalent to one cup fresh skimmed milk.

To substitute evaporated milk for fresh milk in cooking, mix with equal amounts of water.

Milk used in cooking will supplement that which the children are drinking.

Egg preparation

Fresh eggs, like meat, will be more tender if cooked at low temperatures. They become tough at high temperatures.

When cooking eggs in the shell, use water which is simmering—not boiling.

When scrambling eggs or cooking them other ways in fat, use only enough fat to keep them from sticking to the pan.

Egg mixtures to be cooked on top of the stove may be cooked in a double boiler.

Set custards to be baked in the oven in a pan of water.

Dried eggs have most of the water removed. They may be added to the other dry ingredients in a recipe and water added to the other liquids. One-half cup sifted egg powder added to the dry ingredients and one-half cup water added to the other liquids is equivalent to six large-size eggs.

The U.S. Department of Agriculture recommends that dried eggs be used *only* in recipes that require thorough cooking, such as oven-prepared dishes. They are not recommended for dishes cooked

on top of the stove, as there is less likelihood of reaching a safe temperature uniformly throughout the mixture. They may be used in dishes such as baked breads, casseroles that are cooked for a long time, and desserts that are baked. They should not be used in egg-milk drinks, ice cream, uncooked salad dressing, creamed puddings, soft custards, omelets, or scrambled eggs when cooked on top of the stove.

Frozen eggs should be thawed and stirred thoroughly before using. Thaw them in the refrigerator and use them as soon as possible after they are thawed. They may be used in such recipes as custards, cakes, cookies, puddings, or they may be scrambled or the white used for meringue. For amounts of frozen eggs to substitute for fresh eggs, see chart on page 27.

Standardized recipe card

Name of Dish

Type and Size Pan ..... Cooking Temperature.....

Standard Portion..... Cooking Time .....

Yield.....

Ingredients	Weight *or* Measure	Procedure

Information on Appearance and Acceptability

FOOD COSTS

THE COST OF FOOD takes a large slice of any center's budget. Carefully analyzing food costs will pay off.

Careful control in planning, purchasing, preparation, and service of food will help regulate food costs.

Cost control

Some of the methods listed here for controlling food costs have been mentioned in previous sections.

1. **Menus.** Carefully plan menus in advance, considering foods available during the season you are planning for, cost per serving of one food versus another, use of standardized recipes, and the most economical use of donated foods.
2. **Purchasing.** Plan purchasing to buy quality suitable to use, foods in season, in the least expensive form and quantities suitable to your needs and storage facilities.
3. **Delivery.** Make sure you receive what you are paying for by checking weight or count and quality of what is delivered.
4. **Waste control.** You can control waste of food by:
   (a) Storing food properly and using it as soon after delivery or preparation as possible to avoid spoilage.

(b) Standardizing procedures and equipment for preparation so there is minimum waste in preparation and cleaning, minimum nutritive loss in cooking, and minimum amount of leftovers.

(c) Reducing plate waste to a minimum by determining whether plate waste is due to poorly prepared food, food that is unpopular, or servings which are too large.

5. **Records.** Accurate records are essential to food cost control. Records providing information to determine your food cost may also be used in planning budgets, for computing fees, for income tax purposes, and as a guide to planning and purchasing for nutritional adequacy at minimum cost. Food records are more easily adapted to all uses if foods are grouped consistently in the same groups such as that used in the chart on page 42.

When setting up records, it is well to start one record at a time and become thoroughly familiar with it before another record is started.

Figuring cost

To figure the cost of raw foods, three records are necessary. Records *1* and *2* and suggested forms for keeping them have been mentioned in previous sections, see pages 32 and 19.

1. **An inventory** showing amount and cost of all foods which have not been used at the beginning and end of a period—usually the first and last day of each month. If a perpetual inventory is not kept, this information can be obtained by taking an actual physical inventory. The inventory taken at the end of one month becomes the beginning inventory for the next month.

2. **Total quantities and costs of all foods purchased and received** during the same period of time. If donated foods from any source are used, estimate and include their current market prices. If your cost figures are used as a basis for establishing budgets, this gives you a cushion against times when some of these foods may not be available.

3. **A census record** which is an actual count of the number of meals and snacks served including those for children, staff, and guests. For purposes of calculating per-meal cost, it is

necessary to decide how you will count the snacks. Six snacks, of the type suggested in this booklet, may be counted as equal in cost to one meal. A suggested form for keeping this record is given below.

From these records, you can proceed in the following way to calculate average raw food cost for a meal:

Step 1. Add the total inventory cost at the beginning of the month to the total cost of purchases and donated foods for the month.

Step 2. Subtract, from the above figure, the inventory cost at the end of the month.

Step 3. Divide this figure by the total number of meals served during the month. (Add one meal for every six snacks you have served.)

This will give you the average cost per person per meal of the raw foods used. Your final figures may be compiled on a form similar to that given on page 42.

Census record for one meal, two snacks daily[1]

Month _____

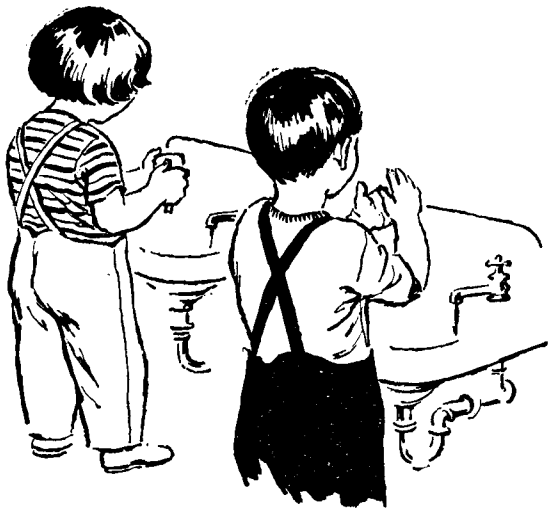
Date	Children			Staff			Guests			Total
	A.M. snack	Noon meal	P.M. snack	A.M. snack	Noon meal	P.M. snack	A.M. snack	Noon meal	P.M. snack	

Total meals for month _____
Total snacks for month _____

[1] If additional meals are served, spaces should be added for recording numbers fed.

Monthly food costs

	January		February		March	
	Amount	Cost	Amount	Cost	Amount	Cost
Milk						
Cheese and ice cream						
Eggs						
Meat, poultry, fish						
Dry beans and peas, peanut butter						
Vegetables and fruits for vitamin A (see p. 47)						
Vegetables and fruits for vitamin C (see p. 47)						
Other fruits and vegetables						
Bread and cereals						
Butter and other fats						
Sugar and other sweets						
Miscellaneous						
Total cost						
Total number of meals						
Cost per meal per person						



SAFE FOOD SERVICE

ALL CENTERS should be familiar and comply with their local health regulations to insure cleanliness and protection from disease. Regulations covering food service may be obtained from your local health department. Courses for food handlers may be offered by your local health department. It is well to take advantage of these.

If food for young children is to be safe for them to eat, certain principles of sanitation must be followed.

Sanitation means many things—clean food, proper storage, suitable and clean equipment, and good food-handling practices by personnel.

Some of the guides to safe food service given here have been mentioned in previous sections.

Food sanitation

Do not use home canned low-acid or nonacid foods.

Do not use a private-well water supply unless approved by the health authority.

Use only grade A pasteurized fluid milk and cream, even for making homemade ice cream.

Examine food, when it is delivered, to make sure it is not spoiled or dirty and that no insects are present.

Store food at proper temperatures at all times.

Keep perishable food either refrigerated or hot when not serving.

Don't overload containers for heating or cooling—use shallow pans so food will either heat or cool quickly.

Protect food by storing those susceptible to insects and rodents in tight, metal containers.

Use oldest supplies first.

Clean up spilled food immediately.

Check food supplies frequently—when in doubt about using, throw them out.

Throw out portions of food which were served but not eaten.

Keep children and unauthorized persons out of food storage and preparation rooms and areas.

Provide for disposal of garbage and trash to prevent their serving as a breeding place for insects and rodents. If disposal equipment is not available, garbage containers should be kept covered and thoroughly cleaned daily.

Equipment sanitation

Keep equipment, dishes, utensils, floors, and walls clean and in good repair.

Provide adequate light in all food-preparation areas.

Doors and windows should be clean, closely fit, and effectively screened.

Store dishes and utensils in clean, protected cupboards.

Do not use cracked or chipped utensils and dishes. Keep enamelware utensils under close observation, since they are very susceptible to chipping.

Dishwashing equipment should be suitable to maintain standards established by your local health agency.

Toilet facilities should be equipped with a lavatory, hot and

cold water, soap, and single-service towels, and a sign reminding the employees to wash their hands before returning to the kitchen.

It is also desirable to have hand-washing facilities conveniently located in the kitchen.

Personnel sanitation

The key to good sanitary practices is well-trained personnel. It is important that employees realize the importance of good personal habits such as:

Keeping fingers off eating and drinking surfaces of dishes, glasses, and silver.

Keeping hands away from their face or hair.

Washing hands thoroughly with soap and hot water before starting work, before returning to the kitchen from the toilet facilities, and after handling dirty dishes or using handkerchief.

Protecting food from coughs and sneezes.

Not handling food when they have a cold.

Not working with food if there are sores or cuts on their hands.

Handling food with a fork, ladle, spoon, or tongs—not the fingers.

Having regular health examinations.

APPENDIX

Sources and functions of the nutrients

Nutrients	What the nutrients do for the body	Good sources
	PROTEINS	
Proteins	Build and repair muscles, glands, blood and other tissues. Furnish materials for substances that regulate body processes. Furnish energy for bodily activities.	Meat, poultry, fish, eggs, milk, cheese, dried beans and peas, nuts.
	MINERAL ELEMENTS	
Calcium	Builds and maintains teeth and bones. Constitutes part of muscle and nerve tissues and of body fluids.	Milk, cheese, ice cream, dark green leafy vegetables.
Iron	Constitutes part of red blood cells which carry oxygen to all parts of body.	Liver, lean meat, egg yolk, dried fruits, enriched or whole grain bread and cereals, green leafy vegetables.
Iodine	Constitutes part of thyroid gland, which regulates rate at which energy is used by body.	Iodized salt, salt-water fish.
(Phosphorus, copper, magnesium, manganese, potassium, sodium, and other elements are also essential. They are probably present in adequate amounts in diets that supply plenty of calcium, iron, and iodine.)		
	VITAMINS	
Vitamin A	Is essential to tissues that cover and line body and help it to resist infection. Takes part in adaptation of eye to dim light.	Whole milk and cheese, butter or fortified margarine, dark green and deep yellow vegetables and a few fruits—apricots, broccoli, cantaloup, carrots, greens, mango, persimmon, pumpkin, sweetpotatoes, winter squash.

VITAMINS—Continued

Nutrients	What the nutrients do for the body	Good sources
Thiamine (vitamin B_1)	Each takes a specific part in process by which foods are burned in body.	Enriched or whole grain bread and cereals, lean pork, beef, lamb, liver, dried beans, peas, nuts, milk.
Riboflavin		Milk, liver, green leafy vegetables, enriched or whole grain bread and cereals, lean meat, fish.
Niacin (nicotinic acid)		Lean meat, dried beans and peas, enriched or whole grain bread and cereals, peanut butter.
Vitamin C (ascorbic acid)	Is essential to health of teeth, bones, blood vessels, and other tissues.	Grapefruit or grapefruit juice, orange or orange juice, cantaloup, guava, mango, papaya, raw strawberries, broccoli, green pepper, sweet red pepper.
Vitamin D	Helps body to use calcium and phosphorus in food.	Vitamin D milk, fish liver oils or vitamin D concentrate.

(Folic acid, vitamin B_6, vitamin B_{12}, choline and other vitamins are also essential. They are probably present in adequate quantities in diets that supply the above vitamins.)

	CARBOHYDRATES	
Starch, sugar	Furnish energy for work.	Bread, cereals, potatoes, sweets, fruits.
	FATS	
Fats and oils	Furnish energy for work. Give staying power to meals. Provide fatty acids essential to health.	Butter, margarine, cream, salad oils, olives, avocado, chocolate, nuts.

Equivalents

1 tablespoon=3 teaspoons

1 fluid ounce=2 tablespoons

1 cup=16 tablespoons (8 fluid ounces)

1 pint=2 cups

1 quart=2 pints

1 gallon=4 quarts

1 peck=8 quarts

1 bushel=4 pecks

Common can sizes

Can size	Approximate cups per can	Cans per case	Common use
No. 1 picnic	1¼	48	Condensed soups, fruits, vegetables, meat, and fish, specialties.[1]
No. 300	1¾	48	Baked beans, meat products, cranberry sauce, specialties.[1]
No. 303	2	24	Fruits, vegetables, meat products, ready-to-serve soups, specialties.[1]
No. 2	2½	24	Juices, ready-to-serve soups, a few fruits and vegetables, specialties.[1]
No. 2½	3½	24	Fruits, some vegetables.
No. 3 cylinder	5¾	12	Juices, fruits and some vegetables, pork and beans, condensed soup.
No. 10	12–13	6	Fruits and vegetables.

[1] Specialties: Usually combination dishes such as Spanish rice, Mexican foods.

Food buying guide

BREAD AND CEREALS

	Serving size	Unit	Quantity to order for—			Additional information
			10	25	50	
Bread	1 slice	1-lb. loaf	1	2	4	12–16 slices=1 lb.
		2-lb. loaf		1	2	
Crackers:						
Graham	2 crackers	Lb	½	1	2	60 crackers=1 lb.
Soda	2 crackers	Lb	½	1	1½	70 crackers=1 lb.
Cereal:						
Dry	½ cup	12-oz. pkg	½	1	2	
		18-oz. pkg		1	1½	
To cook	½ cup, cooked	Lb	½	1½	2½	1 lb.=10 cups, cooked.
Rice	¼ cup, cooked	Lb	½	1	2	1 lb.=8 cups, cooked.
Macaroni, noodles, spaghetti	¼ cup, cooked	Lb	½	1	1½	1 lb.=9 cups, cooked.

FRUITS

Fruits, fresh:						
Apples	1 medium	Lb	3½	8	16	1 apple=4 tbsp. sauce; 1 lb.=3–4 medium apples; 1 bu.=48 lb.
Apricots	2 medium	Lb	2½	6½	12½	1 lb.=8–10; 1 bu.=48 lb.
Bananas	1 medium	Lb	3½	8	16	1 lb.=3 medium; 1 hand=5 lb.; 1 bunch=45–65 lb.
Berries	⅓–½ cup	Qt	2	5	10	1 crate=24 qt.; 1 qt.=3 cups, hulled, or 2 cups, crushed.
Cherries, fresh	⅓–½ cup, pitted	Lb	2½	6½	12½	1 lb.=1½ cups, pitted; 1 bu.=64 lb.

Cantaloup	¼–½	Lb	4	10	20	1 jumbo crate=70 lb.
Grapefruit	4–5 sections	Each	5	13	25	1 fruit=10–12 sections; count per box depends on size.
Grapes, seedless	6–8 medium	Lb	2	5	10	
Honeydew melon	¼–½ cup	Lb	4	10	20	1 crate=35 lb.
Oranges	4–5 sections	Each	5	13	25	1 lb.=2–3 medium; 1 medium=10 sections; count per box depends on size.
Peaches	1 medium	Lb	2½	6½	12½	1 lb.=4 medium.
Pears	½ medium	Lb	1½	4½	8½	1 lb.=3–4 medium.
Pineapple	⅓–½ cup	Lb	3½	8½	17	1 medium=2 lb.
Plums	2 medium	Lb	2½	6½	12½	1 lb.=8–12 medium.
Rhubarb	⅓–½ cup	Lb	2	5	10	1 lb.=2–2½ cups sauce.
Tangerines	½ medium	Lb	1½	3½	6½	1 lb.=4 medium.
Watermelon	¼–½ cup	Lb	8	19	38	1 melon=25 lb.
Fruits, canned	½ cup	No. 303 can	3	7	13	
	½ cup	No. 10 can	------	1	2	
Fruits, frozen	¼–½ cup	2½-lb. pkg	1	3	5	Also available in 1-lb. package or 30-lb. cans.
Fruits, dried:						
Prunes, apricots, mixed	¼–½ cup, cooked	Lb	1	2½	5	1 lb.=4–5 cups, cooked.
Raisins, seedless	⅛ cup (2 tbsp.)	Lb	½	1	2	1 lb.=3 cups.
Fruit juices:						
Canned	½ cup	No. 2 can	2	5	10	
		No. 3 cylinder	1	3	5	
		No. 10 can	------	1	2	
Frozen concentrate	½ cup, reconstituted	6-oz. can	2	5	9	Also available in 32-oz. can.
		27-oz. can	------	1	2	

MEATS, POULTRY, FISH

	Suitable cuts to buy	Serving size	Purchase unit	Quantity for—		
				10	25	50
Beef:						
Corned	Brisket.					
Boneless		2 oz	Lb	2	5	10
Dried		2 oz	Lb	2	5	10
Ground	Lean chuck, bottom, or outside round.	2 oz	Lb	2	5	10
Pot roast	Chuck, bottom round, rump.					
Boneless		2 oz	Lb	2	5	10
Bone-in		2 oz	Lb	3½	8½	17
Roast	Top or inside round, loin, rib.					
Boneless		2 oz	Lb	2	5	10
Bone-in		2 oz	Lb	3½	8½	17
Steak	Rib, loin (broil). Round, flank (braise).					
Boneless		2 oz	Lb	2	5	10
Bone-in		2 oz	Lb	3½	8½	17
Stew cubes, boneless	Lean chuck, bottom, or outside round.	2 oz	Lb	2	5	10
Lamb:						
Chops	Rib, loin, shoulder	2 oz	Lb	3½	8½	17
Ground	Shoulder, neck, shank	2 oz	Lb	2	5	10
Roast	Leg, shoulder.					
Boneless		2 oz	Lb	2	5	10
Bone-in		2 oz	Lb	3½	8½	17
Stew cubes, Boneless	Shoulder, neck, shank	2 oz	Lb	2	5	10

Pork:						
Fresh:						
Chops, bone-in	Rib or lion	2 oz	Lb	3½	8½	17
Roast, bone-in	Ham (butt half or shank half); picnic shoulder, loin.	2 oz	Lb	3½	8½	17
Sausage, bulk		2 oz	Lb	2½	6½	13
Cured:						
Bacon		2 oz	Lb	1	2½	5
Roast	Ham (butt half or shank half); picnic shoulder, shoulder, butt.					
Boneless		2 oz	Lb	2	5	10
Bone-in		2 oz	Lb	3½	8½	17
Veal:						
Chops, bone-in	Loin, rib	2 oz	Lb	3½	8½	17
Ground	Forequarter	2 oz	Lb	2	5	10
Roast	Leg, loin, rib, blade, arm, shoulder.					
Boneless		2 oz	Lb	2	5	10
Bone-in		2 oz	Lb	3½	8½	17
Steak, bone-in	Arm, blade, loin	2 oz	Lb	3½	8½	17
Stew cubes, boneless	Forequarter	2 oz	Lb	2	5	10
Variety meats:						
Frankfurter		2 oz	Lb	1½	3½	6½
Heart—beef		2 oz	Lb	3½	8½	17
Liver—pork, lamb, or young beef.		2 oz	Lb	2	5	10
Luncheon meats		2 oz	Lb	1½	3½	6½
Tongue		2 oz	Lb	2	5	10
Poultry:						
Chicken, eviscerated, bone-in:						
Baked or roast	Roasters 3½ lb. over (male)	2 oz	Lb	4	10	20
Frying or broiling	1½- to 3½-lb. broiler or fryer	2 oz	Lb	4½	10½	21
Stewing	3½ to 5 lb. fowl (female)	2 oz	Lb	4	10	20
Turkey, eviscerated:						
Boneless		2 oz	Lb	2	5	10
Bone-in		2 oz	Lb	4	9	18

MEATS, POULTRY, FISH—Continued

	Suitable cuts to buy	Serving size	Purchase unit	Quantity for—		
				10	25	50
Fish:						
Fresh or frozen fillet		2 oz	Lb	2	5	10
Canned		2 oz	1-lb. can	2	4	7
		2 oz	3-lb. can	------	1	2

MILK AND DAIRY PRODUCTS

	Serving size	Unit	Quantity for—			Additional information
			10	25	50	
Milk, whole, fluid	1 cup	½ pint	10	25	50	
		Quart	3	7	13	
		Gallon	------	2	3½	
Dried, nonfat	¼ cup (4 tbsp.), dry	Lb	1	2	3½	1 lb.=4 cups, dry; 1 cup, dry + 4 cups water=1 qt. skim milk.
Evaporated	½ cup, evaporated	14½-oz. can	3	8	15	14½-oz. can=1⅔ cups.
		8-lb. can	------	1	2	8-lb. can=14 cups, evaporated.
Cheese:						
Cheddar	2 oz	Lb	1¼	3¼	6¼	1 lb.=4 cups, grated.
Cottage	2 oz	Lb	1¼	3¼	6¼	1 lb.=2 cups.
Cream	2 oz	Lb	1¼	3¼	6¼	
Ice cream:						
Brick	1 slice	Quart	1½	3½	6½	1 qt.=7–8 slices.
Bulk	⅓ cup	Gallon	------	1	2	
Individual	3 oz	1 3-oz. serving	10	25	50	

VEGETABLES

	Serving size	Unit	Quantity for—			Additional information
			10	25	50	
Vegetables, fresh						
Asparagus	¼ cup	Lb	2	5	10	1 bunch=2 lb.; 1 crate=30 lb.
Beans, snap	¼ cup	Lb	2	4½	8½	1 bu.=30 lb.
Beets, without tops	¼ cup	Lb	2	5	10	1 bu.=52 lb.
Broccoli	¼ cup	Lb	2½	6½	12½	1 bunch=2 lb.; 1 crate=63 lb.
Brussels sprouts	¼ cup	Lb	2½	6½	12½	1 drum=35 lb.
Cabbage	⅛–¼ cup raw	Lb	1	2	3½	1 lb.=4 cups, shredded; 1 lb.=2 cups, cooked; 1 bu.=32 lb.
	¼ cup cooked	Lb	1½	3½	6½	
Carrots, without tops	3 small sticks or 2–4 tbsp. shredded, raw.	Lb	1	2½	5	1 lb.=2½ cups, shredded; 1 lb.=4–5 carrots; 1 sack or bushel=50 lb.
	¼ cup, cooked	Lb	1½	3½	6½	
Cauliflower	¼ cup	Lb	3	7½	15	1 head=2 lb.; 1½-bu. crate=37 lb.
Celery	3 small sticks, raw	Lb	1	2½	5	1 med. stalk=1 lb.
	¼ cup, cooked	Lb	1½	3½	6½	½ crate=65 lb.
Cucumbers	⅛–¼ cup, sliced, diced, or sticks.	Lb	1	2	4	1 bu.=48 lb.
Eggplant	¼ cup	Lb	1½	3½	6½	1 lb.=2½ cup, diced; 1 bu.=33 lb.; 1 crate=48 lb.
Greens	¼ cup	Lb	2	5	10	1 bu.=18 lb.
Lettuce	2–4 tbsp.	Lb	1	2½	5	1 head=1 lb.; 1 crate=70 lb.
Okra	¼ cup	Lb	2	4½	8½	1 lug=20 lb.
Onions	⅛–¼ cup, cooked	Lb	1½	3½	6½	1 sack=50 lb.
Parsnips	¼ cup	Lb	2	4	8½	1 bu.=50 lb.
Peas, unshelled	¼ cup	Lb	3½	8½	17	1 bu.=30 lb.
Potatoes	¼ cup	Lb	2	5	10	1 lb.=3–4 medium; 1 peck=15 lb.; 1 bu.=60 lb.

VEGETABLES—Continued

	Serving size	Unit	Quantity for—			Additional information
			10	25	50	
Rutabaga	⅛–¼ cup	Lb	2	4	8½	1 bu.=56 lb.
Squash:						
Summer	¼ cup	Lb	2	4	8	1 bu.=40 lb.
Winter	¼ cup	Lb	2	5	10	1 lug=50 lb.
Tomatoes	¼ cup, raw	Lb	1½	3½	7	1 lb.=3–4 medium. 1 lug=32 lb. 1 bu.=53 lb.
Turnips, without tops	¼ cup	Lb	2	5	10	1 bu.=54 lb.
Vegetables:						
Canned	¼ cup	No. 303 can	2	4	7	
	¼ cup	No. 10 can	------	------	1	
Dried (peas and beans)	¼ cup, cooked	Lb	½	1½	2½	1 lb., dry=5 cups, cooked.
Frozen	¼ cup	12 oz	2	5	10	
		2½ lbs	1	2	3	
Vegetable juices, canned	½ cup	No. 2 can	2	5	10	
		No. 3 cylinder	1	3	5	
		No. 10 can	------	1	2	

MISCELLANEOUS

Butter or margarine	1 tsp.	Lb	⅛	¼	½	96 tsp.=1 lb.
Jams, jellies	1 tbsp.	Lb	½	1	2	
Peanut butter	2 tbsp.	Lb	1	2	3½	1 lb.=1¾ cups.

SUGGESTED REFERENCES

Child nutrition

Your Child From One to Six, Children's Bureau Publication No. 30, U.S. Department of Health, Education, and Welfare, 1962. 97 pp. Available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. 20¢.

Describes the growth of children from one to six years of age, including influence of food on growth and health.

Your Child From Six to Twelve, Children's Bureau Publication No. 324, U.S. Department of Health, Education, and Welfare, 1966. 98 pp. Available from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. 25¢.

Tells how parents may help their children mature as healthy well-adjusted and socially responsible human beings.

Nutrition and Healthy Growth, Children's Bureau Publication No. 352, U.S. Department of Health, Education, and Welfare, 1955. 35 pp. Available from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. 20¢.

The nutritional needs of children during the various stages of growth and development are discussed and practical suggestions on feeding are included.

Food service

Handbook of Food Preparation, American Home Economics Association, 1600 20th Street NW., Washington, D.C. 20009. 1964. 71 pp. $1.00.

Includes weight and measurements of foods; cooking times, buying guides; properties of foods; grades; essentials of recipe construction; and definitions of foods and processes.

Food and Nutrition Manual for Institutions, Margaret M. Walsh, The Welfare Foundation of Cleveland, 1001 Huron Road, Cleveland, Ohio 44113. 1963. 229 pp. $3.00.

Contains information on food needs, meal planning, food purchasing, food preparation, equipment, sanitation, menu suggestions, and recipes for serving 50.

Food Service Sanitation Manual, Public Health Service Publication No. 934, U.S. Department of Health, Education, and Welfare, 1962. 90 pp. Available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. 55¢.

Contains information on the purpose and scope of a food service sanitation program and suggests ways of implementing effective programs.

Food Storage Guide for Schools and Institutions, U.S. Department of Agriculture, PA. 403, 1959. 42 pp. Available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. 25¢.

Contains suggested methods of handling and storing food. Guides to required amount of storage space, when serving 100 to 750 meals per day, are given.

Recipes

Recipies for Quantity Service, U.S. Department of Agriculture, 1958. 225 pp. Available from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. $2.50.

Standardized recipes for 25, 50, and 100 servings. Weights and measures are given for each of the recipes.

Cooking With Dried Eggs, Home and Garden Bulletin No. 50, U.S. Department of Agriculture, 1956. 23 pp. Available from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. 15¢.

Contains information on storage and cooking with dried eggs. Family-size recipes are given.

Large Quantity Recipes, compiled by Margaret Terrill for the American Dietetic Association, 1951. 414 pp. Available from J. B. Lippincott Co., East Washington Square, Philadelphia, Pa. 19106. $7.00.

Standardized recipes for 50 servings. Weights and measures given for each of 750 recipes.

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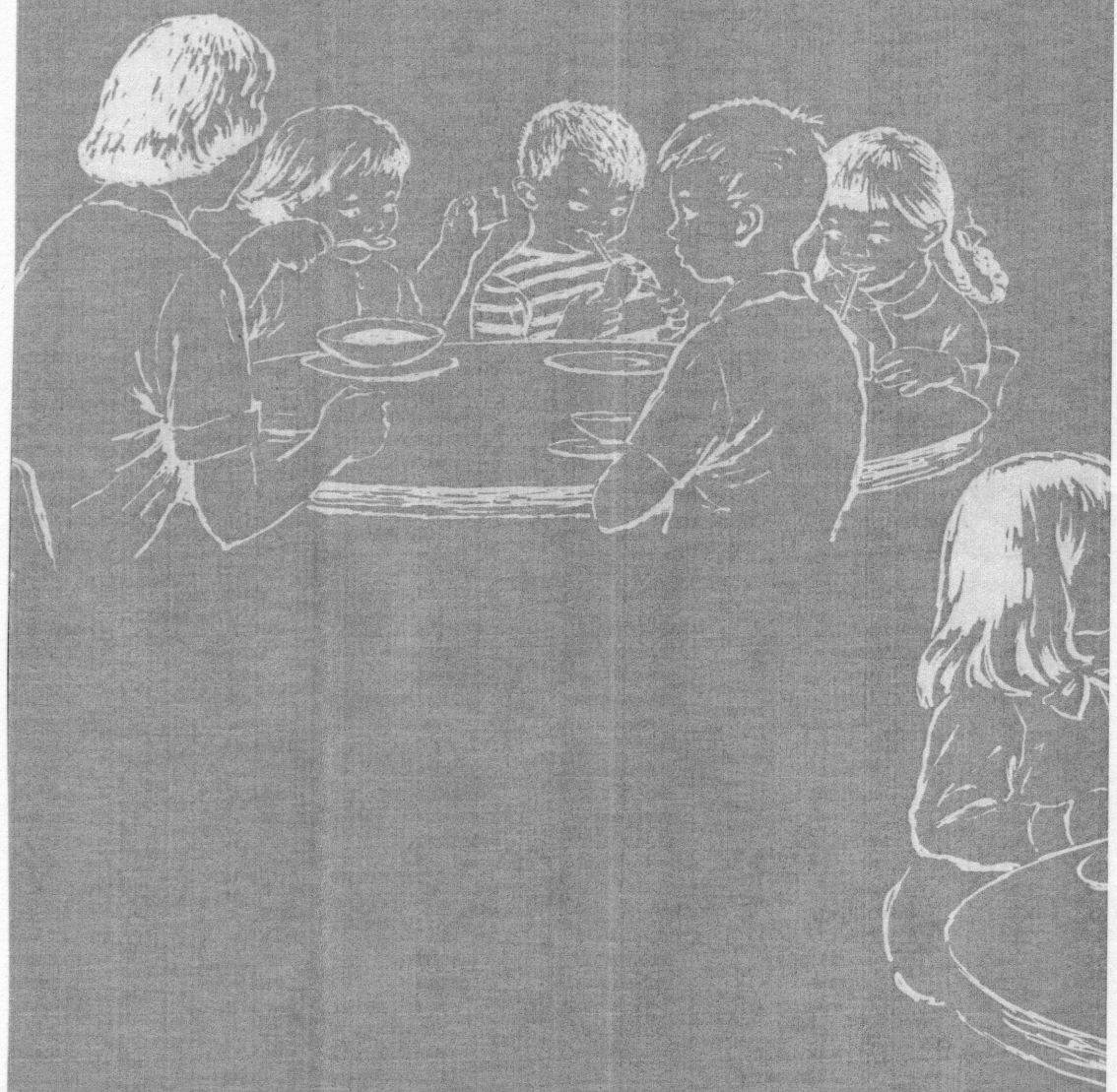

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
SOCIAL and REHABILITATION SERVICE
• Children's Bureau