

# NUTRITION SUPERVISION





# EARLY CHILDHOOD

## Overview

Early childhood is divided into two stages:

- **Toddler**—Ages 1 to 2, characterized by a developing sense of independence as well as possible struggles over food
- **Young Child**—Ages 3 to 4, marked by competency in self-feeding, interest in new foods, and enjoyable participation in family meals

## Growth and Physical Development

- Growth rates and energy needs decrease during early childhood.
- Children quadruple birthweight by 2 years of age.
- Children gain an average of 4 1/2 to 6 1/2 pounds per year between the ages of 2 and 5.
- Children grow 2 1/2 to 3 1/2 inches per year between the ages of 2 and 5.
- Physical, cognitive, social, and emotional development are tightly linked.





## Eating Behaviors

- Toddlers tend to be leery of new foods and may refuse to eat them. They need to look at new foods and touch, smell, feel, and taste them, sometimes many times before they accept them.
- Toddlers will consume a variety of foods if parents continue to serve developmentally appropriate meals and snacks.
- Parents need to provide a structured, but pleasant, mealtime environment to help toddlers establish healthy eating behaviors.
- Young children are curious about new foods, but they may be reluctant to try them.
- Young children should be encouraged to try a variety of healthy foods.
- Parents decide what, when, and where children eat; children decide whether to eat and how much.

## Physical Activity

- Early childhood is an ideal time for promoting development of motor skills.
- Fundamental motor skills (walking, running, galloping, jumping, hopping, skipping, throwing, catching, striking, kicking, balancing) begin to develop.
- If children are physically active, motor skills can develop into advanced patterns of motor coordination.
- Simple games (“Simon Says,” chase, tag) and certain organized activities (gymnastics, swimming, dancing) are appropriate.
- Children are not ready for organized, competitive sports, which require visual acuity, control, and balance.



## Common Nutrition Concerns

### Food Intake

- Children need to consume enough calories and nutrients to support their growth and development.
- Before 2 years of age, children's fat intake should not be restricted.
- After age 2, children should gradually eat fewer high-fat foods.
- By age 5, children's fat intake should be no more than 30 percent of their daily calories.
- As children consume fewer calories from fat, they should eat more grain products, fruits, vegetables, low-fat dairy products, lean meats, and other protein-rich foods.

### Iron-Deficiency Anemia

- Iron-deficiency anemia is common in children and may have adverse effects on growth and development.
- Prevalence of iron-deficiency anemia is especially high among children from families with low incomes.

- Risk of iron-deficiency anemia can be reduced if parents wait until children are 12 months of age before offering them cow's milk and limiting the amount of milk to 16 oz per day.
- Children's absorption of iron is enhanced when they consume iron-rich foods (meat, fish, poultry) and foods that contain vitamin C (fruits, vegetables).

### Children with Special Health Care Needs

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. They may need specialized care from a dietitian or referral to early intervention programs or specialized clinics.

# NUTRITION SUPERVISION THROUGHOUT EARLY CHILDHOOD



A child's nutrition status should be evaluated during nutrition supervision visits or as part of health supervision visits. Health professionals can do the following:

- Begin nutrition supervision by asking key interview questions. Continue by using screening and assessment and counseling guidelines.
- Recognize that interview questions, screening and assessment, and counseling should be used as appropriate and will vary from visit to visit and from child to child.

Information pertaining to the entire developmental period is provided first in the pocket guide, followed by information on age-specific visits.

## Interview Questions

- Do you have any concerns about Marla's eating behaviors or growth?
- How do you know when she is hungry? When she is full?
- What do you do if Marla doesn't like a food?
- Do you enjoy sharing meals and snacks with her?

- Do you have equipment for feeding Marla (cups, utensils, highchair, booster seat)?
- Do you have concerns about 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?
- Do you have any questions or concerns about Marla's development?
- Do you have any questions or concerns about her participation in physical activity?
- Which physical activities does Marla participate in? How often? For how long each time?



## Screening and Assessment

- Measure child's length or height and weight and plot on standard growth chart to determine nutrition and growth status. Deviation from expected growth pattern should be evaluated. This may be normal or may indicate a nutrition problem.
- Use body mass index (BMI) to determine nutrition status and overall health. Calculate BMI by dividing weight by square of height ( $\text{kg}/\text{m}^2$ ) or by referring to BMI chart. Compare BMI to norms listed for sex and age on chart.
- Evaluate appearance of child's skin, hair, teeth, gums, tongue, and eyes.
- Evaluate child's eating skills (chewing, swallowing).
- Assess all sources of water used by family to determine need for fluoride supplements. If child is not getting enough fluoride, refer to a dentist or primary care health professional.
- Assess eating behaviors for risk of early childhood caries (baby bottle tooth decay) and ask about regular dental checkups.

## Counseling

Discuss with Parents:

### *Parent-Child Feeding Relationship*

- Determining what, when, and where child eats
- Allowing child to decide whether to eat and how much
- Meeting child's nutrition needs by purchasing and preparing foods

### *Eating Behaviors*

- Serving healthy, developmentally appropriate meals and snacks at scheduled times
- Coping with unpredictable eating behaviors (amount and types of foods eaten) from meal to meal and day to day
- Providing child 2 to 3 years of age with same number of servings as child 4 to 6, but with smaller portions (about  $\frac{2}{3}$  of a serving)
- Serving child 4 years of age portions similar to those eaten by older family members ( $\frac{1}{2}$  cup fruits or vegetables,  $\frac{3}{4}$  cup juice, 1 slice bread, 2 to 3 oz cooked lean meat, poultry, or fish)



- Serving whole milk to child 1 to 2 years of age; serving reduced-fat (2 percent), low-fat (1 percent), or fat-free (skim) milk to older child
- Weaning child from bottle by 12 to 14 months
- Serving juice in cup; limiting consumption to 4 to 6 oz per day
- Reducing risk of early childhood caries, minor infections, loose stools, and diarrhea by not allowing child to drink fruit juices or sweetened beverages whenever he wants
- Maintaining child's appetite for healthy foods by limiting foods and beverages high in sugar
- Encouraging child to drink plenty of water throughout day

### ***Meals and Snacks***

- Making meals and snacks pleasant, social experiences
- Sharing meals and snacks with child (Children eat better if an adult is nearby.)
- Teaching child to serve herself at the table
- Offering a variety of healthy foods and allowing child to choose which ones to eat
- Having patience and understanding as child learns to feed herself or makes a mess

- Offering small portions (1 or 2 tablespoons) of new foods
- Being positive role models by eating new foods
- Not pressuring child to eat certain foods or more than she wants
- Not using foods to reward, bribe, punish, calm, comfort, or entertain child
- Offering dessert (custard, pudding, fruit, yogurt) as part of the meal

### ***Food Safety***

- Following food safety practices to reduce child's risk of foodborne illness
- Using highchair when feeding child
- Taking precautions to prevent choking (staying with child when he eats, having child sit while eating, keeping things calm during meals and snacks, not letting child eat in car)
- For children under 3, avoiding foods that may cause choking; for children between 3 and 5, modifying these foods to make them safer
- Special techniques for positioning, special equipment, and modified utensils to help child with special health care needs eat



### *Teaching Children About Food*

- Serving a variety of healthy foods
- Offering foods from other cultures
- Teaching child where foods come from, such as how fruits and vegetables are grown
- Involving child in food shopping and preparation

### *Physical Activity*

- Ensuring that child participates in physical activity on most, if not all, days of the week
- Playing with child, parental participation in physical activity
- Planning family activities each week to encourage physical activity
- Allowing child to decide which physical activities family will do (raking leaves, walking dog, hiking, playing tag)
- Taking part in community projects as a family (cleanup days, community gardens)

### *Oral Health*

- Limiting consumption of candy, dried fruit, and foods that stick to teeth to prevent early childhood caries

- Using community water fluoridation as safe, effective way to reduce risk of early childhood caries (If bottled water is preferred, recommend a brand with fluoride added at a concentration of approximately 0.8 to 1.0 mg/L [ppm].)
- Providing fluoride supplementation if water is severely deficient in fluoride (less than 0.3 ppm for child 6 months to 3 years, less than 0.6 ppm for child 3 to 6 years)
- Cleaning child's teeth twice a day with small, soft toothbrush, using pea-size amount of fluoridated toothpaste, when child is 2 years of age; consulting child's dentist or primary care health professional about use of fluoridated toothpaste if child is younger than 2
- Supervising while child brushes teeth (Children younger than 6 are at risk for enamel damage if they swallow too much fluoridated toothpaste.)
- Preventing injuries to child's mouth, teeth, oral tissues, and jaws by using safety belt in shopping cart, safety seat in car or truck, and baby gates at top and bottom of stairs

# 1 YEAR

## Interview Questions

- Are you breastfeeding Rhonda?
- What type of formula or milk do you feed her?
- How much fruit juice and how many sweetened drinks (fruit punch, soft drinks) does Rhonda drink?
- 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 child for iron-deficiency anemia if any risk factors are present. (See Iron-Deficiency Anemia, pp. 62–63.)
- Screen child for lead exposure. (See Lead Exposure, pp. 64–65.)
- Evaluate child's progress in developing eating skills (bites off small pieces of food, puts food in mouth, drinks from cup).

## Counseling

### Discuss with Parents:

- Giving child opportunities to feed himself at family table
- Offering child a variety of foods to help him develop eating skills (chewing, swallowing)
- Serving beverages in a cup (Child may need help drinking from cup.)
- Serving child a variety of soft foods
- Coping with unpredictable eating behaviors (amount and types of foods eaten) from meal to meal and day to day (Children usually eat enough food to meet their nutrition needs.)
- Offering child food every 2 to 3 hours (Children's capacity to eat at any one time is limited.)
- Handling child's limit-testing behaviors (asking for certain foods and throwing tantrums when refused)
- Imposing limits on unacceptable behaviors during meals and snacks without controlling amount or types of foods child eats
- Cleaning child's teeth twice a day with small, soft toothbrush and water





## 15 MONTHS

### Interview Questions

- Are you breastfeeding Christopher? Are you giving him milk in a bottle? Milk in a cup? What kind of milk does he drink? How much?
- How much fruit juice and how many sweetened drinks (fruit punch, 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 child for iron-deficiency anemia if any risk factors are present. (See Iron-Deficiency Anemia, pp. 62–63.)

### Counseling

#### Discuss with Parents:

- Offering child food every 2 to 3 hours (Children's capacity to eat at any one time is limited.)
- Providing relaxed atmosphere during meals and snacks as child tries new foods
- Being patient as child's skills at eating a variety of foods increases
- Making eating easier for child by using spoons, cups, and dishes with steep sides (bowls)
- Cleaning child's teeth twice a day with small, soft toothbrush and water

# 18 MONTHS

## Interview Questions

- Are you breastfeeding Mia? Are you giving her milk in a bottle? Milk in a cup? What kind of milk does she drink? How much?
- How much fruit juice and how many sweetened drinks (fruit punch, 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 Nutrition Supervision Throughout Early Childhood section, pp. 27–30.

## Counseling

### Discuss with Parents:

- Offering child food every 2 to 3 hours (Children's capacity to eat at any one time is limited.)
- Giving child opportunities to feed herself at family table
- Serving child a variety of foods to help her develop eating skills (chewing, swallowing)
- Providing forks and spoons designed for child (smaller, easier to use)
- Cleaning child's teeth twice a day with small, soft toothbrush and water





## 2 YEARS

### Interview Questions

- Has Ricky been weaned from the bottle?
- What kind of milk does he drink? How much?
- How much fruit juice and how many sweetened drinks (fruit punch, 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

- Assess child's risk for familial hyperlipidemia. (See Hyperlipidemia, pp. 60–61.)
- Screen child for iron-deficiency anemia if any risk factors are present. (See Iron-Deficiency Anemia, pp. 62–63.)
- Screen child for lead exposure. (See Lead Exposure, pp. 64–65.)
- Ask about regular dental checkups.

### Counseling

#### Discuss with Parents:

- Serving child a variety of foods to help her develop eating skills (chewing, swallowing)
- Handling child's food jags (wants to eat only a particular food) by offering smaller servings of favorite foods, along with a variety of other healthy foods
- Cleaning child's teeth twice a day with small, soft toothbrush and pea-size amount of fluoridated toothpaste
- Supervising while child brushes teeth (Children younger than 6 are at risk for enamel damage if they swallow too much fluoridated toothpaste.)

## 3 TO 4 YEARS

### Interview Questions

- What kind of milk does Felicia drink? How much?
- How much fruit juice and how many sweetened drinks (fruit punch, 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

- Assess child's risk for familial hyperlipidemia. (See Hyperlipidemia, pp. 60–61.)
- Screen child for iron-deficiency anemia if any risk factors are present. (See Iron-Deficiency Anemia, pp. 62–63.)
- Screen child for lead exposure. (See Lead Exposure, pp. 64–65.)
- Obtain child's blood pressure.
- Ask about regular dental checkups.

## Counseling

### Discuss with Parents:

- Increasing child's awareness of new foods by enjoying them as a family
- Teaching child about new foods by growing, preparing, and talking about them
- Sharing stories, drawing pictures, and singing songs about foods to help child become familiar with them
- Teaching child 3 years or older to brush teeth twice a day with small, soft toothbrush and pea-size amount of fluoridated toothpaste
- Supervising while child brushes teeth (Children younger than 6 are at risk for enamel damage if they swallow too much fluoridated toothpaste.)

