

# Childhood Obesity

## What, Why, How

### WHAT is Childhood Obesity?

Childhood obesity is a serious medical condition that affects children and adolescents. It occurs when a child is well above the normal weight for his or her age and height. Childhood obesity is particularly troubling because the extra pounds often start children on the path to health problems that were once confined to adults, including diabetes, high blood pressure, and high cholesterol. Childhood obesity can also lead to poor self-esteem and depression.

Not all children carrying extra pounds are overweight or obese. Some children have larger than average body frames. Children normally carry different amounts of body fat at various stages of development. You might not know just by looking at a child if his or her weight is a health concern.

**Causes of Childhood Obesity:** The factors that contribute to childhood obesity interact with each other, so it is not possible to specify one "cause" of obesity. Some factors that play a part in leading to childhood obesity include:

1. **Genetic factors:** Studies indicate that certain genetic characteristics may increase an individual's susceptibility to excess body weight. However, this genetic susceptibility may need to exist in conjunction with contributing environmental and behavioral factors, such as a high-calorie food supply and minimal physical activity, to have a significant effect on weight.
2. **Environmental Factors:** Home, child care, school, and community environments can influence children's behaviors related to food intake and physical activity.
  - **Within the home:** Parent-child interactions and the home environment can affect the behaviors of children and youth related to calorie intake and physical activity.
  - **Within child care:** Almost 80% of children aged 5 years and younger with working mothers are in child care for 40 hours a week on average. Child care providers are sharing responsibility with parents for developing healthy eating and exercise habits.
  - **Within schools:** Because the majority of young people aged 5–17 years are enrolled in schools and because of the amount of time that children spend at school each day, schools provide an ideal setting for teaching children and teens to adopt healthy eating and physical activity behaviors. Children may be spending less time engaged in physical activity during school. Daily participation in school physical education among adolescents dropped 14% over the last 13 years — from 42% in 1991 to 28% in 2003. In addition, less than one-third (28%) of high school students meet currently recommended levels of physical activity. According to the Institute of Medicine, schools and school districts are, increasingly, implementing innovative programs that focus on improving the nutrition and increasing physical activity of students.
  - **Within the community:** Communities influence access to physical activity opportunities and access to affordable and healthy foods. For example, a lack of sidewalks, safe bike paths, and parks in neighborhoods can discourage children from walking or biking to school or from participating in physical activity. Additionally, lack of access to affordable, healthy food choices in neighborhood food markets can

- be a barrier to purchasing healthy foods. Children from low-income backgrounds are at greater risk of becoming obese.
- Behavioral factors:** Genetic and environmental factors contribute to childhood obesity. However, it is widely accepted that the problem stems from kids eating too much and exercising too little. "Basically we have two things going against kids," says Dr. Bob Keith, an Alabama Cooperative Extension System nutritionist, "a plentiful supply of food, which often tends to be high in calories and full of fat and sugar, and a lack of physical activity."
    - Diet:** Large portion sizes for food and beverages, eating meals away from home, frequent snacking on energy-dense foods, and consuming beverages with added sugar are often hypothesized as contributing to excess energy intake in children and teens. Regular consumption of high-calorie foods, such as fast foods, baked goods, and vending machine snacks, can easily cause children to gain weight, as can loading up on soft drinks, candy, and desserts.
    - Lack of exercise:** Children who don't exercise frequently are more likely to gain weight because they don't burn calories through physical activity. Inactive leisure activities, such as watching television or playing video games, contribute to the problem. It is estimated that children of ages 8–18 years devote an average of 7½ hours per day to entertainment media including TV, computers, video games, cell phones, and movies, and that only one third of high school students get the recommended levels of physical activity. Several studies have found a positive association between time spent viewing television and increased prevalence of obesity in children.

## WHY be concerned about childhood obesity?

Childhood obesity has more than tripled in the past 30 years. The prevalence of obesity among children aged 6 to 11 years increased from 6.5% in 1980 to 19.6% in 2008. The prevalence of obesity among adolescents aged 12 to 19 years increased from 5.0% to 18.1%.

We spend \$150 billion every year to treat obesity-related conditions, and that number is growing. For the first time in American history, our children's life expectancy may be shorter than their parents'.

Childhood obesity can have complications for the physical, social and emotional well-being of children.

- Obesity is a serious health concern for children and adolescents.** Results from the 2007-2008 National Health and Nutrition Examination Survey (NHANES), using measured heights and weights, indicate that an estimated 17 percent of children and adolescents ages 2–19 years are obese.
- Obese children and adolescents are at risk for health problems during their youth and as adults.** Obese children and teens have been found to have risk factors for cardiovascular disease (CVD), including high cholesterol levels, high blood pressure, and abnormal glucose tolerance. In a population-based sample of 5- to 17-year-olds, 70% of obese children had at least one CVD risk factor while 39% of obese children had two or more CVD risk factors. Less common health conditions associated with increased weight include asthma, hepatic steatosis, sleep apnea, and Type 2 diabetes.

- **Obese children and adolescents are more likely to become obese as adults.** One study found that approximately 80% of children who were overweight at aged 10–15 years were obese adults at age 25 years. Another study found that 25% of obese adults were overweight as children. The latter study also found that if overweight begins before 8 years of age, obesity in adulthood is likely to be more severe.
- **Some consequences of childhood and adolescent obesity are psychosocial.** Obese children and adolescents are targets of early and systematic social discrimination. The psychological stress of social stigmatization can cause low self-esteem which, in turn, can hinder academic and social functioning, and persist into adulthood. Children often tease or bully their overweight peers, who suffer a loss of self-esteem and an increased risk of depression as a result.
- **Overweight children tend to have more anxiety and poorer social skills than normal-weight children have.** At one extreme, these problems may lead overweight children to act out and disrupt their classrooms. At the other, they may cause overweight children to withdraw socially. Stress and anxiety also interfere with learning. School-related anxiety can create a vicious cycle in which ever-growing worry fuels ever-declining academic performance.

## HOW can you tackle childhood obesity within your classroom?

Look for innovative and successful programs to use as models. No need to “reinvent the wheel.” Programs that are interesting to you can be modified to fit the needs of your school and classroom. Some places to start looking include:

- 1) **Fit Environment** is a program created by Winneshiek County Conservation Board through the support of REAP-CEP funding. Program resources not only include numerous ideas for recreational activities to get kids outside, but also information on calories burned during outdoor activities. Use the calorie information in health, physical education, and math class. Outdoor activities can be applied to a variety of subjects as well. Winneshiek County Conservation’s website is [www.winneshiekwild.com](http://www.winneshiekwild.com).
- 2) Join the **Let’s Move!** movement started by First Lady Michelle Obama. Visit the website, <http://www.letsmove.gov/>, to find out more.
- 3) Follow the **Northeast Iowa Food and Fitness Initiative**, <http://www.iowafoodandfitness.org/>, for ideas and examples that schools in this region are undertaking to encourage healthier kids.
- 4) Students in Princeton Public High School in New Jersey can take **gym class in the garden**. Advocates for greener schools believe this is the first time public school students will receive physical education credit for garden work. See this article for more information: <http://greeninc.blogs.nytimes.com/2010/03/26/high-school-gardening-for-credit/>
- 5) **PE4life** is in 50 Iowa schools as Iowa strives to become the healthiest state in the nation. Learn more about the program and the Iowa movement at <http://www.pe4life.org/useruploads/files/Iowa%20on%20the%20move.pdf>.

Keep in mind, the best way for children to achieve healthy weights is to start exercising more and eating better. Lifestyle changes are usually the best childhood obesity treatment, preferred over medication and surgery. Some general principles to encourage children to establish healthy habits can be followed no matter what program or activity you decide to use in your classroom.

**Physical activity:** A critical part of maintaining a healthy weight, especially for children, is physical activity. It not only burns calories but also builds strong bones and muscles and helps children sleep well at night and stay alert during the day. Such habits established in childhood help adolescents maintain healthy weight despite the hormonal changes, rapid growth, and social influences that often lead to overeating. Active children are more likely to become fit adults.

To increase children's activity levels:

- **Emphasize activity, not exercise.** Activity doesn't have to be a structured exercise program; the object is just to get moving. Free-play activities, such as hide-and-seek, tag, jump-rope, or going for a walk can be great for burning calories and improving fitness.
- **Vary the activities.** Let children take turns choosing activities. Batting practice, bowling, and swimming all count. What matters is that you're doing something active.
- **Find activities each child likes.** For instance, if a child is artistically inclined, go on a nature hike to collect leaves and rocks that can be used to make a collage. If a child likes to climb, head for the nearest neighborhood jungle gym or climbing wall. If a child likes to read, then walk or bike to the neighborhood library for a book.
- **Limit recreational computer and TV time.** A surefire way to increase child's activity levels is to limit the number of hours he or she is allowed to watch television each day. Other sedentary activities — playing video and computer games or talking on the phone — should also be limited.
- **If you want active children, be active yourself.** Be a good example and role model. **Never** make exercise seem a punishment or a chore.

**Healthy eating:** Even small changes can make a big difference in children's health.

Remember you are always a role model to your students. They pay attention to what you do and what you eat!

- **Choose fruits and vegetables.** Convenience foods, such as cookies, crackers, and prepared meals, are high in sugar and fat. Have healthy snacks available in the classroom where appropriate. Never use food as a reward or punishment.
- **Limit sweetened beverages,** including those containing fruit juice. These drinks provide little nutritional value in exchange for their high calories. They also can make children feel too full to eat healthier foods.
- **Model sitting down together for meals as you talk with your students.** Are your meal times an event, a time to share news and tell stories? Discourage the idea of eating in front of a screen, such as a television, computer, or video game. Share with students that this leads to fast eating and a lowered awareness of how much you're eating.

## Resources

<http://www.cdc.gov/obesity/childhood/index.html>

<http://www.mayoclinic.com/health/childhood-obesity/DS00698>

<http://www.cdc.gov/HealthyYouth/obesity/>

<http://www.aces.edu/dept/extcomm/newspaper/child-obesity.html>

<http://www.smallstep.gov/>

<http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/get-active/getting-active.htm>

<http://www.health.state.mn.us/pala/actionpack.pdf>