



Lesson 2: Food for the Preschooler

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THE PRESCHOOLER'S DIET

Feeding a preschooler can be one of the most exciting and also one of the most frustrating tasks a parent or caregiver tackles. You have two goals: (1) You want the child to enjoy eating and (2) to be well nourished. Nourishing preschoolers can be rewarding, if you understand what they need, what they can do, and how they view their world.

A preschooler needs the same nutrients as the infant, the older child, and the adult, but in different amounts. Proteins, carbohydrates, fats, vitamins, and minerals are nutrients needed in the diet to provide energy, the building blocks for growing and developing tissues, and for the control of body processes. Nutrients work together so it is important to provide adequate quantities of all. For example, we often say that calcium is needed to build bones and teeth, but two other minerals (phosphorus and fluoride), two vitamins (D and C), and protein are also needed for skeletal growth.

Energy is needed by the preschooler to provide fuel for growth and activity and to maintain body functions. Carbohydrates, fats, and proteins in the diet all provide energy. (Technically, calorie as it is used to describe energy needs and the energy content of foods should be spelled with a capital "C" or an alternate term, kilocalorie [kcal], used.) The food energy provided by these nutrients is measured as calories. If your

child consumes more energy than is needed by the body, it will be stored as fat. The need for energy depends a great deal on your child's activity level and so can vary from day to day. The average one- to three-year-old will need about 1300 calories a day and the four- to six-year-old about 1700 calories.

Protein provides the body with essential materials needed to build muscles, blood and other body components. Protein is especially important for young children because of their rapid muscular growth. The requirement for protein is about 23 grams for a one- to three-year-old child; 30 grams for a four-six year-old. A child who ate one egg (6 grams of protein), two cups of milk (16 grams of protein), and one hamburger patty (10 grams of protein) would easily meet that requirement. Studies show that protein is a nutrient that most children in the United States consume in adequate amounts. If more protein is consumed than is needed for building, it will be converted to energy or stored as body fat.

Carbohydrate foods provide energy for body growth and physical activity. Carbohydrates are of two types: complex (starches - breads, cereals, grains, vegetables, fruits) and simple (sugars - white and brown sugar, honey, molasses, syrups). Complex carbohydrate foods are preferred as these foods supply vitamins, minerals, and fiber as well as energy and also add many new

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colors and textures to the child's diet. Simple sugars provide calories but little else. There will be more about carbohydrates in later lessons.

Fats play several roles in the diet. They are a concentrated source of energy. They provide essential fatty acids needed for normal growth. They serve as carriers for fat-soluble vitamins such as vitamins A and D. More so than other foods, they give a feeling of fullness after a meal. Fats are found in oils, margarines, mayonnaise, nuts, meats, and dairy products. A surplus of fat will be stored as fat.

Vitamins and minerals are important in maintaining good health and in regulating body processes. Children who eat a wide variety of foods will probably get an adequate amount of all the essential vitamins and minerals. Vitamins are divided into two groups: those that are soluble in water and those that are fat-soluble. Most vitamins are in the water-soluble group--riboflavin, niacin, thiamin, folacin (folic acid), ascorbic acid (C), and vitamins B-6 and B-12. If a surplus of those vitamins is consumed, the excess will be excreted in the urine. Vitamins A, D, E, and K are fat-soluble; if more of any one of these is consumed in food or as a supplement than is needed immediately, it will be stored. Toxic build-ups can occur.

If your preschooler is eating a wide variety of foods, there should be no need for vitamin supplements. Ask the pediatrician if one is needed and if so, which one would be best for your child.

Water is a nutrient that must not be overlooked in the child's diet. It is necessary for regulating chemical balance and body temperature. Fluoride, a mineral needed in tooth building to increase caries resistance, is often found in the water supply. Water intake is especially important during hot

weather, or when children are very active or ill. In general, the healthy preschooler needs four to five glasses of water each day. Some of this water is supplied by foods which are liquid or contain a good bit of water.

How can you, the parent or caregiver, be sure that your child is receiving adequate amounts of the nutrients just discussed? The Basic Four Food Groups are a helpful tool in planning an adequate diet for the preschooler. Selections from all four groups each day help to ensure that the diet meets the child's nutritional needs.

If all the foods from the Four Food Groups won't fit into three meals, count on snacks to provide the rest. Nutritious snacks have an important place in the preschooler's diet. Preschoolers' stomachs may be too small to allow them to eat enough at one sitting to last until the next meal. Plan snacks around the Four Food Groups and offer midway between meals.

A very general rule for determining serving sizes from the Four Food Groups is to use one tablespoon per year of life or 1/4 to 1/3 of an adult serving. This will, of course, vary depending on the food served. These serving sizes may seem small to you, but remember that the preschooler has a small stomach and a small appetite. If children want more food, they will generally ask for it. Some typical serving sizes for a two- to three-year-old might be:

- 2-3 tablespoons of applesauce
- 1/4 of a banana
- 1/4 of an apple
- 1/3 cup orange juice
- 1-2 oz. meat, fish, or poultry
- 1/2 slice bread
- 2-3 tablespoons of vegetable
- 1/3 cup cooked dry beans, peas, or lentils
- 2-3 tablespoons of rice or cereal

FOOD SELECTION GUIDE

MILK AND FOODS MADE FROM/WITH MILK

Important nutrients

Calcium
Phosphorus
Riboflavin
Protein
Vitamin D
Fat

Some foods in group

American cheese	Ice cream
Buttermilk	Ice milk
Cheddar cheese	Low-fat milk
Chocolate milk	Pudding
Cocoa	Ricotta cheese
Cottage cheese	Skim milk
Cream soups	Whole milk
Custard	Yogurt

2 to 3 servings

BREADS AND CEREALS

Important nutrients

Carbohydrate
 complex
 simple
 fiber
Iron
Niacin
Thiamin
Riboflavin

Some foods in group

Bagels	Pita
Cereals	Pumpernickel
Cornbread	Rice
Crackers	Rolls
Grits	Rye bread
Macaroni	Spaghetti
Muffins	Tortillas
Noodles	Waffles
Oatmeal	White bread
Pancakes	Whole wheat bread

4 servings

OTHER

There are many foods which do not fit into one of the basic Four Food Groups. Some of these foods are used in food preparation; others are used to round out meals or for snacks. Unfortunately, foods in this group are sometimes used instead of the protective foods in the Four Food Groups. Most foods in this group are high in fat and/or sugar. Alcoholic beverages are also in this group.

Some foods in group

Butter	Soft drinks
Margarine	Sweet buns
Salad dressings	Jelly
Candy	Pancake sirup
Cookies	

0 to several servings
depending on energy needs

FRUITS AND VEGETABLES

Important nutrients

Vitamin A
Vitamin C
Carbohydrate
 complex
 simple
 fiber
Folic acid
Vitamin B6

Some foods in group

Apple	Corn	Peach
Apricot ^Δ	Cucumber	Pepper**
Asparagus	Grapefruit**	Pumpkin
Banana	Grapes	Potato*
Beets	Green beans	Spinach** ^Δ
Broccoli** ^Δ	Kale** ^Δ	Squash
Cabbage*	Lettuce	Strawberry**
Carrot ^Δ	Onion	Tomato*
Cauliflower**	Orange**	Watermelon* ^Δ

Vitamin C is needed every day. Choose one good source (those marked with **) or two fair sources (those marked *) every day. There should be a Vitamin A source at least three times a week. Fruit and vegetable sources of Vitamins A are marked with^Δ

4 servings

MEAT AND MEAT ALTERNATES

Important nutrients

Protein
Iron
Fat
Niacin
Thiamin
Vitamin B6
Vitamin B12

Some foods in group

Beef	Oysters
Chicken	Peanut butter
Dry beans	Pork
Eggs	Salmon
Fish sticks	Shrimp
Flounder	Tofu
Lamb	Tuna
Mackerel	Turkey
Nuts	Veal

4 servings

SNACK TIME

If snacks are to come from one of the Four Food Groups, let's look at some possible choices from the Milk Group. Milk, itself, is a cool and refreshing, as well as nutritious, snack. Preschool children need the calcium supplied by two to three 8-ounce glasses of milk each day but an 8-ounce glass may be too much to consume with a meal. Serving some milk or food made with milk as a snack can help with this problem. Skim milk and low-fat milk have the same calcium and protein content as whole milk. They have just had some of the fat and, consequently, the calories removed. Whatever form you use, be sure Vitamin D has been added.

Hot cocoa or a soup made with milk may be popular following outdoor play on cold days.

Cheese is a good snack food. Cubes of cheese served with fresh fruit make a filling snack. Or cut cheeses into geometric shapes to fit crackers or into fun shapes for sandwiches. Mild cheddar and American cheeses may be more appealing to the conservative tastes of the preschooler than more exotic cheeses which cost more.

Cheese spreads like pimiento cheese can be spread on bread, crackers, or celery.

Serve cottage cheese with a peach, pineapple or tomato slice.

Cream cheese is not a very good choice for frequent use as it is high in fat. It's more like butter than milk.

Puddings and custards made with milk and ice cream would be good snack foods. These foods have less calcium and more calories than an equal amount of milk.

Many youngsters enjoy yogurt. Plain yogurt has about the same number of calories as the milk from which it is made, but fruit-flavored yogurt has more calories. You might make your own fruit-flavored yogurt by adding unsweetened or lightly

sweetened fruit to plain yogurt. Or make Strawberry-Yogurt Popsicles.

STRAWBERRY-YOGURT POPSICLES

(Makes 12 popsicles--about 70 calories per popsicle.)

Frozen strawberries, thawed
2 cartons, 10 ounces each
Unflavored gelatin
1 Tablespoon
Yogurt, plain - 16 ounces
12 paper cups, 3 ounce
12 wooden popsicle sticks

1. Drain strawberries.
2. Place drained liquid in a saucepan and sprinkle with gelatin. Cook over low heat, stirring constantly, until gelatin dissolves.
3. Mix strawberries, yogurt, and gelatin mixture in a blender until smooth.
4. Place cups on a tray or in a baking pan. Fill with blended mixture and cover cups with a sheet of aluminum foil.
5. Insert a stick for each popsicle by making a slit in the foil over the center of each cup.
6. Freeze popsicles until firm.
7. Run warm water on outside of cup to loosen each popsicle from the cup just before serving.

KIDS IN THE KITCHEN

After the child has learned kitchen safety, she/he is ready for pouring and spreading activities.

Pouring

Pouring skills begin as the child plays in the sandbox, bathtub, or kitchen sink. For pouring beverages, here are some hints for success.

Give the child a small, lightweight pitcher to use. Many small plastic pitchers are available or you may have a measuring cup with a pouring spout.

A second hint is to mark the full line on the glass with a rubber

band or waxed pencil. This signals the youngster that it is time to stop pouring so the liquid won't spill over the top. If there should be spills, leave the task of cleaning up to the child.

Thirdly, tell the child to hold the handle of the pitcher with one hand and guide the spout with the other hand. This technique also helps to balance the pitcher.

Spreading

The three-year-old can use a table knife for spreading. Show him how to hold the knife and let him practice spreading butter/margarine, peanut butter, or salads on breads, crackers, celery, or fruit slices.

MEALTIME MANNERS

The right eating utensils make it easier for the child to feed himself.

A bowl, a short-handled spoon, and a short stubby glass which can be grasped with both hands are all that are needed for first self-feeding efforts.

Later a plate and a short-handled fork will be needed. A salad or luncheon plate will be large enough for the smaller portions of the preschooler. A plate with a rim an inch or so wide may be a better choice than a coupe shaped plate. The rim will afford a margin of safety when the child pushes food against it in an effort to get food on his fork. A plastic glass and plate will prevent breakage.

By age four, the child should be pretty efficient at handling the glass, fork, and spoon. He doesn't have to spend much attention on the

management of these tools so he should be able to manage both eating and talking. Spills occur when attention is diverted from eating.

FAMILY ACTIVITIES

Children like to see how they are growing. They want to learn to be like adults and to do grown-up things. Asking questions is a way to teach children simple concepts about growth.

Look at pictures of families with children. Ask questions such as who is big? who is small? who is young? who is old? These kinds of questions help children learn simple concepts about size and age.

Also ask questions about what people in the picture eat and why. Such questions, although very simple, are of great value. They help children figure out how food is adapted to different needs. In this way, they can learn not to give the new baby foods that could cause choking such as chips or nuts.

A long term activity is measuring children's growth. Although some families mark height of growing children on walls, an easier and neater way is to attach a tape measure to a piece of fabric. Mark the child's height about every six months and record the date. This provides the child with his/her own personal growth chart.

Another way is to periodically have the child trace his/her hand or foot to see how the body grows. Mark the date on the tracing and keep in a safe place so comparison can be made as the child grows.