

NUTRITION SUPERVISION





MIDDLE CHILDHOOD

Overview

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

Growth and Development

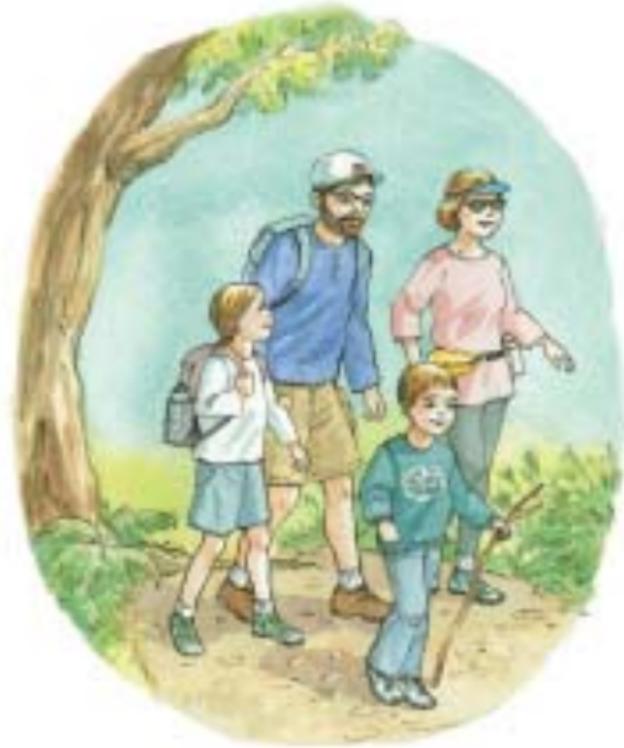
- Children gain an average of 7 pounds and grow an average of 2 1/2 inches per year.
- Head circumference increases an average of an inch per year.
- Body composition and body shape remain relatively constant.
- Growth spurts, accompanied by increased appetite and food intake, are common. Conversely, appetite and food intake decrease during periods of slower growth.

Eating Behaviors

- Children need to consume a variety of healthy foods. They need three meals per day and snacks.
- Children can help plan and prepare meals.
- Children begin to eat more meals and snacks away from home, and their eating behaviors become influenced by peers and others outside the family.
- Parents need to help children make healthy food choices at or away from home.

Physical Activity

- Children acquire motor skills, muscle strength, and stamina needed for complex movements, allowing them to participate in a variety of physical activities.
- The rate at which children master motor skills varies.
- Children usually acquire motor skills at a basic level through play. They need instruction and practice to fully develop these skills.
- By participating in physical activity with their children, parents emphasize the importance of physical activity—and show them that it can be fun.





Common Nutrition Concerns

Food Intake

- Adequate consumption of protein-rich foods (meat, beans, dairy products) is extremely important, providing children with B vitamins, iron, and zinc.
- Inadequate consumption of protein-rich foods may impair growth, increase risk of iron-deficiency anemia, and delay sexual maturation.
- Inadequate consumption of dairy products (source of calcium) may reduce peak bone mass and increase risk of osteoporosis.
- Inadequate consumption of fruits and vegetables (sources of dietary fiber, vitamins A and C, and minerals) is associated with increased risk of many types of cancer.
- Consumption of fat, saturated fat, and sodium often exceeds recommended amounts, increasing risk of cardiovascular disease, obesity, and some types of cancer.

Body Image

- Children may become overly concerned about their physical appearance.
- Girls may be especially worried about being overweight and may begin to eat less.
- Girls need reassurance that increased body fat is part of normal growth and development and is probably not permanent.
- Boys may be concerned about their stature and muscle size and strength.
- Muscle-building activities (weightlifting) do not build muscle mass and can be harmful; muscle strength can be improved with appropriate physical activities.

Oral Health

- Children lose primary teeth, and permanent teeth erupt.
- Children may have difficulty chewing certain foods as a result of missing teeth or orthodontic treatment and may need foods modified (crumbled, chopped) so they are easier to eat.

NUTRITION SUPERVISION THROUGHOUT MIDDLE 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.

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

- Did you eat any fruits yesterday? Vegetables? Did you drink any juice?
- What foods do you eat most often?
- What is your favorite food?
- Are there any foods you won't eat?

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?

Food Resources

For the Child or Parent

- Who usually buys 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 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, why? What are you doing to change it?

Physical Activity

For the Child

- Do you think you are getting enough physical activity? Why (or why not)?
- Which physical activities do you participate in? How often? For how long each time?
- How much time do you spend each day watching television and videotapes and playing computer games?

For the Parent

- Do you have any questions or concerns about Renae's participation in physical activity?
- Which physical activities does Renae participate in? How often? For how long each time?

Screening and Assessment

- Measure child's 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 (kg/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.
- Obtain child's blood pressure.
- Assess child's risk for familial hyperlipidemia. (See Hyperlipidemia, pp. 60–61.)
- Assess all sources of water used by family to determine need for fluoride supplementation. If child is not getting enough fluoride, refer to a dentist or primary care health professional.
- Ask about regular dental checkups.



Stunting

- If height-for-age is below third percentile, evaluate to determine whether growth is stunted and whether child may benefit from improved nutrition or treatment of other underlying problems.
- Low height-for-age is usually the result of genetics, not stunting.
- Children with special health care needs may have low height-for-age because of a genetic disorder, eating problems, altered metabolic rate, malabsorption, or other conditions. Assess these factors and implement interventions to help child reach potential height.

Thinness

- If BMI is below fifth percentile, assess for eating disorders and diseases such as cancer, diabetes mellitus, thyroid disease, infections (tuberculosis [TB], human immunodeficiency virus [HIV]), gastrointestinal disease or malabsorption, and renal disease. (See Eating Disorders, pp. 56–57.)
- Child with low BMI-for-age may be thin naturally or may have a nutritional deficit or chronic disease.

Overweight

- If BMI is between 85th and 95th percentiles, child is at risk for overweight and needs further screening.
- If BMI is at or above 95th percentile for age and sex, child is overweight and needs in-depth medical assessment. (See Obesity, pp. 66–67.)

Iron-Deficiency Anemia

- Screen child with history of iron-deficiency anemia, special health care needs, or low iron intake for iron-deficiency anemia. (See Iron-Deficiency Anemia, pp. 62–63.)

Physical Activity

- Determine how much physical activity child participates in weekly.



Counseling

Discuss with Parents and/or Child:

Physical Development

- Expected accelerated growth (for girls, at ages 9 to 11; for boys, at about age 12)
- How child compares with others on standard growth chart
- Healthy body weight (determined by genetics, not social standards)
- Range of healthy body weights (People come in unique sizes and shapes.)
- Not losing weight (with possible exception of child with BMI at or above 95th percentile)
- Variation in onset of puberty among children
- Upcoming physical changes and specific concerns
- Eating healthy foods to achieve and maintain appropriate weight for height and level of physical activity

Eating Behaviors

- Increasing variety of foods child eats and ways to incorporate new foods into diet
- Making healthy food choices based on Dietary Guidelines for Americans and Food Guide Pyramid

- Importance of eating healthy breakfast, lunch, dinner, and snacks
- Packing healthy foods to be eaten away from home
- Enrolling child in school breakfast and lunch programs if needed
- Energy requirements remaining fairly constant, influenced by growth, physical activity level, and body composition
- Growth spurts, increased calorie needs (200 to 300 more calories per day for active child)
- Choosing healthy snacks rich in complex carbohydrates (whole grain products, fresh fruits)
- Limiting high-fat foods (chips) and high-sugar foods (candy, soft drinks)

Oral Health

- Limiting amount and frequency of foods that increase risk of dental caries
- Using community water fluoridation as safe, effective way to reduce risk of dental caries (If bottled water is preferred, recommend 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 0.6 ppm)



Physical Activity

- Ensuring that child participates in physical activity on most, if not all, days of the week
- Incorporating physical activity into daily life (using stairs instead of elevator or escalator), participating in activities with friends and family (walking, hiking, biking)
- Results of fitness testing (Review results of President's Council on Physical Fitness and Sports test.)
- Drinking enough fluids when physically active (Children are at increased risk for heat illness because their sweat glands are not fully developed.)
- Using appropriate safety equipment (helmets, wrist guards, elbow and knee pads)
- Reducing sedentary behaviors (watching television and videotapes, playing computer games), especially if child is overweight

- Finding safe settings for physical activity
- Allowing child with special health care needs to participate in physical activity for cardiovascular fitness (within limits of medical or physical conditions)
- Adapting physical education for child with special health care needs and identifying appropriate activities by consulting physical therapist

Substance Use

- Dangers of using alcohol, tobacco, and other drugs
- Dangers of using performance-enhancing products (protein supplements, anabolic steroids)