



HEALTH

Childhood Overweight

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Quick Facts...

Overweight children have an increased risk of being overweight as adults.

Genetics, behavior, and family environment play a role in childhood overweight.

Childhood overweight increases the risk for certain medical and psychological conditions.

Encourage overweight children to be active, decrease screen time, and develop healthful eating habits.

The prevalence of overweight children in the United States has increased dramatically in recent years. Recent reports have reached epidemic levels, with approximately 16 percent of children, 2 to 19 years old, classified as overweight.² Colorado fares slightly better with close to 14 percent of children considered overweight; however, the same increasing trend seen nationally is occurring in Colorado as well.³ 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. Due to children's changing body compositions over time and the 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. Weight categories are determined based on these percentiles and are defined as:

Underweight	< 5th percentile
Normal	5th to < 85th percentile
At risk of overweight	85th to < 95th percentile
Overweight	95th percentile and above

The terms obese and overweight are often used interchangeably, although the terms at risk of overweight and overweight are preferred to reference children whose excess body weight poses medical risks.

Consequences of Childhood Overweight

Overweight children and adolescents are at increased risk for several health complications. During their youth, for example, they are more likely to exhibit risk factors for cardiovascular disease (CVD) including high blood pressure, high cholesterol, dyslipidemia, and type 2 diabetes compared with normal weight individuals.⁴ Additional health complications associated with overweight children include sleep apnea, asthma, and liver damage.⁴ Further, overweight children and adolescents are more likely to become obese adults. For example, one study found that approximately 80 percent of children who were overweight at 10 to 15 years old were obese at 25.⁴ Another study found that 25 percent of obese adults were overweight as children.⁴ This study also concluded that if overweight begins before 8 years of age, obesity in adulthood is likely to be more severe. Finally, childhood overweight has psychological and emotional consequences. Overweight children are at an increased risk of teasing and bullying, low self-esteem, and poor body image.

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Contributors of Childhood Overweight

There is not one single cause of childhood overweight, rather it is a complex interaction of many variables. Contributing factors include genetics, behavior, environment, and certain socio-demographics.

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.⁵ It has been shown that overweight tends to run in families suggesting a genetic link. In some cases, parental obesity is a stronger predictor of childhood overweight than the child's weight status alone.⁵

Behavior. Weight gain occurs as a result of energy imbalance, specifically when a child consumes more calories than the child uses. Several behaviors can contribute to weight gain including nutrition, physical activity, 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 overweight. Further, many children's diets do not meet nutrition guidelines. For example, only 8 percent of children in Colorado ate vegetables three or more times per day as recommended by the U.S. Department of Agriculture.^{3,6}

- *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.⁷ It also has been shown that physically active children are more likely to remain physically active into adolescence and adulthood.⁷ 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, playing on the computer and with 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.⁶ Several studies have found a positive association between time spent watching television and prevalence of overweight in children. Sedentary behavior, and specifically television viewing, may replace time children spend in physical activities, 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.⁶

Environment. There are a variety of environmental factors that can potentially contribute to childhood overweight, including home, childcare settings, school, and the community. The school and community settings are other environments where children learn about eating and physical activity habits. It is becoming 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 our children.

Socio-Demographics. Certain ethnic minority and socioeconomic populations have increased rates of childhood overweight.⁸ Low-income families face numerous barriers including food insecurity, lack of safe places for physical activity, and lack of consistent access to healthful food choices, especially fruits and vegetables.⁵ Recent reports also indicate racial disparities, with the greatest prevalence among Mexican American boys and African American non-

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References

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⁹National Heart, Lung, and Blood Institute. (2009). *WeCan! Ways to Enhance Children's Activity and Nutrition*. Retrieved February 27, 2009 from www.wecan.org

Hispanic girls.² With both sexes combined, roughly 21 percent of both Mexican Americans and African American non-Hispanics are overweight compared to close to 15 percent for white non-Hispanic.²

Promoting Healthy Habits and a Healthy Weight

Lifestyles and behaviors are established early in life; therefore, a focus on healthful behaviors is vital to promoting healthy weight. The primary goals of overcoming childhood overweight should be healthful eating and increased activity. It is important for children to consume enough calories to support normal growth and development without promoting excessive weight gain. The home, childcare setting, school, and community 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 the following.

Encouraging Healthy Eating Habits

- Serve a wide variety of foods, including fruits, vegetables, whole grains, and low-fat dairy products. Provide children with a variety of foods to ensure they get all the nutrients they need for proper growth and development.
- Know how much food kids need. Keep portion sizes in check to help children maintain their sense of self-regulation –and to know when they are hungry and when they are full.
- Be a good role model for kids 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 MyPyramid website (www.mypyramid.gov) for information and tips for eating healthfully.⁶

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.
- Visit the National Institutes of Health's WeCan™ (Ways to Enhance Children's Activity and Nutrition) website (www.wecan.org) for ideas on increasing physical activity, decreasing screen time, and improving food choices among children.⁹

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