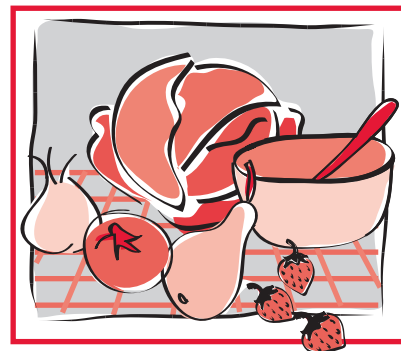


Childhood Obesity

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Food and Nutrition Series | Health



by L. Bellows and R. Moore*

Childhood Obesity Facts and Statistics

The prevalence of childhood obesity in the United States has doubled in the past two decades, and the number of obese adolescents has tripled. The percentage of children in the United States that carry excess body fat has reached epidemic levels, with approximately 32% of children 2 to 19 years old classified as overweight, and 17% classified as obese. Colorado fares slightly better with close to 14% of children considered obese. However, the same increasing trend seen nationally is occurring in Colorado as well, at an even faster rate. Childhood obesity in Colorado increased 23% between 2003 and 2007 – the second-fastest rate of increase in the nation. Excess weight has both immediate and long-term consequences and the current issue demands serious attention.

Definitions

Body Mass Index (BMI) is a measure of weight adjusted for height, used to determine weight categories for adults and children

Weight categories are determined based on the percentiles and are defined as:

Underweight: less than 5th percentile

Healthy Weight: 5th to < 85th percentile

Overweight: 85th to 95th percentile

Obese: 95th percentile and above

over 2 years of age. Due to changing body compositions over time, and different growth rates of boys and girls, BMI for children is age and gender specific. BMI for age is determined using gender-specific growth charts that place a child in a percentile relative to weight and height.

The terms *obese* and *overweight* reference children whose excess body weight is considered unhealthy (given their current height) and poses a medical risk.

Consequences of Childhood Obesity

Overweight and obese children and adolescents are at increased risk for several health complications. During youth, for example, they are more likely to exhibit risk factors for cardiovascular disease (CVD) including high blood pressure (hypertension), high cholesterol, dyslipidemia (abnormal blood lipid levels), and type 2 diabetes, compared with normal weight children. Additional health complications associated with overweight and obese children include sleep apnea, asthma, and liver damage. Further, overweight or obese children and adolescents are more likely to become obese adults. For example, one study found that approximately 80% of children who were overweight or obese at 10 to 15 years old were obese at 25 years old. Another study found that 25% of obese adults were overweight or obese as children. This study also concluded that if a child is classified as overweight before 8 years of age, obesity in adulthood is likely to be more severe. Finally, childhood obesity has psychological and emotional consequences. Overweight and obese children are at an increased risk of teasing and bullying, low self-esteem, and poor body image.

Quick Facts

- Obesity is defined as an excess percentage of body weight due to fat, which places one at risk for many health problems.
- Overweight and obese children have an increased risk of being overweight as adults.
- Genetics, behavior, and family environment play a role in childhood obesity.
- Childhood obesity increases the risk for certain medical and psychological conditions.
- Encourage all children to be active, decrease screen time when playing video games or watching television, and develop healthful eating habits.

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Childhood Obesity Causes and Contributing Factors

There is no single cause responsible for childhood obesity; rather it is a complex interaction of many variables. Contributing factors include genetics, behavior, environment, and certain socio-demographics such as ethnicity and income level.

Genetics—Certain genetic characteristics may increase an individual's susceptibility to excess body weight, however, there are likely to be many genes involved and a strong interaction between genetics and environment that influences the degree of excess body weight. It has been shown that obesity tends to run in families, suggesting a genetic link. In some cases, parental obesity is a stronger predictor of a child's weight than the child's weight status alone.

Behavior—Weight gain occurs as a result of energy imbalance, specifically when more calories are consumed than the child actually uses. Several behaviors can contribute to weight gain including poor diet and sedentary behaviors.

- **Nutrition**—An increase in availability and consumption of high-calorie convenience foods and beverages, more meals eaten away from home, fewer family meals, and greater portion sizes all may contribute to childhood obesity. Further, many children's diets do not meet nutrition guidelines. For example, only 8% of children in Colorado eat vegetables three or more times per day as recommended by the U.S. Department of Agriculture.

- **Physical Activity**—Decreased opportunities and participation in physical activity is another behavior that contributes to overweight children. Being physically active not only has positive effects on body weight, but also on blood pressure and bone strength. It also has been shown that physically active children are more likely to remain physically active into adolescence and adulthood. Children may spend less time being physically active during school as well as at home. School physical education programs have decreased, and children are walking to school and doing household chores less frequently.

- **Screen Time**—While physical activity levels have decreased, sedentary behaviors, such as watching television, computer activity, and playing video games have increased. One study found that time spent watching television, videos, DVDs, and movies averaged slightly over three hours per day among children 8 to 18 years old. Several studies have found a positive link between time spent watching television and prevalence of obesity in children. Sedentary behavior, specifically television viewing, may replace time spent engaged in physical activity, contribute to increased calorie consumption (through excessive snacking and eating meals in front of the television), influence children to choose high-calorie, low-nutrient foods (through exposure to food advertisements), and decrease children's metabolic rate.

Environment—There are a variety of environmental factors that can potentially contribute to childhood obesity, and include home, childcare settings, school, and the community. The school and community settings are other environments where children learn eating and physical activity habits. It has become increasingly important for all children to have access to healthful food choices and safe physical activity opportunities. Advocating for innovative school nutrition and physical activity programs as well as ensuring that there are well-lit sidewalks, bike paths, and parks in the community, can all help to shift towards a more healthful environment for children.

Socio-Demographics—Certain ethnic minority and socioeconomic populations have increased rates of childhood obesity. Low-income families face numerous barriers including food insecurity (lack of access to safe, nutritious food), lack of safe places for physical activity, and inconsistent access to healthful food choices, especially fruits and vegetables. Recent reports also indicate racial disparities among children who are obese, with the greatest prevalence among Mexican American boys (28.9%), and non-Hispanic African American girls (24.8%). With both sexes combined, roughly 22% of both Mexican Americans and non-Hispanic African Americans are obese compared to close to 15% of white non-Hispanics.

Strategies to Promote Healthy Habits and a Healthy Weight

Lifestyles and behaviors are established early in life; therefore, a focus on healthful behavior is vital to promoting healthy weight. The primary goals of overcoming childhood obesity should be a combination of healthful eating and increased physical activity. It is important for children to consume enough calories to support normal growth and development without promoting excessive weight gain. The home, childcare, school, and community settings are all integral to a more healthful environment for our children.

Parents, caregivers, teachers, and community members can promote healthy nutrition and physical activity habits and a healthy weight among children by:

Encouraging Healthy Eating Habits

- Serve a wide variety of foods, including fruits, vegetables, whole grains, lean proteins, and low-fat dairy products. Provide children with a variety of foods to ensure they receive all the nutrients needed for proper growth and development.
- Limit consumption of sugar-sweetened beverages such as soda, sports drinks, and non-natural fruit juice. Encourage children to drink water or low-fat milk instead.
- Avoid intake of excess dietary sugar and saturated fat, which are often found in fast foods, prepackaged foods, and baked goods.
- Know how much food children need. This amount is based on the age of your child, and may vary when growth spurts occur. Calorie counting is not necessary; rather keep portion sizes in check to help children maintain their sense of self-regulation. Children will learn to rely on internal cues that will indicate when they are hungry or full.
- Be a good role model for children by eating together. Eating meals as a family has been shown to increase fruit and vegetable consumption and decrease the amount of junk foods and sugar-sweetened beverages.
- Visit USDA's ChooseMyPlate website (www.choosemyplate.gov) for information and tips for healthful eating.

Promoting Physical Activity

- Aim for children to accumulate a minimum of 60 minutes of moderate-to-vigorous physical activity each day. Activity bouts can be all at once or in several bouts spread throughout the day.
- Increase opportunities for children to engage in physical activity throughout the day. Incorporating daily recess and physical education into the school day will help ensure that children are getting the recommended 60 minutes of physical activity each day.
- Be a good role model. Engage in activity with children.
- Limit screen and television time to less than two hours per day. Keep televisions and video games out of children's bedrooms to help them limit the amount of screen time.

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Additional Resources

Lets Move! is a website geared towards providing information for parents to promote a healthy eating and physical activity environment for their children. The website provides helpful information for families eating on a budget, fun physical activities for children, and simple steps to become healthy. For more information, visit their website at: www.letsmove.gov/health-problems-and-childhood-obesity.

Healthy Children, American Academy of Pediatrics promotes proper nutrition and healthy living for various life stages, from infants to young adults. This website also has great suggestions for physical activities that include both children and adults. For more information, visit the website at: www.healthychildren.org/english/health-issues/conditions/obesity/Pages/default.aspx.

We Can! (Ways to Enhance Children's Activity & Nutrition) is a website that provides parents, caregivers, and the community resources aimed at preventing childhood obesity. Helpful information that highlights reducing screen time, increasing physical activity, and healthy eating is provided. For more information, visit their website at: www.nhlbi.nih.gov/health/public/heart/obesity/wecan/.