



Early Childhood

1-4 Years



EARLY CHILDHOOD

During early childhood, a child's world expands to include friends, school-mates, and others in the community. The child's physical, cognitive, social, and emotional development are tightly linked. For example, nutrition affects not only the physical health of children but also their emotional health. When offered developmentally appropriate food in a supportive environment, children can thrive.

Early childhood is divided into two stages: the toddler stage, ages 1 to 2, and the young child stage, ages 3 to 4. The toddler stage can be stressful for parents as toddlers develop a sense of independence. In addition, toddlers may struggle with their parents over food. By 3 years old, young children usually are more competent at feeding themselves. As they get older, young children become more interested in trying new foods, and they enjoy participating in family meals.

Practicing healthy eating behaviors during early childhood is essential for

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

Growth and Physical Development

A child's birthweight quadruples by 2 years of age. Between the ages of 2 and 5, children gain an average of 4.5 to 6.5 pounds per year and grow 2.5 to 3.5 inches per year. As the growth rate declines during early childhood, a child's appetite decreases and the amount of food consumed may become unpredictable.¹

During early childhood, children predominantly use their cheeks rather than their tongues to swallow. As toddlers' eating skills develop, they progress from eating soft pieces of food to foods with more texture. By age 3 or 4, they are able to



use their fingers to push food on a spoon, pick up food with a fork, and drink from a cup. Children do not have the muscle control yet to cut their food or eat all foods neatly.

Children who are bottle fed should be weaned from the bottle and encouraged to use a cup at about 12 to 14 months of age. The risk for early childhood caries (baby bottle tooth decay) increases if children are allowed to suck on a bottle filled with any liquid except water for prolonged periods.

Social and Emotional Development

The Toddler: 1 to 2 Years

Toddlers tend to be leery of new foods and may refuse to eat them. They need to look at the new foods and touch, smell, feel, and taste them—perhaps as many as 15 to 20 times before they accept them.^{2,3}

Toddlers are unpredictable. The foods they like one day may be different the next. They may eat a lot one day, and very little the next. Unlike adults, they usually eat only one or two foods at a meal. Parents often become alarmed when toddlers' eating behaviors change so much, and often so abruptly.

Parents should not become concerned that their toddler is not eating enough. Toddlers' growth rates decrease during early childhood; therefore, their energy needs decrease. Despite these changes, toddlers will consume a variety of foods if parents continue to serve developmentally appropriate healthy meals and snacks.

To encourage toddlers to establish healthy eating behaviors, parents need to provide a structured,

but pleasant, mealtime environment and serve as role models by eating a variety of foods. Parents are responsible for what, when, and where the toddler eats; toddlers are responsible for whether to eat and how much.³

The Young Child: 3 to 4 Years

Around age 3 or 4, young children become more curious about food, although they still may be reluctant to try new foods. This reluctance can be overcome if parents talk about new foods and allow their children to prepare and perhaps grow them.

As young children grow, they become less impulsive and can follow instructions. They can stay calm when they are hungry, join in conversation during mealtimes, serve themselves, and pass food to others. Young children are more comfortable eating in unfamiliar places than they were as toddlers.

Young children should be encouraged to try new foods. The goal is for children to accept a variety of healthy foods—not simply to get them to eat what is on their plates.

Healthy Lifestyles

Early childhood is a key time for promoting the development of motor skills and good habits for physical activity that will last a lifetime. Most children are active but may not have the opportunity to play and explore because of space or safety concerns.

Physical activities (e.g., running, jumping, climbing; throwing, catching, or hitting a ball) should be encouraged. Simple games such as “Simon says,” chase, and tag are appropriate during early childhood. Organized activities tailored to the

developmental needs of children (e.g., gymnastics, swimming, dancing) are also appropriate. Because most children need to develop their motor skills, they are not ready for organized, competitive sports, which require visual acuity, control, and balance.

Building Partnerships

Partnerships among health professionals, families, and communities are essential for ensuring that parents receive guidance on childhood nutrition and feeding. Health professionals can give parents the opportunity to discuss nutrition issues and con-

cerns affecting their children and can identify and contact community resources to help parents feed their children.

Many children spend time with child care providers or participate in Head Start or other preschool programs, which provide opportunities for promoting healthy eating behaviors. Children in community programs can be introduced to new foods and may try them more readily if their peers seem to be enjoying them.

By directly providing food and vouchers for food, nutrition programs ensure that families with low incomes have access to food. Federally funded food assistance and nutrition programs can provide



a substantial part of a child's daily nutrition requirements. (See Tool K: Federal Food Assistance and Nutrition Programs.) Food shelves and pantries, churches and other places of worship, and businesses can also provide food.

Common Nutrition Concerns

The most important nutrition message for parents during early childhood is to ensure that their children consume enough calories and nutrients to support adequate growth and development. Before children are 2, their fat intake should not be restricted. After 2 years of age, children should gradually eat fewer high-fat foods, so that by 5 years of age they are getting no more than 30 percent of their daily calories from fat (33 g per 1,000 kcal).² As children begin to consume fewer calories from fat, they need to eat more grain products; fruits; vegetables; low-fat dairy products and other calcium-rich foods; and beans, lean meat, poultry, fish, and other protein-rich foods.

Iron-deficiency anemia may have adverse effects on growth and development. Iron-deficiency anemia is common in children and is especially prevalent among children from families with low incomes. (See the Iron-Deficiency Anemia chapter.) The prevalence of iron-deficiency anemia can be reduced by doing the following:⁴

- Waiting until children are 12 months of age before feeding them cow's milk
- Offering children no more than 16 oz of cow's milk daily
- Encouraging consumption of iron-rich foods (e.g., meat, fish, poultry) and foods that contain vitamin C (e.g., fruits, vegetables, juice), which enhances iron absorption



Children with special health care needs may have nutrition concerns, including poor growth, poor eating skills, inadequate food intake, developmental delays, elimination problems, and metabolic disorders. These children may need specialized care from a dietitian; they may also need referral to early intervention programs in their communities. (See the Children and Adolescents with Special Health Care Needs chapter.)

EARLY 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. Nutrition supervision information that pertains to the entire early childhood developmental period (Nutrition Supervision Throughout Early Childhood) is provided first in this chapter, followed by information for age-specific visits. 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 2.

Nutrition Supervision Throughout Early Childhood

Interview Questions

Do you have any concerns about Marla's eating behaviors or growth?

How does she let you know when she is hungry and when she is full?

What do you do if Marla doesn't like a particular food?

Do you enjoy sharing meals and snacks with her?

Do you have appropriate equipment for feeding Marla (for example, cups, eating utensils, and an infant seat, highchair, or booster seat)?

Do you have any concerns about the food served to her when she is away from home?

What is the source of your drinking and cooking water? Do you use bottled or processed water?

Are you concerned about having enough money to buy food?

Screening and Assessment

- Measure the child's length or 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).

- Length or 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 reflects 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.)
- Evaluate the appearance of the child’s skin, hair, teeth, gums, tongue, and eyes.
- 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 the child to a dentist or primary health care provider.
- Assess eating behaviors to determine the child’s risk for early childhood caries (baby bottle tooth decay).

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.

(For additional information on nutrition counseling, see Tool G: Strategies for Promoting Healthy Eating Behaviors.)

Parent-Child Feeding Relationship

- Inform parents that they are responsible for what, when, and where the child eats. To ensure that the child’s nutrition needs are met, parents need to
 - Purchase and prepare food.
 - Serve developmentally appropriate and healthy food at scheduled times.
 - Make meal and snack times pleasant.
 - Make sure the child develops eating skills (e.g., progresses from using her hands for eating to using utensils).⁵
- Children are responsible for deciding whether to eat and how much.⁵

Eating Behaviors

- Emphasize to parents that children need healthy meals and snacks at scheduled times throughout the day to help them achieve nutritional balance.⁶
- Tell parents that children are unpredictable in the amounts and types of foods they eat, from meal to meal and from day to day. Reassure parents that children usually eat enough food to meet their nutrition needs.
- Instruct parents to modify foods to make them easier for the child to eat.
- From ages 2 to 5, children make the transition from the higher fat intake necessary in infancy to



the lower fat intake recommended for the rest of the population. Inform parents that children's fat intake should gradually be reduced to no more than 30 percent of their daily calories by age 5.²

- Tell parents that children 2 to 3 years of age need the same number of servings as children 4 to 6, but they may need smaller portions—about $\frac{2}{3}$ of a serving.⁶
- Explain that by the time children are 4, they can eat serving sizes similar to those eaten by older family members (e.g., $\frac{1}{2}$ cup of fruits or vegetables; $\frac{3}{4}$ cup of juice; 1 slice of bread; 2 to 3 oz of cooked lean meat, poultry, or fish).
- Instruct parents to serve children 1 to 2 years of age whole milk. For older children, reduced-fat (2 percent), low-fat (1 percent), or fat-free (skim) milk is acceptable.²
- Instruct parents to offer two servings of milk per day to children 2 to 6.⁶ Excessive milk intake can reduce the child's appetite for other foods.
- Encourage parents to wean the child from the bottle by 12 to 14 months.
- Instruct parents to serve juice in a cup instead of a bottle and to limit the child's consumption of juice to 4 to 6 oz per day.
- Explain that children who drink fruit juices or sweetened beverages (e.g., fruit punch, soft drinks) whenever they want are at increased risk for early childhood caries and minor infections, and may experience loose stools and diarrhea.
- Emphasize that children who consume foods (e.g., candy, cookies) and beverages high in sugar (e.g., fruit punch) in unlimited amounts are likely to fill up on these foods rather than eat healthy foods.
- Encourage parents to make sure the child drinks plenty of water throughout the day.

Mealtimes

- Explain to parents that meals and snacks can be important social times for children. Parents should turn off the television and make mealtimes a pleasant experience.
- Emphasize that children eat better when an adult is nearby, particularly when the adult shares the meal or snack with them.
- Parents can teach children to serve themselves at the table.
- Instruct parents to offer the child a variety of healthy foods and allow the child to choose which ones to eat.



- Instruct parents to modify foods to make them easier and safer for the child to eat.
- Encourage parents to be patient and understanding if the child makes a mess while he learns to feed himself.
- Tell parents that they can encourage the child to eat new foods by offering small portions—perhaps 1 or 2 tablespoons.⁶
- Encourage parents to be positive role models when they offer new foods to the child by eating these foods themselves.
- Caution parents not to pressure the child to eat certain foods or to eat more than she wants.
- Tell parents not to use foods to reward, bribe, or punish the child or to calm, comfort, or entertain him.
- Emphasize that children benefit when parents praise them for their accomplishments and are patient and understanding.
- Encourage parents to offer dessert as part of the meal. Some desserts (e.g., custard, pudding, fruit, yogurt) make a healthy contribution to the meal.

Food Safety

- Inform parents that children are at high risk for many foodborne illnesses because their immune and gastrointestinal systems are not fully devel-

oped. To reduce the risk of foodborne illness, parents need to follow food safety practices. (See Tool H: Tips for Promoting Food Safety.)

- Tell parents to use a highchair or an infant seat when feeding the child.
- Parents may need instruction about special techniques for positioning, special equipment, or modified utensils for feeding children with special health care needs.
- Instruct parents to take the following precautions to prevent their children from choking:

Stay with children while they are eating.

Have children sit while eating. Eating while walking or running may cause choking.

Keep things calm at meal and snack times. Overexcitement while eating may cause choking in children.

For children under age 3, foods that may cause choking should be avoided (e.g., hard candy, mini-marshmallows, popcorn, pretzels, chips, spoonfuls of peanut butter, nuts, seeds, large chunks of meat, hot dogs, raw carrots, raisins and other dried fruits, whole grapes).⁷

Children between 3 and 5 may eat these foods if they are modified to make them safer (e.g., cutting hot dogs in quarters lengthwise and then into small pieces, cutting whole grapes in half lengthwise, chopping nuts finely, chopping raw carrots finely or into thin strips, spreading peanut butter thinly on crackers or bread).⁷

- Caution parents not to let the child eat in the car. If the parent is driving, helping a choking child will be difficult.

Teaching Children About Food

- Encourage parents to offer a wide variety of healthy foods to the child.
- Parents can help the child learn about foods from other cultures by offering these foods.
- Encourage parents to teach the child where foods come from and how foods are grown (e.g., by planting a vegetable garden).
- Encourage parents to involve the child in food shopping and preparation.

Physical Activity

- Parents' involvement and enthusiasm have a positive impact on their children's play experiences. Encourage parents to be good role models by playing with their children and participating in physical activity themselves.
- Suggest that parents plan activities each week to encourage all family members to participate in physical activity.
- Encourage parents to let the child decide which physical activities the family will do together (e.g., washing the car, raking leaves, walking the dog, hiking, skating, swimming, playing tag).
- Community projects provide opportunities for the entire family to be physically active together (e.g., neighborhood cleanup days, community gardens, food drives).

Oral Health

- Instruct parents with children 1 to 2 years to clean their child's teeth twice a day using a small, soft toothbrush and water. For parents with chil-

dren older than 2, inform them that fluoridated toothpaste can be used. (See the Oral Health chapter.)

- If appropriate, refer children younger than 2 to a dentist or primary care health professional to assess the need for fluoridated toothpaste.⁹
- Explain to parents that children older than 3 can brush their own teeth using a small, soft toothbrush and a pea-size amount of fluoridated toothpaste. Brushing should be supervised because children younger than 6 are at increased risk for enamel damage if they swallow too much fluoridated toothpaste.
- Explain to parents that limiting the child's consumption of candy, dried fruit, and other foods that stick to the teeth can help prevent early childhood caries.
- Explain to parents that community water fluoridation is a safe and effective way to significantly reduce the risk of early childhood caries. 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.⁸
- Inform parents that children require fluoride supplementation if the water is severely deficient in fluoride (i.e., less than 0.3 ppm for children 1 to 3 years; less than 0.6 ppm for children 3 to 6 years).⁸
- Tell parents that to prevent injuries to the child's mouth, teeth, oral tissue, and jaws, they need to use a safety belt when the child is placed in a shopping cart, a child safety seat when the child rides in a car or truck, and baby gates at the top and bottom of stairs.

Nutrition Supervision by Visit

1 YEAR

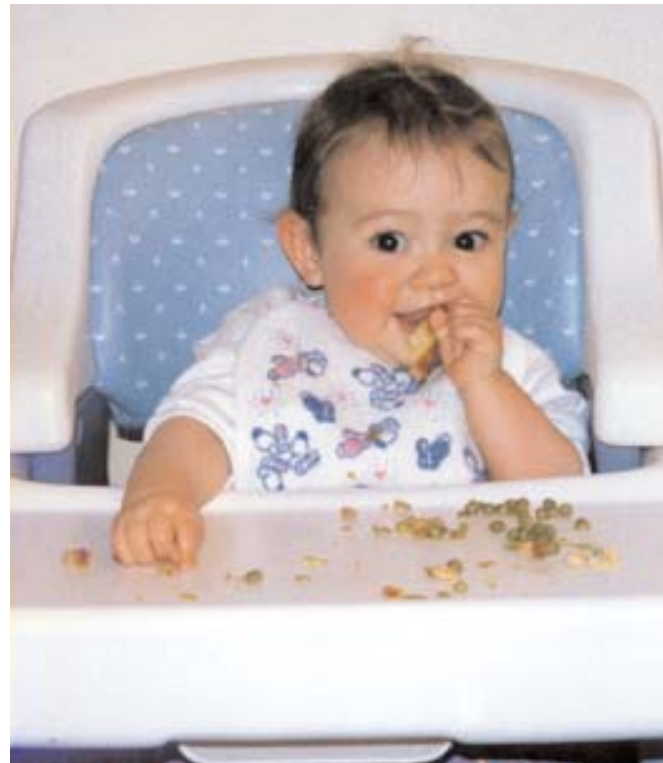
Health professionals can use the general information in the section Nutrition Supervision Throughout Early Childhood (pp. 65–70), as well as the age-specific information that follows.

Interview Questions

What is Rhonda's feeding routine?

Are you breastfeeding Rhonda? Are you giving her infant formula or milk in a bottle or cup?

What type of infant formula or milk do you feed her?



How much fruit juice or how many sweetened drinks (for example, fruit punch or soft drinks) does Rhonda drink? When does she drink them?

Does Rhonda drink from a cup? Does she drink from a bottle now and then? If so, what are your plans for weaning her from the bottle?

What textures of food does Rhonda eat? Does she eat pieces of soft food?

Does she eat meals with the family?

Screening and Assessment

- Screen the child for iron-deficiency anemia if any of these risk factors are present (see the Iron-Deficiency Anemia chapter):⁴

Was born preterm or with low birthweight

Was fed non-iron-fortified infant formula for more than 2 months

Was fed cow's milk before 12 months of age

Consumes more than 24 oz of cow's milk per day

Is eligible for WIC

Is from a family with low income

Is from a migrant family

Is from a family of recently arrived refugees

Has special health care needs (e.g., takes medications that interfere with iron absorption; has chronic infection, inflammatory disorders, a restricted diet, or extensive blood loss from a wound, an accident, or surgery)

- Screen the child for lead exposure. (See Tool E: Screening for Elevated Blood Lead Levels.)

- Evaluate the child's progress in developing eating skills. Make sure the child

Can bite off small pieces of food.

Can put food in the mouth.

Has an adequate gag reflex.

Can retain food in the mouth (i.e., doesn't immediately swallow).

Can chew food in an up-and-down or rotary motion.

Can use a "pincer grasp" to pick up small pieces of food.

Can drink from a cup.

- Ask whether the child has regular dental check-ups. (See the Oral Health chapter.)

Counseling

- Encourage parents to give their children opportunities to feed themselves at the family table.
- Encourage parents to give their children opportunities to develop their eating skills (including chewing and swallowing) by offering a variety of foods.
- Instruct parents to serve the child beverages in a cup. Children may need help drinking from a cup; however, they may be able to use a covered infant cup by themselves.
- Encourage parents to serve the child a variety of soft foods.
- Explain that children are unpredictable in the amount and types of foods they eat, from meal to meal and from day to day. Reassure parents that children usually eat enough food to meet their nutrition needs.

- Instruct parents to offer the child food every 2 to 3 hours, because children’s capacity to eat at any one time is limited.
- Explain that children will test limits by asking for certain foods and perhaps by throwing tantrums when refused.
- Reassure parents that they can impose limits on the child’s unacceptable mealtime behaviors without controlling the amount or types of foods she eats.



15 MONTHS

Health professionals can use the general information in the section Nutrition Supervision Throughout Early Childhood (pp. 65–70), as well as the age-specific information that follows.

Interview Questions

Are you breastfeeding Christopher? Are you giving him bottles? Milk in a cup? What kind of milk does he drink? How much?

How much fruit juice or how many sweetened drinks (for example, fruit punch or soft drinks) does Christopher drink? When does he drink them?

Which foods does Christopher like to eat? Are there any foods he doesn’t like?

Does Christopher eat meals with the family?

Does he ask for food between meals and snacks? If so, how do you handle this?

Does Christopher throw tantrums over food? If so, how do you handle them?

Screening and Assessment

- Screen the child for iron-deficiency anemia if any of these risk factors are present (see the Iron-Deficiency Anemia chapter):⁴

Was born preterm or with low birthweight

Was fed non-iron-fortified infant formula for more than 2 months

Was fed cow’s milk before 12 months of age

Consumes more than 24 oz of cow’s milk per day

Is eligible for WIC

Is from a family with low income

Is from a migrant family

Is from a family of recently arrived refugees

Has special health care needs (e.g., takes medications that interfere with iron absorption; has chronic infections, inflammatory disorders, a restricted diet, or extensive blood loss from a wound, accident, or surgery)

Counseling

- Instruct parents to offer the child food every 2 to 3 hours, because children’s capacity to eat at any one time is limited.
- Emphasize that children benefit from a relaxed atmosphere during meals and snacks. Children should not be rushed, because trying new foods takes time.
- Reassure parents that children will become increasingly skilled at eating a variety of foods.
- Instruct parents to use spoons, cups, and dishes with steep sides (e.g., bowls) to make eating easier for the child.

18 MONTHS

Health professionals can use the general information in the section Nutrition Supervision Throughout Early Childhood (pp. 65–70), as well as the age-specific information that follows.

Interview Questions

Are you breastfeeding Mia? Are you giving her bottles? Milk in a cup? What kind of milk does she drink? How much?

How much fruit juice or how many sweetened drinks (for example, fruit punch or soft drinks) does Mia drink? When does she drink them?

Which foods does Mia like to eat? Are there any foods she doesn’t like?

Does Mia eat meals with the family?

Does she ask for food between meals and snacks? If so, how do you handle this?

Does Mia throw tantrums over food? If so, how do you handle them?

Screening and Assessment

- Use the screening and assessment guidelines in the section Nutrition Supervision Throughout Early Childhood (pp. 65–70).

Counseling

- Instruct parents to offer the child food every 2 to 3 hours, because children’s capacity to eat at any one time is limited.
- Encourage parents to give the child opportunities to feed himself at the family table.



- Encourage parents to give the child opportunities to develop her eating skills (including chewing and swallowing) by offering a variety of foods.
- Explain that children need forks and spoons that are designed for them (i.e., those that are smaller and easier to use).
- Instruct parents to clean the child's teeth twice a day using a small, soft toothbrush (without toothpaste) and water.

2 YEARS

Health professionals can use the general information in the section Nutrition Supervision Throughout Early Childhood (pp. 65–70), as well as the age-specific information that follows.

Interview Questions

- Has Ricky been weaned from the bottle?
- What kind of milk does he drink? How much?
- How much fruit juice or how many sweetened drinks (for example, fruit punch or soft drinks) does Ricky drink? When does he drink them?
- Which foods does Ricky like to eat? Are there any foods he doesn't like?
- Does Ricky eat meals with the family?
- Does he eat the same foods as the rest of the family?
- What do you do when Ricky does not want to eat or only wants to eat a particular food?

Screening and Assessment

- Screen the child for iron-deficiency anemia if any of these risk factors are present (see the Iron-Deficiency Anemia chapter):⁴
 - Consumes a diet low in iron
 - Has limited access to food because of poverty or neglect
 - Has special health care needs
- Screen the child for lead exposure. (See Tool E: Screening for Elevated Blood Lead Levels.)



- 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.)

Counseling

- Encourage parents to give the child opportunities to develop her eating skills (including chewing and swallowing) by offering a variety of foods.
- Reassure parents that food jags in children (when children only want to eat a particular food) are common. Smaller servings of the favored food can be offered, along with other foods to ensure that the child eats a variety of healthy foods.

3 TO 4 YEARS

Health professionals can use the general information in the section Nutrition Supervision Throughout Early Childhood (pp. 65–70), as well as the age-specific information that follows.

Interview Questions

What kind of milk does Felicia drink? How much?

How much fruit juice or how many sweetened drinks (for example, fruit punch or soft drinks) does Felicia drink? When does she drink them?

Which foods does Felicia like to eat? Are there any foods she doesn't like?

Does Felicia eat meals with the family?

How often do you serve snacks? What types of foods do you serve?

Screening and Assessment

- Screen the child for iron-deficiency anemia if any of these risk factors are present (see the Iron-Deficiency Anemia chapter):⁴

Consumes a diet low in iron

Has limited access to food because of poverty or neglect

Has special health care needs

- Screen the child for lead exposure. (See Tool E: Screening for Elevated Blood Lead Levels.)
- 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 check-ups. (See the Oral Health chapter.)



Counseling

- Children become aware of new foods by seeing family and friends enjoying them.
- Children enjoy learning about new foods by growing, preparing, and talking about them. Sharing stories, drawing pictures, and singing songs related to foods help children become familiar with them.

Table 2. Desired Outcomes for the Child, and the Role of the Family

Child

Educational/Attitudinal	Behavioral	Health
<ul style="list-style-type: none"> ■ Tries new foods ■ Enjoys a variety of healthy foods ■ Enjoys active play 	<ul style="list-style-type: none"> ■ Gradually increases variety of foods eaten ■ Eats healthy foods ■ Participates in active play 	<ul style="list-style-type: none"> ■ Improves motor skills, coordination, and muscle tone ■ Grows and develops at an appropriate rate ■ Maintains good health

Family

Educational/Attitudinal	Behavioral	Health
<ul style="list-style-type: none"> ■ Understands that each child's growth and development are unique ■ Has a positive attitude toward food ■ Understands the nutrition needs of the growing child and the importance of scheduled healthy meals and snacks ■ Encourages the child to try a variety of healthy foods ■ Understands the importance of modifying foods for the child to make them easier and safer to eat ■ Understands the importance of a healthy lifestyle, including eating healthy foods and participating in regular physical activity 	<ul style="list-style-type: none"> ■ Understands that parents are responsible for what, when, and where the child eats, and that the child is responsible for whether to eat and how much ■ Serves developmentally appropriate foods ■ Serves scheduled healthy meals and snacks ■ Offers a variety of foods ■ Eats meals together regularly to ensure optimal nutrition and to facilitate family communication ■ Provides positive role models by eating healthy foods and participating in regular physical activity ■ Uses nutrition programs and food resources if needed ■ Provides safe opportunities for active play 	<ul style="list-style-type: none"> ■ Maintains good health

References

1. Birch LL, Fisher JA. 1995. Appetite and eating behavior in children. *Pediatric Clinics of North America* 42(4):931–953.
2. Kleinman RE, ed. 1998. *Pediatric Nutrition Handbook* (4th ed.). Elk Grove Village, IL: American Academy of Pediatrics.
3. Satter EM. 1990. The feeding relationship: Problems and interventions. *Journal of Pediatrics* 117(2, Pt. 2): S181–S189.
4. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Epidemiology Program Office. 1998. *Recommendations to Prevent and Control Iron Deficiency in the United States*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Epidemiology Program Office.
5. Satter EM. 1998. *Secrets of Raising a Healthy Eater*. Chelsea, MI: Kelcy Press.
6. U.S. Department of Agriculture, Center for Nutrition Policy and Promotion. 1999. *Tips for Using the Food Guide Pyramid for Young Children 2 to 6 Years Old*. Washington, DC: U.S. Department of Agriculture, Center for Nutrition Policy and Promotion.
7. Trahms CM, Pipes PL. 1997. *Nutrition in Infancy and Childhood* (6th ed.). New York, NY: WCB/McGraw-Hill.
8. American Dental Association. 2000. *ADA Guide to Dental Therapeutics* (2nd ed.). Chicago, IL: ADA Publishing Company.
9. Centers for Disease Control and Prevention. 2001. Recommendations for using fluoride to prevent and control dental caries in the United States. *Morbidity and Mortality Weekly Report* 50(RR-14):1–42.

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.
- Graves DE, Sutor CW, Holt KA, eds. 1997. *Making Food Healthy and Safe for Children: How to Meet the National Health and Safety Performance Standards—Guidelines for Out-of-Home Child Care Programs*. 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.
- Network of the Federal/Provincial/Territorial Group on Nutrition; National Institute of Nutrition. 1989. *Promoting Nutritional Health During the Preschool Years: Canadian Guidelines*. Ottawa, Ontario, Canada: Network of the Federal/Provincial/Territorial Group on Nutrition; National Institute of Nutrition.
- 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.
- 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. Available from <http://www.fns.usda.gov/tn/resources/funtips.html>.
- U.S. Department of Agriculture, Food and Nutrition Service. 1999. *Families Who Eat Together . . . Grow Together*. Parent Workshop TEAM Nutrition. Washington, DC: U.S. Department of Agriculture, Food and Nutrition Service.



Reducing Distractions During Mealtime

T Tyler Mikkelsen, a 22-month-old, is in a home child care facility 5 days a week while his parents work. Like other children his age, Tyler is apprehensive about trying new foods. However, he seems to have a good appetite and his parents have been successful in getting him to try one or two bites of a new food by modeling their own willingness to eat that food.

Tyler's parents are thus surprised when Tyler's child care provider, Fran Eisenberg, asks to speak with them about Tyler's eating. Ms. Eisenberg says that Tyler will not sit down at the table long enough to eat his meal and that Tyler refuses to try new foods and sometimes refuses to eat anything at all. Tyler's parents have not noticed any changes in his eating behaviors at home. They call Sandy Hill, a dietitian, for guidance.

Ms. Hill suggests that Tyler's parents visit Ms. Eisenberg's home when she feeds the children. She says that the

mealtime environment at child care may be very different from the environment at home, which may be affecting Tyler's appetite and interest in eating. During their visit, Tyler's parents find that Ms. Eisenberg does not sit down to eat meals with the children. Ms. Eisenberg turns on the television in the kitchen so the children can watch cartoons while they eat. Tyler's parents notice that Tyler is too busy watching the cartoons to pay attention to his food.

Tyler's parents meet with Ms. Eisenberg to discuss the mealtime environment. They tell her that they always eat at the table with Tyler to help him eat and to encourage him to try each food on his plate. They do not turn on the television during mealtimes because it distracts Tyler. Tyler's parents suggest that Ms. Eisenberg join the children at mealtime to provide a familylike atmosphere. They also suggest that the television be turned off.

Ms. Eisenberg agrees to try the changes to see whether Tyler's eating behaviors improve. Two weeks later, she tells Tyler's parents that as a result of the changes, Tyler and the other children in her care are eating better and enjoying mealtimes together.

FREQUENTLY ASKED QUESTIONS ABOUT NUTRITION IN EARLY CHILDHOOD

■ How can I teach my child healthy eating behaviors?

Eat meals together as a family.

Keep in mind that you are responsible for what, when, and where your child eats. Let him decide whether to eat and how much.

Offer a variety of healthy foods, and encourage your child to try different ones.

Let your child help with food shopping and preparation.

Do not use food to reward, bribe, or punish your child.

Be a positive role model—practice healthy eating behaviors yourself.

■ How can I make mealtimes enjoyable?

Be patient and understanding when your child makes a mess while she learns to feed herself—this is normal.

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

Use your child's favorite plate, bowl, cup, and eating utensils.

Create a relaxed setting for meals (for example, turn off the TV).

■ My 2-year-old's appetite has changed. Should I be worried?

Children grow more slowly from ages 1 to 5. Young children's appetites are usually smaller than those of babies.

Children's appetites change a lot from day to day, even from meal to meal. If your child is energetic and growing, he is probably eating enough.

■ What should my child eat?

At mealtime, offer small portions of what the rest of your family is eating (for example, bread, pasta, or rice; fruits and vegetables; cheese or yogurt; and cooked lean meat, poultry, fish, or eggs).

Children under 2 usually eat small portions. Offer small portions (for example, 1 or 2 tablespoons) and let your child ask for more if she is still hungry.

Offer your child food every 2 to 3 hours for a meal or snack.

■ What can I do about my picky eater?

Look at your child's eating over time rather than at each meal. If your child is energetic and growing, he is probably eating enough.

Offer your child food choices and let him decide.

Continue to serve a new food even if your child has rejected it.

Let your child participate in food shopping and preparation.

Do not use food to reward, bribe, or punish your child.

■ **My child sometimes dawdles during meals. What can I do?**

It is normal for children to lose interest in an activity, including eating, after a short time. They are also easily distracted. Try to reduce distractions (for example, television) during meals and snacks.

Routines are important to children. Serve scheduled meals and snacks.

■ **I am struggling with my child over food. Is this normal?**

Your child may struggle with you over food in an attempt to make his own decisions and become independent. Struggling over food may make him even more determined.

Keep in mind that you are responsible for what, when, and where your child eats. Let your child decide whether to eat and how much.

Continue to serve a new food even if your child has rejected it. It may take several times before your child accepts the food.

■ **My child wants to eat only peanut butter sandwiches. What should I do?**

Food jags in children (when children want to eat only a particular food) are common.

Offer smaller servings of the favored food, along with other foods to ensure that your child eats a variety of foods.

Jags rarely last long enough to be harmful. If your child is energetic and growing, he is probably eating enough.

■ **How can I get my child to try new foods?**

Offer small portions of new foods—perhaps 1 or 2 tablespoons—and let your child ask for more.

Encourage your child to try a new food, but don't force her to eat it. Continue to serve a new food even if your child has rejected it. It may take several times before she accepts the food.

Serve your child's favorite foods along with new foods. She may be more willing to try new foods if her favorites are on her plate.

Be a positive role model—eat new foods yourself.

Introduce a new food in a neutral manner. Talk about the food's color, shape, aroma, and texture, but don't talk about whether it tastes good.

Make trying new foods appealing by involving your child in shopping and preparing the food.

Be creative. For example, cut foods into various shapes using cookie cutters and create fun names for foods (for example, "little trees" for broccoli).

■ **What should my child drink?**

Your child should drink about 2 cups (16 ounces) of milk per day. Drinking more than this can reduce your child's appetite for other healthy foods.

Until age 2, do not give your child reduced-fat (2 percent), low-fat (1 percent), or fat-free (skim) milk. He needs the extra fat in whole milk for growth and development.

Offer juice in small amounts, about 4 to 6 ounces per day. Drinking more than this can reduce your child's appetite for other healthy foods.

Serve juice in a cup, not a bottle. Juice served in a bottle can cover your child's teeth with sugar for long periods of time and contribute to tooth decay (early childhood caries).

Your child may not tell you when he is thirsty. Make sure he drinks plenty of water throughout the day, especially between meals and snacks.

■ How can I help my child get enough calcium?

Serve foods that are rich in calcium, such as milk; cheese; yogurt; tofu processed with calcium sulfate; broccoli; and collard and turnip greens.

Serve flavored milk, such as chocolate or strawberry.

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

Serve unusual dairy products, such as new flavors of 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 (calcium-fortified).

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

■ Should I give my child a vitamin and mineral supplement?

If your child is growing and eats a variety of healthy foods, she does not need a vitamin and mineral supplement.

If your child does take a vitamin and mineral supplement, keep the bottle out of her reach.

The supplement may look like candy, and consuming too many at once can be harmful.

Talk to a health professional if you are considering giving your child a vitamin and mineral supplement.

■ 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 whether he is overweight.

Let your child know that people come in unique sizes and shapes and that he is loved just as he is. Never criticize your child's size or shape.

If others comment about the size or shape of your child, redirect their comments to your child's other attributes.

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

Focus on gradually changing the entire family's eating behaviors and physical activity practices instead of singling out the overweight child.

Plan family activities that everyone enjoys (for example, hiking, biking, or swimming).

Limit to 1 to 2 hours per day the amount of time your child spends watching television and videotapes and playing computer games.

Serve scheduled meals and snacks.

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

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?

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

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

■ Should my child eat low-fat foods?

Reduced-fat (2 percent), low-fat (1 percent), and fat-free (skim) milk are not recommended during the first 2 years, because babies and young children need fat for growth and development.

After 2 years of age, children should gradually eat more low-fat foods. As they begin to consume fewer calories from fat, children need more breads and cereals, fruits and vegetables, lower-fat or fat-free milk, lean meats, and other high-protein foods.

It is important for children to consume enough calories to grow well. When children are very active or having a growth spurt, their energy needs may be higher.

■ How can I prevent my child from choking?

Have your child sit while eating. Eating while walking or running may cause her to choke.

Keep things calm at meal and snack times. If your child becomes overexcited, she may choke.

Do not let your child eat in a moving car. If she chokes while you are driving, you will not be able to help her.

For children younger than 3, avoid foods that may cause choking (for example, hard candy, mini-marshmallows, popcorn, pretzels, chips, spoonfuls of peanut butter, nuts, seeds, large

chunks of meat, hot dogs, raw carrots, raisins and other dried fruits, and whole grapes).

Children ages 3 to 5 may eat these foods if they are modified to make them safer (e.g., cutting hot dogs in quarters lengthwise and then into small pieces, cutting whole grapes in half lengthwise, chopping nuts finely, chopping raw carrots finely or into thin strips, spreading peanut butter thinly on crackers or bread).⁷

■ How can I encourage my child to be more physically active?

Encourage active, spur-of-the-moment play, such as jumping and skipping.

Play together (for example, play hide and seek or kick a ball). It is a great way to spend time with your child.

Limit the time your child spends watching TV and videotapes to 1 to 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.

Involve your child in family chores (for example, raking leaves or walking the dog).

Plan at least one special physical activity (for example, a hike or bike ride) each week.

Enroll your child in planned physical activities (for example, swimming or dancing lessons or gymnastics).

Work with community leaders to ensure that your child has safe places for participating in physical activity (for example, walking and biking paths, playgrounds, parks, and community centers).

■ What can I do to make grocery shopping with my child pleasant?

Go shopping when neither you nor your child is hungry.

Make a list in advance to save time at the store.

Use a safety belt when your child rides in a shopping cart.

Bring toys to keep your child busy.

Set up clear rules of behavior (for example, no climbing out of the cart and no asking for candy), and praise your child for following the rules.

Ask your child to help you look for food items.

Talk to your child about what you are buying.

If possible, do not rush your child. Children love to look around and discuss what they see.

■ What can I expect my child to do as he grows?

At 1 to 1½ years of age, your child will

Grasp and release foods with his fingers.

Be able to hold a spoon (but will not be able to use it very well).

Be able to use a cup (but will have difficulty letting go of it).

Want foods that others are eating.

At 1½ to 2 years of age, your child will

Eat less than babies and children 2 years and older.

Like to eat with his hands.

Have favorite foods.

Get distracted easily.

At 2 to 3 years of age, your child will

Be able to hold a cup.

Be able to chew more foods.

Have definite likes and dislikes.

At 3 to 4 years of age, your child will

Be able to use a fork.

Be able to hold a cup by its handle.

Be able to pour liquids from a small pitcher.

Request favorite foods.

Like foods in various shapes and colors.

Like to imitate the cook.

Have an increased interest in foods.

Be influenced by TV.

At 4 to 5 years of age, your child will

Be able to use a knife and fork.

Be able to use a cup well.

Be able to feed himself.

Be more interested in talking than in eating.

Continue to have food jags (when he only wants to eat a particular food).

Like to help prepare food.

Be interested in where food comes from.

Be more influenced by his peers.

Resources for Families

- Berman C, Fromer J. 1991. *Teaching Children About Food*. Boulder, CO: Bull Publishing Company.
- Eisenberg A, Murkoff HE, Hathaway SE. 1994. *What to Expect the Toddler Years*. New York, NY: Workman Publishing Company.
- Goldberg AC. 2000. *Feed Your Child Right from Birth Through Teens*. New York, NY: M. Evans and Company.
- Ray AR, Harms T, Cryer D. 1996. *Nutrition Activities for Preschoolers*. Old Tappan, NJ: Addison-Wesley Longman.
- Satter E. 2000. *Child of Mine: Feeding with Love and Good Sense*. Boulder, CO: Bull Publishing Company.
- Satter EM. 1987. *How to Get Your Kid to Eat . . . But Not Too Much*. Palo Alto, CA: Bull Publishing Company.
- U.S. Department of Agriculture, Center for Nutrition Policy and Promotion. 1999. *Tips for Using the Food Guide Pyramid for Young Children 2 to 6 Years Old*. Washington, DC: U.S. Department of Agriculture, Center for Nutrition Policy and Promotion.