



MIDDLE CHILDHOOD

iddle childhood, ages 5 to 10, is characterized by a slow, steady rate of physical growth. However, cognitive, emotional, and social development occur at a tremendous rate.

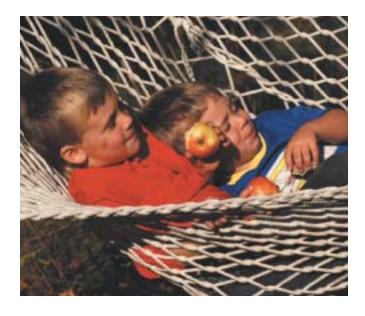
To achieve optimal growth and development, children need a variety of healthy foods that provide sufficient energy, protein, carbohydrates, fat, vitamins, and minerals. They need three meals per day, plus snacks.

Children benefit greatly from practicing healthy eating behaviors. These behaviors are essential for

- Promoting optimal growth, development, and health.
- Preventing immediate health problems (e.g., iron-deficiency anemia, undernutrition, obesity, eating disorders, dental caries).
- Laying the foundation for lifelong health and reducing the risk of chronic diseases (e.g., cardiovascular disease, type 2 diabetes mellitus, hypertension, some forms of cancer, osteoporosis).

Growth and Physical Development

Middle childhood's slow, steady growth occurs until the onset of puberty, which occurs late in middle childhood or early adolescence. Children gain an average of 7 pounds in weight, an average of $2^{1}/2$ inches in height, and an average of an inch in head circumference per year. They have growth



spurts, which are usually accompanied by an increase in appetite and food intake. Conversely, a child's appetite and food intake decrease during periods of slower growth.

Body composition and body shape remain relatively constant during middle childhood. During preadolescence and early adolescence (9 to 11 years in girls and 10 to 12 years in boys), the percentage of body fat increases in preparation for the growth spurt that occurs during adolescence. This body fat increase occurs earlier in girls than in boys, and the amount of increase is greater in girls. Preadolescents, especially girls, may appear to be "chunky," but this is part of normal growth and development. During middle childhood, boys have more lean body mass per inch of height than girls. These differences in body composition become more significant during adolescence.

During middle childhood, children may become overly concerned about their physical appearance. Girls especially may become concerned that they are overweight and may begin to eat less. Parents should be aware of this possibility so that they can reassure their daughters that an increase in body fat during middle childhood is part of normal growth and development and is probably not permanent. Boys may become concerned about their stature and muscle size and strength. Parents should be aware that muscle-building activities (e.g., weightlifting) during this period can be harmful and, in fact, will not build muscle because boys are unable to increase their muscle mass until middle adolescence (although with appropriate physical activity, muscle strength can be improved).

Children begin to lose their primary teeth during middle childhood, and permanent teeth begin to erupt. When children are missing several teeth or are undergoing orthodontic treatment, it may be difficult for them to chew certain foods (e.g., meat). Offering foods that are easier to eat (e.g., crumbled hamburger, chopped meat) can alleviate this problem.

Social and Emotional Development

From ages 5 to 7, children are in the "preoperations" period of development. They describe foods by color, shape, and quantity and classify foods as ones they like and don't like. These children can identify foods that are healthy, but may not know why they are healthy. From ages 7 to 12, children move to the "concrete operations" period of development. These children realize that healthy food has a positive effect on growth and health.

Children in middle childhood begin to develop a sense of self and learn their roles in the family, at school, and in the community. Their ability to feed themselves improves, they can help with meal planning and food preparation, and they can perform tasks related to mealtime (e.g., setting the table). Performing these tasks enables children to contribute to the family, thereby boosting their self-esteem.

During middle childhood, mealtimes take on more social significance and children become more influenced by outside sources (e.g., their peers, the media) regarding eating behaviors and attitudes toward food. In addition, they eat more meals away from home (e.g., at child care facilities, school, and homes of friends and relatives). Their eagerness to eat certain foods and to participate in nutrition programs (e.g., the National School Breakfast and National School Lunch programs) may be based on what their friends are doing.

Parents and other family members continue to have the most influence on children's eating behaviors and attitudes toward food. Parents need to make sure that healthy foods are available and decide when to serve them; however, children should decide how much to eat. It is important for families to eat together in a pleasant environment, allowing time for social interaction. Parents can be positive role models by practicing healthy eating behaviors themselves.

Many children walk to neighborhood stores and fast-food restaurants and purchase foods with their own money. Parents need to provide guidance to help children make healthy food choices away from home.

Healthy Lifestyles

Children benefit from participating in regular physical activity, which can

- Promote a healthy weight.
- Give children a feeling of accomplishment.
- Reduce the risk of certain diseases (e.g., coronary heart disease, hypertension, colon cancer, diabetes mellitus) if children continue to be active during adulthood.

During middle childhood, children's muscle strength, motor skills, and stamina increase. Children acquire the motor skills necessary to perform complex movements, allowing them to participate in a variety of physical activities.

Parents are a major influence on a child's level of physical activity. By participating in physical activity (e.g., biking, hiking, playing basketball or baseball) with their children, parents emphasize the importance of regular physical activity—and show their children that physical activity can be fun. Parents' encouragement to be physically active significantly increases a child's activity level.^{1,2}

Physical education at school should be provided every day, and enjoyable activities should be offered. Teachers and children's friends influence a child's level of physical activity. Children may be more interested in activities in which their friends are participating. Participating in physical activity programs helps children learn to cooperate with others.

Building Partnerships

Middle childhood provides an opportunity for health professionals, families, and communities to teach children about healthy eating behaviors, encourage positive attitudes toward food, and promote regular physical activity. However, there are many barriers. Foods that are high in fat and sugar are readily available, and media messages encourage children to eat them. Children may not have access to the foods they need to stay healthy, as a result of poverty or neglect. Some children do not have opportunities for participating in physical activity, and some live in unsafe neighborhoods.

Children need a variety of foods served in a pleasant environment. Nutrition should be part of the curriculum at school, and child care facilities and school cafeterias should serve a variety of healthy foods that children learn about in the classroom. Federally funded food assistance and nutrition programs can help schools provide children with a substantial part of their daily nutrient requirements. (See Tool K: Federal Food Assistance and Nutrition Programs.) In addition, community groups, churches and other places of worship, businesses, and others provide food and food vouchers to help hungry or homeless children and families.

Communities need to provide physical activity programs (e.g., at child care facilities, schools, and recreation centers) and safe places for children to play.

Common Nutrition Concerns

Milk (source of calcium), fruit, and vegetable consumption decreases, while soft drink consumption increases. In addition, the intake of fat, saturated fat, and sodium exceeds recommended amounts.^{3,4} Consequently, the prevalence of child-hood obesity is increasing. In contrast, some children may begin to be overly concerned about their

body image during middle childhood, which can lead to eating disorders.⁵

Tool D: Key Indicators of Nutrition Risk for Children and Adolescents lists the risk factors that can lead to poor nutrition status. If there is evidence that a child is at risk for poor nutrition, further assessment is needed, including a nutritional assessment and/or laboratory tests.



MIDDLE CHILDHOOD NUTRITION SUPERVISION

A child's nutrition status should be evaluated during nutrition supervision visits or as part of health supervision visits. (For more information on health supervision, see *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents,* listed under Suggested Reading in this chapter.)

Health professionals begin nutrition supervision by gathering information about the child's nutrition status. This can be accomplished by selectively asking key interview questions listed in this chapter or by reviewing a questionnaire filled out by parents before the visit. (See Tool B: Nutrition Questionnaire for Children.) These methods provide a useful starting point for identifying nutrition concerns.

Health professionals can then use this chapter's screening and assessment guidelines, and counseling guidelines, to provide families with anticipatory guidance. Interview questions, screening and assessment, and counseling should be used as appropriate and will vary from visit to visit and from child to child.

To assist health professionals in promoting optimal nutrition that will last a lifetime, desired outcomes for the child and the role of the family are identified in Table 4.

Interview Questions

Eating Behaviors and Food Choices

For the Child

Where did you eat yesterday? At school? At home? At a friend's house?

How often does your family eat meals together?

What do you usually eat and drink in the morning? Around noon? In the afternoon? In the evening? Between meals?

What foods do you eat most often?

What is your favorite food?

Are there special foods you eat during holidays or special occasions?

Are there any foods you won't eat?

Did you drink any milk yesterday? Did you eat other dairy foods (for example, cheese or yogurt)?

Did you eat any fruits yesterday? Vegetables? Did you drink any juice?

For the Parent

Do you think Tran eats healthy foods? Why (or why not)?

What does he usually eat for snacks?

Where does Tran eat snacks? At home? At school? At after-school care? At a friend's house?

Do you have any concerns about his eating behaviors (for example, getting him to drink enough milk)?

Food Resources

For the Child or Parent

Who usually purchases the food for your family? Who prepares it?

Are there times when there is not enough food to eat or not enough money to buy food?

Weight and Body Image

For the Younger Child

How do you feel about the way you look?

Do you feel that you are underweight? Overweight? Just right? Why?

For the Older Child

How much would you like to weigh?

Are you trying to change your weight? If so, how?

Physical Activity

For the Child

Do you think you are getting enough physical activity? Why (or why not)?

What do you do for fun? Do you ride a bike? Skate? Play basketball or soccer?

How do you think you can increase your level of physical activity?

How much time do you spend each day watching television and videotapes and playing computer games?

For the Parent

What type of physical activity does Renae participate in? How often?

Screening and Assessment

- Measure the child's height and weight, and plot these on a standard growth chart. (See Tool M: CDC Growth Charts). Deviation from the expected growth pattern (e.g., a major change in growth percentiles on the chart) should be evaluated. This may be normal or may indicate a nutrition problem (e.g., difficulties with eating).
- Height and weight measurements can be used to indicate nutrition and growth status. Changes in weight reflect a child's short-term nutrient intake and serve as general indicators of nutrition status and overall health. Low height-for-age may reflect long-term, cumulative nutrition or health problems.
- Body mass index (BMI) can be used as a screening tool to determine nutrition status and overall health. Calculate the child's BMI by dividing weight by the square of height (kg/m²) or by referring to a BMI chart. Compare the BMI to the norms listed for the child's sex and age on the chart. (See Tool M: CDC Growth Charts.)

Some children have a high BMI because of a large, lean body mass resulting from physical activity, muscularity, or frame size. An elevated skinfold (i.e., above the 95th percentile on CDC growth charts) can confirm excess body fat in children.

Table 3. Indicators of Height and Weight Status in Middle Childhood

Indicator	Anthropometric Variable	Cut-Off Values
Stunting	Height-for-age	< 3rd percentile
Thinness	BMI-for-age	< 5th percentile
At risk for overweight	BMI-for-age	≥ 85th percentile, but < 95th percentile
Overweight	BMI-for-age	≥ 95th percentile

Sources: Compiled from World Health Organization⁶ and Himes and Dietz.⁷

- Evaluate the appearance of the child's skin, hair, teeth, gums, tongue, and eyes.
- Obtain the child's blood pressure. (See the Hypertension chapter.)
- Assess the child's risk for familial hyperlipidemia. (See the Hyperlipidemia chapter.)
- Ask whether the child has regular dental checkups. (See the Oral Health chapter.)
- Assess fluoride levels in all sources of water used by the family (including municipal, well, commercially bottled, and home system–processed) to determine the need for fluoride supplementation. If the child is not getting enough fluoride, refer to a dentist or primary care health professional.

Stunting

Children whose height-for-age is below the third percentile should be evaluated.⁶ Stunting reflects a failure to reach optimum height as a result of poor nutrition or health. Stunting has been

reported in children with inadequate food resources, those on highly restricted diets (e.g., diets extremely low in fat), and those with eating disorders or chronic illnesses. The goal is to identify children whose growth is stunted and who may benefit from improved nutrition or treatment of other underlying problems. Most children with low height-for-age are short as a result of genetics, not because their growth is stunted. Children with special health care needs may have low height-for-age because of a genetic disorder, chronic eating problems, altered metabolic rate, malabsorption syndrome, or other conditions. All of these factors should be assessed and interventions implemented to help children reach their potential height.

Thinness

Children with a BMI-for-age below the fifth percentile should be assessed for organic disease and eating disorders. Children may be thin naturally, or they may be thin as a result of a nutritional deficit or chronic disease.

Overweight

Children with a BMI between the 85th and 95th percentiles are at risk for overweight and need further screening. Children with a BMI at or above the 95th percentile for their age and sex are overweight and need an in-depth medical assessment.⁷ (See the Obesity chapter.)

Iron-Deficiency Anemia

Children who have a history of iron-deficiency anemia, special health care needs, or low iron intake should be screened for iron-deficiency anemia.⁸ (See the Iron-Deficiency Anemia chapter.)

Physical Activity

Assess the child's level of physical fitness by

- Determining how much physical activity the child participates in on a weekly basis.
- Evaluating how the child's physical fitness compares to national standards (e.g., by reviewing the results of the child's President's Council on Physical Fitness and Sports test).

For physical activity characteristics associated with an increased likelihood of poor nutrition, see Tool D: Key Indicators of Nutrition Risk for Children and Adolescents. If there is evidence of nutrition



risk, further assessment should be done, including a nutrition assessment and/or laboratory tests.

Counseling

Health professionals can use the following information to provide anticipatory guidance to parents. Anticipatory guidance provides information on the child's nutrition status and on what to expect as the child enters the next developmental period, and promotes a positive attitude about food and healthy eating behaviors in children. (For additional information on counseling, see Tool F: Stages of Change—A Model for Nutrition Counseling, and Tool G: Strategies for Promoting Healthy Eating Behaviors.)

Physical Development

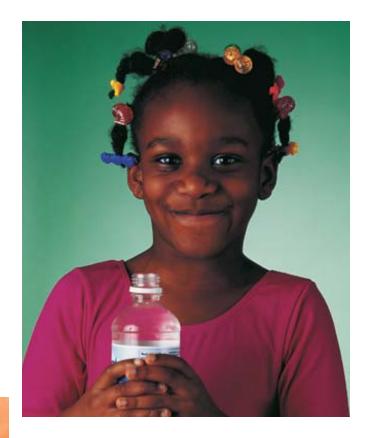
- Discuss physical development with children and their parents, and the approximate time when they should expect accelerated growth. For girls, this may occur at ages 9 to 11; for boys, this may not occur until about age 12.
- Explain the standard growth chart to children and their parents and how the children compare to others their age. Emphasize that a healthy body weight is based on a genetically determined size and shape rather than on an ideal, socially defined weight. (See Tool I: Tips for Fostering a Positive Body Image Among Children and Adolescents.)
- Discuss what a healthy weight is. Help children understand that people come in unique sizes and shapes, within a range of healthy body weights. All children need to know they are loved and accepted by their families as they are, regardless of their size and shape.



- Explain to older children that some of their peers may start puberty earlier than they do, but that they are still normal.
- Discuss the child's upcoming physical changes and specific concerns.
- Emphasize the importance of eating healthy foods to achieve or maintain a weight appropriate for the child's height and level of physical activity.
- Explain that weight loss should not occur during middle childhood, with the possible exception of the child whose BMI is at or above the 95th percentile.

Eating Behaviors

■ Discuss the importance of healthy eating behaviors. Provide guidance to children on increasing the variety of foods they eat and guidance to parents on incorporating new foods into their children's diets.



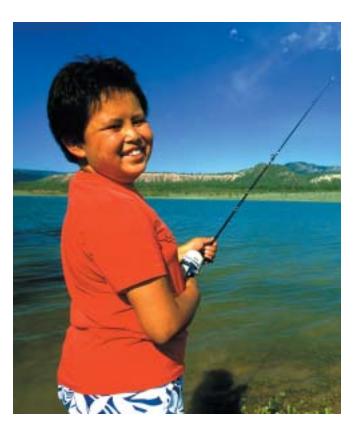
- Encourage children to make healthy food choices that are based on the Dietary Guidelines for Americans and the Food Guide Pyramid. (See the Healthy Eating and Physical Activity chapter.)
- Encourage children to eat healthy meals and snacks. Discuss the importance of eating breakfast, lunch, and dinner. Provide suggestions for packing foods to be eaten away from home, and encourage parents to enroll their children in school breakfast and lunch programs if needed. (See Tool K: Federal Food Assistance and Nutrition Programs.)
- Explain that energy requirements remain fairly constant during middle childhood and are influenced by growth, physical activity level, and body

- composition. Boys and girls need approximately the same amount of kilocalories per day until the beginning of their growth spurts, when calorie needs increase. In addition, 200 to 300 more calories per day may be necessary for very active children.
- Help children choose healthy snacks rich in complex carbohydrates (e.g., whole grain products, fresh fruits). Encourage families to limit high-fat and high-sugar foods (e.g., chips, candy, soft drinks). Children in middle childhood cannot consume large amounts of food at one time and therefore need snacks to ensure a healthy diet.
- Explain to parents that community water fluoridation is a safe and effective way to significantly reduce the risk of dental caries in children. It is best for families to drink fluoridated water; for families that prefer bottled water, a brand in which fluoride is added at a concentration of approximately 0.8 to 1.0 mg/L (ppm) is recommended. Children require fluoride supplementation if their water is severely deficient in fluoride (i.e., less than 0.6 ppm).9

Physical Activity

- Physical activity is recommended on most, if not all, days of the week. Explain that the child can achieve this goal through moderately intense activities (e.g., hiking for 30 minutes) or through shorter, more intense activities (e.g., skating or playing basketball for 15 to 20 minutes).
- It is critical for children to understand the importance of physical activity. This may encourage them to stay active during adolescence, when physical activity tends to decline.

- Encourage children to find physical activities they enjoy and can incorporate into their daily lives. These activities tend to be continued into adulthood.
- Most elementary schools include physical education in their curricula. Schools that participate in the President's Council on Physical Fitness and Sports program usually conduct testing when children are in middle childhood. Encourage parents to bring the results of their child's fitness testing to discuss positive results as well as suggestions for improvement.
- Encourage parents of children with special health care needs to allow their children to participate



- in regular physical activity for cardiovascular fitness (within the limits of their medical or physical conditions). Explain that adaptive physical education is often helpful and that a physical therapist can help identify appropriate activities for the child with special health care needs. (See the Children with Special Health Care Needs chapter.)
- For children who participate in organized sports, adequate fluid intake is very important. Before puberty, children are at increased risk for heat-related illness because their sweat glands are not fully developed and they cannot cool themselves as well as adolescents can. Encourage parents to make sure that their children drink enough fluids.
- Emphasize the importance of safety equipment (e.g., helmets, pads, mouth guards, goggles) when the child participates in physical activity.
- Encourage children, especially those who are overweight, to reduce sedentary behaviors (e.g., watching television and videotapes, playing computer games).
- If the safety of the environment or neighborhood is a concern, help parents and children find other settings for physical activity.

Substance Use

- Warn parents and children about the dangers of alcohol, tobacco, and other drugs.
- Warn parents and children about the dangers of performance-enhancing products (e.g., protein supplements, anabolic steroids).

Table 4. Desired Outcomes for the Child, and the Role of the Family

Child

behaviors and regular physical foods promote growth and activity are crucial to growth, Makes healthy food choices at ment	Educational/Attitudinal	Behavioral	Health
 Understands the importance of eating a variety of healthy foods and how to increase food variety Understands the importance of a healthy diet consisting of 3 meals per day and snacks and away from home Participates in physical activity on most, if not all, days of the week Independent and health Participates in physical activity on most, if not all, days of the week Independent and health Achieves nutritional a cal well-being, without iron-deficiency aneming nutrition, obesity, eat ders, dental caries, or nutrition-related problems. Achieves nutritional and away from home 	ehaviors and regular physical ctivity are crucial to growth, evelopment, and health anderstands the importance of ating a variety of healthy foods and how to increase food variety understands the importance of healthy diet consisting of 3 heals per day and snacks and social benefits of egular physical activity and ow to increase physical activity and ow to increase physical activity and on the increase physical activity and on the increase physical activity and	foods Makes healthy food choices at and away from home Participates in physical activity on most, if not all, days of the	promote growth and development Achieves nutritional and physical well-being, without signs of iron-deficiency anemia, undernutrition, obesity, eating disorders, dental caries, or other nutrition-related problems Achieves and maintains a healthy body weight and posi-

(continued)

Table 4. Desired Outcomes for the Child, and the Role of the Family (continued)

Family

Educational/Attitudinal Beh	avioral Health
that occur with growth and development Understands the relationship between nutrition and shortand long-term health Understands children's eating behaviors and how to increase the variety of foods they eat Understands the importance of a healthy diet consisting of 3 meals per day and snacks as needed Understands that people come in unique body sizes and shapes, within a range of healthy body weights practices heal iors, participa ical activity, a positive body Provides a var foods at home availability of sugar foods Eats meals tog ensure optimal facilitate fami Provides opported to participation in the positive body Inderstands that people come in unique body sizes and shapes, within a range of healthy body weights	lety of healthy e, limiting the high-fat and high- lether regularly to all nutrition and by communication retunities for the lipate in meal plan- preparation programs and s if needed regular physical

References

- 1. Epstein LH. 1986. Treatment of childhood obesity. In Brownell KD, Foreyt JP, eds., *Handbook of Eating Disorders: Physiology, Psychology, and Treatment of Obesity, Anorexia, and Bulimia*. New York, NY: Basic Books.
- 2. Kohl HW, Hobbs KE. 1998. Development of physical activity behaviors among children and adolescents. *Pediatrics* 101(3):549–554.
- 3. U.S. Department of Agriculture, Agricultural Research Service. 1999. *Food and Nutrition Intakes by Children* 1994–96, 1998. Beltsville, MD: U.S. Department of Agriculture, Agricultural Research Service. In Food Surveys Research Group [Web site]. Cited July 1, 2001; available at http://www.barc.usda.gov/bhnrc/foodsurvey/Products9496.html#food and nutrient intakes.
- 4. Kennedy E, Powell R. 1997. Changing eating patterns of American children: A view from 1996. *Journal of the American College of Nutrition* 16(6):524–529.
- 5. Birch LL, Fisher JO. 1998. Development of eating behaviors among children and adolescents. *Pediatrics* 101(3):539–549.
- 6. World Health Organization. 1995. Physical status: The use and interpretation of anthropometry. Report of a WHO Expert Committee. *World Health Organization Technical Report Series* 854:1–452.
- 7. Himes JH, Dietz WH. 1994. Guidelines for overweight in adolescent preventive services: Recommendations from an expert committee. *American Journal of Clinical Nutrition* 59(2):307–316.
- 8. Centers for Disease Control and Prevention, Epidemiology Program Office. 1998. *Recommendations to Prevent and Control Iron Deficiency in the United States*. Atlanta, GA: Centers for Disease Control and Prevention, Epidemiology Program Office.
- 9. American Dental Association. 2000. *ADA Guide to Dental Therapeutics* (2nd ed.). Chicago, IL: ADA Publishing Company.

Suggested Reading

- American Dietetic Association. 1999. Position of the American Dietetic Association: Dietary guidance for healthy children aged 2 to 11 years. *Journal of the American Dietetic Association* 99(1):93–101.
- Casamassimo P, ed. 1996. *Bright Futures in Practice: Oral Health*. Arlington, VA: National Center for Education in Maternal and Child Health.
- Green M, Palfrey JS, eds. 2002. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents* (2nd ed., rev.). Arlington, VA: National Center for Education in Maternal and Child Health.
- Patrick K, Spear B, Holt K, Sofka D, eds. 2001. *Bright Futures in Practice: Physical Activity*. Arlington, VA: National Center for Education in Maternal and Child Health.
- Rickert VI, ed. 1996. *Adolescent Nutrition: Assessment and Management*. New York, NY: Chapman and Hall.
- Tamborlane WV, Weiswasser JZ, Held NA, Fung T. 1997. *The Yale Guide to Children's Nutrition.* New Haven, CT: Yale University Press.
- Trahms CM, Pipes PL. 1997. *Nutrition in Infancy and Childhood* (6th ed.). New York, NY: McGraw-Hill.



The Importance of Healthy Snacks

By the time Melanie gets home from school around 3:30 p.m., she is very hungry, tired, and cranky.

elanie Walker is a 6year-old who has just started first grade. She eats breakfast at home and participates in the school lunch program at her elementary school, where she eats lunch every day at 11:00 a.m. The school does not have a regularly scheduled snack in the afternoon. By the time Melanie gets home from school around 3:30 p.m., she is very hungry, tired, and cranky.

Last year, Melanie attended a morning kindergarten class and spent three afternoons a week at a child care facility. At the time, she was eating breakfast at home, a snack at 9:30 a.m., lunch at 11:30 a.m., and another snack at 3:00 p.m. Melanie didn't seem to be as hungry, tired, or cranky at the end of the afternoon as she is now.

Melanie's parents talk with a nutritionist, Kristin McKee, who suggests that they meet with the teacher and the principal to discuss adding an afternoon snack. Mr. and Mrs. Walker and the parents of other children in Melanie's class share their concerns with the teacher and the principal during an afterschool meeting, and the nutritionist shares information on the importance of healthy snacks in children's diets. As a result, the school authorizes a regular afternoon snack for children who eat lunch early.

FREQUENTLY ASKED QUESTIONS ABOUT NUTRITION IN MIDDLE CHILDHOOD

■ How can I get my child to eat breakfast?

Provide foods that are fast and convenient, such as bagels, low-fat granola bars, fruits, 100 percent fruit juice, and yogurt.

Serve foods other than the usual breakfast foods (for example, sandwiches, baked potatoes, and leftovers such as chicken or pasta).

Help your child get organized so that she has time to eat in the morning.

Make breakfast the night before.

If your child is in a hurry, offer her foods such as fruits or trail mix to eat at school.

How can I get my child to eat more fruits and vegetables?

Keep a variety of fruits and vegetables at home.

Keep 100 percent fruit juice in the refrigerator.

Wash and cut up fruits and vegetables and keep them in the refrigerator, along with low-fat dip or salsa. Use a clear container so that the fruits and vegetables can be seen easily.

Serve two or more vegetables with dinner, including at least one your child likes. Serve a salad with a choice of low-fat dressing.

Pack fruits and vegetables (including juice) in your child's bag to eat at school.

Be a good role model—eat more fruits and vegetables yourself.

■ How can I help my child get enough calcium?

Serve foods that are rich in calcium, such as reduced-fat (2 percent), low-fat (1 percent), or fat-free (skim) milk; cheese; yogurt; tofu processed with calcium sulfate; broccoli; and collard and turnip greens.

Serve reduced-fat, low-fat, or fat-free flavored milk, such as chocolate or strawberry.

Use low-fat dairy products in recipes, such as in puddings, milkshakes, soups, and casseroles.

Serve unusual dairy products, such as new flavors of low-fat yogurt.

If your child's digestive system cannot handle milk and other dairy products (he is lactose intolerant), try these suggestions:

- Serve small portions of these foods throughout the day.
- Serve these foods along with non-dairy foods.
- Serve lactose-free dairy products, yogurt, and aged hard cheeses, such as Cheddar, Colby, Swiss, and Parmesan, that are low in lactose.
- Give your child lactase tablets before he eats dairy products containing lactose.
- Add lactose drops to your child's milk.
- Serve foods, such as orange juice and cereal products, with added calcium (calciumfortified).

If these ideas do not work, ask a health professional about giving your child a calcium supplement.

■ How can our family eat healthy meals together when we are so busy?

Make food preparation and cooking a family activity.

Eat different meals together. For example, eat breakfast together one day and lunch or dinner the next.

Buy healthy ready-to-eat foods from the store or healthy take-out foods from a restaurant.

When your family eats together, use the time to socialize. Avoid distractions. Turn the television off, and don't answer the telephone.

■ How can I teach my child to make healthy food choices away from home?

Encourage your child to make healthy food choices when purchasing food at school, stores, and restaurants, and from vending machines.

Review school and restaurant menus with your child and discuss healthy food choices.

Encourage your child to eat salads, fruits, vegetables, and broiled or baked meats.

Encourage your child to avoid eating fried foods or to reduce the serving size (for example, by splitting an order of French fries with a friend).

Teach your child to be assertive and to request food modifications (for example, asking the server to "hold the mayonnaise").

My child snacks on chips and candy. What should I do?

Limit foods that are high in fat, such as potato chips that are fried, and foods that are high in sugar, such as candy and soft drinks.

Keep a variety of easy-to-prepare and healthy foods on hand.

Serve healthy foods, such as pretzels, baked potato chips, low-fat granola bars, popcorn, 100 percent fruit juice, fruits, apple sauce, vegetables, and yogurt.

Wash and cut up vegetables and keep them in a clear container (so they can be seen easily) in the refrigerator, along with low-fat dip or salsa.

Keep a bowl of fruit on the kitchen table or counter.

Encourage your child to make healthy food choices when purchasing food at school, stores, and restaurants, and from vending machines.

■ How can I help my child be more active?

Encourage active, spur-of-the-moment physical activity, such as dancing to music.

Limit the time your child spends watching TV and videotapes and playing computer games to 1 or 2 hours per day.

For every hour your child reads, watches television and videotapes, or plays computer games, encourage her to take a 10-minute physical activity break.

Give your child chores, such as raking leaves or walking the dog.

Make physical activity a part of your child's daily life. For example, use the stairs instead of taking an elevator or escalator, and walk or ride a bike instead of riding in a car.

Participate in physical activity together, such as playing ball or going biking or skating. It is a great way to spend time with your child.

Enroll your child in planned physical activities, such as swimming, martial arts, or dancing.

■ What should I do if my child seems overweight?

If your child is growing, eats healthy foods, and is physically active, you do not need to worry about her weight.

Serve healthy meals and snacks at scheduled times, but allow for flexibility.

Limit foods that are high in fat, such as potato chips that are fried, and foods that are high in sugar, such as candy and soft drinks.

Do not forbid sweets and desserts. Serve them in moderation.

Focus on gradually changing the entire family's eating and physical activity behaviors.

Plan family activities that everyone enjoys, such as hiking, biking, or swimming.

Limit to 1 to 2 hours per day the amount of time your child watches television and videotapes and plays computer games.

Be a good role model—practice healthy eating behaviors and participate in regular physical activity yourself.

Never place your child on a diet to lose weight, unless a health professional recommends one for medical reasons and supervises it.

■ How can I help my child like her body?

Children are very sensitive about how they look. Do not criticize your child about his size or shape.

Focus on traits other than appearance when talking to your child.

Talk to your child about how the media affects his body image.

Be a good role model—don't criticize your own size or shape or that of others.

■ How can I help my underweight child gain weight?

Limit the quantity of beverages your child drinks between meals if his appetite is being affected.

Serve an after-school snack, and encourage your child to eat a midmorning snack at school, if possible. Limit snacks close to mealtimes if snacking is affecting his appetite.

Involve your child in meal planning and food preparation.

Continue to offer foods even if your child has refused to eat them before. Your child is more likely to accept these foods after they have been offered several times.

Work with your community to make sure that your child has safe places for being physically active, such as walking and biking paths, playgrounds, and parks.

My child has become a vegetarian. Should I be concerned?

With careful planning, a vegetarian lifestyle can be healthy and meet the needs of a growing child.

A vegetarian diet that includes dairy foods and eggs usually provides adequate nutrients; however, your child may need to take an iron supplement.

Vegans are strict vegetarians who don't eat any animal products, including dairy foods, eggs, or fish. They may need additional calcium, vitamin B₁₂, and vitamin D, which can be provided by fortified foods and supplements.

Instead of always preparing separate vegetarian meals for your child, occasionally fix vegetarian meals for the whole family.

Ask a dietitian or nutritionist to help you plan healthy meals.

■ If you notice any of these symptoms, talk to a health professional about your concerns:

Anorexia Nervosa

Excessive weight loss in a short period of time

Continuation of dieting although thin

Dissatisfaction with appearance; belief that body is fat, even though severely thin

Loss of menstrual period

Unusual interest in certain foods and development of unusual eating rituals

Eating in secret

Obsession with exercise

Depression

Bulimia Nervosa

Loss of menstrual period

Unusual interest in certain foods and development of unusual eating rituals

Eating in secret

Obsession with exercise

Depression

Binge-eating

Binge-eating with no noticeable weight gain

Vomiting or laxative use

Disappearance into bathroom for long periods of time (e.g., to induce vomiting)

Alcohol or drug abuse

Resources for Families

- Berman C, Fromer J. 1991. *Teaching Children About Food.*Boulder, CO: Bull Publishing Company.
- Brama AN. 2000. *Kids Around the World Cook!* Somerset, NJ: John Wiley and Sons.
- Dietz WH, Stern L, eds. 1999. *American Academy of Pediatrics Guide to Your Child's Nutrition: Making Peace at the Table and Building Healthy Eating Habits for Life.*New York, NY: Villard Books.
- Goldberg AC. 2000. Feed Your Child Right from Birth Through Teens. New York, NY: M. Evans and Company.
- Kalish S, Lawrence RM. 1995. *Your Child's Fitness: Practical Advice for Parents*. Champaign, IL: Human Kinetics.
- National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases. 1997. *Helping Your Overweight Child.* Bethesda, MD: National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases.
- Nissenberg SK, Bogle ML, Wright AC. 1995. *Quick Meals for Healthy Kids and Busy Parents: Wholesome Family Meals in 30 Minutes or Less.* New York, NY: John Wiley and Sons.
- Rockwell L. 1999. *Good Enough to Eat: A Kid's Guide to Food and Nutrition.* Scranton, PA: HarperCollins.
- Sears W, Sears M. 1999. The Family Nutrition Book: Everything You Need to Know About Feeding Your Children from Birth Through Adolescence. Boston, MA: Little, Brown and Company.
- Storlie J. 1997. *Snacking Habits for Healthy Living*. New York, NY: John Wiley and Sons.
- U.S. Department of Agriculture, Food and Nutrition Service. 1997. Fun Tips: Using the Dietary Guidelines at Home. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service. In USDA's Team Nutrition [Web site]. Cited September 1, 2001; available at http://www.fns.usda.gov/tn/resources/funtips.html.
- Warner P. 1999. *Healthy Snacks for Kids*. San Leandro, CA: Bristol Publishing Enterprises.
- Wood C. 1999. *How to Get Kids to Eat Great and Love It!* Torrance, CA: Griffin Publishing Group.