

CHILDHOOD OBESITY

What is childhood obesity?

Childhood obesity occurs when a child is above a healthy weight for his or her age and height.¹ It is the result of a “caloric imbalance” - getting too many calories, without enough physical activity for the body to use them all - and is affected by behavioral, environmental, and genetic factors.²

Today nearly one in three children in America is overweight or obese. In African American and Hispanic communities, almost 40% of children are overweight. Childhood obesity is concerning because it can lead to chronic health problems such as heart disease, high blood pressure, diabetes, and cancer.³

How do I know if a child is overweight or obese?

Doctors and other health care professionals are the best people to determine if a child’s weight is healthy. The body mass index (BMI), a measurement closely linked with body fat, can help determine if a child is overweight. A health care provider will calculate a child’s BMI and plot it on a growth chart to obtain a percentile ranking. This ranking allows the provider to evaluate the status of the child’s current weight. Which BMIs are considered overweight or obese?⁴

- **Normal weight:** A BMI between the 5th and 84th percentile
- **Overweight:** A BMI between the 85th and 95th percentile
- **Obese:** A BMI greater than the 95th percentile

Since BMI does not take into consideration certain details, such as a larger than average body frame or a muscular build, the health care provider will also evaluate the child’s growth and development.⁵ The following online BMI calculator from the Centers for Disease Control and Prevention (CDC) can help you determine the child’s BMI and corresponding percentile: <http://apps.nccd.cdc.gov/dnpabmi/>

What factors increase the risk that a child may become overweight or obese?

Childhood obesity is a complex problem. Unhealthy eating patterns, lack of physical activity, and genetics are factors that can affect a child’s weight.⁵ However, no single decision or action causes a child to become overweight. It is also important to look at what drives and perpetuates these lifestyle patterns.

Over the past 30 years, childhood obesity rates in America have tripled. Many changes in our eating and activity patterns put children at higher risk for becoming overweight. Children spend less time playing outside and more time watching TV, playing video

games, and searching the internet. Parents are busier and families eat fewer home cooked meals. Larger portion sizes, fast food meals, and multiple snacks a day are common. Studies have revealed that Americans eat 31 percent more calories than they did 40 years ago.³

Additional societal factors may increase the risk of being overweight, such as poverty and culture. The National Health and Nutrition Examination Surveys (NHANES) of 2003-2004 indicate that low socio-economic status (SES) strongly predicts pediatric obesity in the United States²⁸. It is pertinent to note that this finding is independent of ethnic background. The surveys also demonstrated that the largest increase in obesity over this thirty-year study was among Americans living within 200% of defined poverty income²⁸. Some low income neighborhoods may have less access to stores and markets where healthy, affordable food is sold.²⁷ In addition, the presence of violence may inhibit children and youth activity in their neighborhood, or the physical space to play is not available. In some cultures, adults may believe that “a chubby baby is a healthy baby,” and fail to recognize when a young child is overweight.¹⁴ Adults may also view a child who is overweight as safer because they are perceived to be less physically vulnerable.¹⁵

Genetic factors also play an important role in determining weight because genes affect body type and how the body stores fat. Both a genetic tendency to become overweight, as well as unhealthy lifestyle habits can be passed from one generation to the next. While genes play an important role, it is important to recognize that genes alone do not explain the current obesity crisis.⁵ Certain hormonal and metabolic factors may also be to blame for the development of weight problems. However, they are only responsible for less than 1% of the cases of childhood obesity.³

Studies suggest that adverse childhood experiences, particularly abuse and neglect, increase the risk for adult obesity.¹⁶⁻¹⁹ The Adverse Childhood Experiences (ACE) Study investigated the childhood experiences of 17,421 adults and found that adults who reported being abused as children had an increased risk of being obese as adults.¹⁶ Adults who reported frequent physical abuse with injury and frequent verbal abuse had the highest risk of being obese. In addition, the risk of obesity increased as the number of types of severe abuse experienced increased.¹⁶ A study of 1,650 adults found that those who reported both physical and psychological violence, with at least one type occurring frequently, were more likely to be obese.¹⁷ While these studies did not look specifically at adults who were once in the child welfare system, they are relevant because many children in this system have experienced abuse or neglect.

How does being overweight or obese affect the body?

Researchers were initially concerned that obese children would become obese adults and suffer from obesity-related health problems as they grew older. However, research has shown that children who are overweight are already suffering from these complications, even at a young age. Children who are overweight are at an increased risk of developing cardiovascular conditions such as high cholesterol and high blood pressure. They are also at risk of developing type 2 diabetes. In the past, this type of diabetes was a condition

limited to adults, but now many children and adolescents are being diagnosed as well.³ Children who are overweight may also suffer from other difficulties, including bone and joint problems, shortness of breath that limits physical activity, disordered sleep patterns, and liver and gall bladder disease.⁵

Children and adolescents who are obese are likely to be obese as adults. Cardiovascular risk factors that develop in children who are overweight can continue into adulthood, increasing the risk of heart disease, heart failure, and stroke.⁵ Obese adults are also at risk for type 2 diabetes, various types of cancer, osteoarthritis, and are at an overall increased risk of death compared to normal weight adults.²

What are the emotional effects of being overweight?

In addition to physical problems, overweight and obese children can suffer numerous social and emotional difficulties as well. Children often bully or tease overweight peers. This can cause low self-esteem, which can interfere with academic and social functioning. Children who are overweight suffer more from anxiety and have poorer social skills than normal weight children have. Depression may result if a child loses hope that his or her situation will improve.¹

How can childhood obesity be prevented?

Since weight loss is difficult once a child is already overweight or obese, preventing childhood obesity is an important focus. Many areas of society influence the dietary choices and activity levels of children, including families, communities, schools, medical providers, government agencies, the media, and the food and beverage industries. Prevention efforts can occur at all of these levels.²

At the family level, decisions made early in the child's life can help prevent obesity. Smoking and excessive weight gain during pregnancy increase the risk that the child will be overweight or obese in infancy and early childhood, while infants who breastfeed and get adequate amounts of sleep have a reduced risk of being overweight in the future.²² The Centers for Disease Control states that the benefits of breastfeeding on weight likely continue into adolescence and adulthood.¹¹ As children grow older, parents and caregivers can play an important role in helping establish healthy eating and activity behaviors that protect against future weight gain.⁶

How can childhood obesity be treated?

Treatment of childhood obesity focuses on improving long-term physical health through permanent healthy lifestyle changes. Emotional health such as good self-esteem is also an important goal of treatment.⁶ Specific treatment guidelines are based on the child's age and if he or she has other medical conditions. Rarely, treatment may include medications or surgery.¹

What can a doctor or health care professional do?

A health care provider can help determine if a child is at a healthy weight. If the child is overweight, they can recommend a plan for treatment. Some children who are still growing will not need to lose weight, but can instead work to reduce their rate of weight gain so that they “grow into” their weight.⁷ For other children, weight loss may be recommended. When trying to help an overweight or obese child lose weight, *it is very important to do so under the supervision of the child’s health care provider*. The health care provider can make sure that the child is losing weight in a safe manner, screen for medical conditions associated with obesity, and discuss diet and activity recommendations.⁴

Registered dietitians, exercise specialists, and counselors are health care professionals who work with the child’s primary health care provider to offer expertise in treating childhood obesity.

How can a caregiver help a child make healthy lifestyle changes?

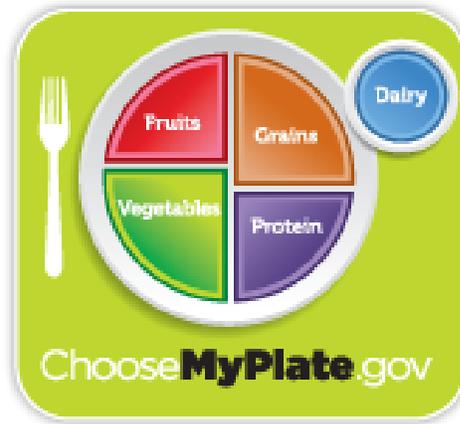
Caregivers can teach children to make healthy nutrition choices and ensure that children are getting enough physical activity. The focus should be on the child’s health rather than the child’s weight. It is important that children who are overweight receive support, encouragement, and acceptance from their caregivers. Let the child know that he or she is loved and accepted whatever his or her weight.⁷

It is also important for the entire family to work together at getting healthier. An overweight child cannot be expected to change his or her eating and activity habits if others in the household are not also working to make healthy changes. Emphasize that the nutritional and activity changes being made are for the benefit of the *entire* family. This way, an overweight child will not feel singled out.⁴

When making lifestyle changes, the best chance for success is to aim for small, gradual adjustments in eating and activity habits. Focus on selecting nutritional options rather than counting calories. A child should never be put on a calorie-restricted diet unless supervised by a pediatrician. The following sections provide guidelines for healthy eating and physical activity. Introducing one or two changes a week will make it more likely that your family can successfully adjust to the changes.⁴

What are healthy eating guidelines for children?

The U.S. Department of Agriculture (USDA) has introduced **MyPlate**, an easy to follow food guide icon.



MyPlate emphasizes that fruits and vegetables should take up half of the plate (with the vegetable portion being a little bigger), while grains and proteins each take up 1/4 of the plate. Kids also need a serving of dairy, such as milk, yogurt, or cheese, at each meal. **MyPlate** helps you make healthy choices about different food groups:^{8,9}

- **Vegetables:** Vegetables provide many of the vitamins and minerals kids need. Serve a variety of vegetables to your family each week. They can be served fresh, frozen, canned, and dried.
- **Fruits:** Fruits contain important nutrients such as vitamin C, potassium, and fiber. You can serve them fresh, dried, and canned. When buying canned fruit, choose fruit that is packed in juice rather than syrup.
- **Grains:** Whenever possible, try to choose whole grains such as oatmeal, whole-wheat flour, brown rice, whole-wheat pasta, corn tortillas, and whole wheat breads.
- **Protein:** Meat, seafood, beans, peas, tofu, lentils, nuts, and eggs are good sources of protein. When choosing meat, opt for lean (less fat) options, such as extra lean ground beef, boneless skinless chicken breasts, and low-fat luncheon meats for sandwiches.
- **Dairy:** Switch to fat-free or low-fat (1%) milk and yogurt. Flavored milks and yogurts are sources of dairy as well but contain extra sugar that can lead to weight gain if over consumed.

The goal is to serve a variety of food groups at each meal, although it is not necessary to serve every food group at every meal. Think of the plate as an entire day's worth of eating: throughout the day, try to use fruits and vegetables to make up half of what your kids eat, and use grains and proteins to make up the other half.⁸

Go to <http://www.choosemyplate.gov> for more information about healthy food choices and portion guidelines by age.

Tips for good nutrition

- **Make smart shopping choices**
Stock up on fruits and vegetables, rather than packaged items that are often high in sugar, fat, and sodium.¹
- **Keep healthy food choices in your home**
Keeping junk food around for other family members and trying to “police” what your child eats only promotes sneak eating.¹⁰
- **Make the healthy choice the easy choice**
Children are more likely to choose healthy foods when they can reach them. Keep yogurts and spoons together on a low shelf in the fridge. Pre-cut apple slices and veggies so they are ready to eat.
- **Reduce consumption of sugary beverages such as juice and soda**
Juice provides some nutritional value but is high in calories.¹ If you do choose juice, go for 100% juice and remember that a portion size should be 4 oz or less.
- **Choose healthy snacks**
Fruit, low-fat yogurt, air-popped pop-corn, whole grain crackers, a tablespoon of peanut butter, dried raisins or apricots, and cucumber or carrot slices are good options.⁴
- **Model good eating**
Children learn how and what to eat from YOU. Caretakers are children’s earliest role models. Kids see and learn from the choices you make. Eat fruits and vegetables in front of your children.
- **Sit down together for family meals**
Eating in front of the TV can lead to faster eating and eating more. Family meals can be a time to share news and tell stories.¹
- **Reduce portion sizes**
Children need smaller portion sizes than adults. Dietitians can talk with you about appropriate portion sizes for your child.⁴
- **Eat more meals at home and reduce consumption of fast food**
Many restaurants, especially fast food ones, have oversized portions and menu options high in fat, sodium and calories.¹
- **Allow kids to prepare meals**
Children are more likely to try foods they have helped prepare. Keep it simple and safe. Teach kids how to stir mix, slice, and arrange the plate.
- **Eat breakfast**
Kids who eat breakfast do better in school and are less likely to overeat at lunch and dinner. Eating less at breakfast and more at dinner, or skipping breakfast completely, increases the risk of obesity.¹⁰
- **Don't talk about "bad foods" or completely eliminate all favorite snacks**
Kids may rebel and try to eat these foods outside the home or sneak them in on their own.⁵ Treats and “celebration foods” are okay once in a while.
- **Focus on health not weight**
Eating well and proper nutrition is about living a healthy life, not the way you look. Negative messages about weight hurt kids’ feelings and don’t work. Kids are more likely to eat healthy when nutrition is about growing strong, jumping high, and thinking smart.

Tips for increasing physical activity

- **Children need 60 minutes of moderate to vigorous physical activity each day**
Moderate to vigorous physical activity means that the heart beats faster and sometimes the child works up a sweat. This will help kids burn calories, build strong bones and muscles, balance energy, focus in school, and sleep well at night.¹
- **Emphasize activity, not exercise**
Your child does not need a structured exercise program-the goal is to get him or her moving. Give children toys such as balls and jump ropes and encourage games like hide and seek or tag.¹
- **Encourage children to try a new activity or to join a sports team**
Allow the child to make the choice. Finding an activity your child likes to do will help him or her stick with it.³
- **Find time to spend together doing a fun family activity: family park day, swim day, or bike day**
A child may be more likely to join in when the whole family is involved.⁴
- **Limit television and other screen time**
The American Academy of Pediatrics (AAP) recommends no television for children under two years of age. The AAP suggests a maximum of two hours per day for children older than two years of age, and no television in the bedroom.³

Common Challenges

Many challenges can arise when making healthy lifestyle changes, even if your family is fully committed to these efforts. Common challenges include:⁴

- **Setbacks and detours:** Perhaps the child overeats for several days in a row, or grabs unhealthy foods at school or a friend's house. Recognize that these setbacks are a normal part of making any type of change. Give some thought to how the setback happened, and how you can minimize the risk of it happening again. Stay optimistic and focus on health-promoting strategies.
- **Teasing and bullying:** Encourage the child to tell an adult. As much as the child possibly can, he or she should not react to the teasing. If the child feels safe, he or she can try being assertive and say something like "stop bugging me!" Let the child's teacher know about the bullying that is happening.
- **Sneaking food:** There are many possible reasons for this. The child may be feeling anxious and find food comforting, or the child may simply be bored and/or tired. Try not to overreact, and encourage your child to ask for food rather than sneak it.
- **Frequent snacking:** In general, children should consume 2 snacks a day. Encourage snacks like carrots or celery sticks, cut of fruits, pretzels, or air-popped popcorn.

Make sure your child has 3 well-balanced meals a day, which should help cut down on a child's desire for several snacks a day

- **Eating out of boredom or anxiety:** Discuss with the child other things that he or she could do besides eating in these situations, such as reading, dancing, going for a walk, playing a game, or listening to music.

Challenges and opportunities for children in the child welfare system and their caregivers

Children who experience abuse and neglect are at risk for developing problematic eating behaviors. A survey of 300 foster parents of sexually abused children found that 77% of the foster parents reported that their foster children displayed eating problems either sometimes or frequently. Unfortunately “eating problems” was not defined by the authors, so it is unknown what specific types of eating problems these children had.²³ A study of 347 pre-adolescent Australian children in foster and kinship care found that 24% scored in the borderline or clinically significant range for food maintenance behaviors. The food maintenance behaviors studied were eating too much, gorging food, hiding, storing, or stealing food, and constant thirst/drinking.²⁴

The challenges that foster children face may require the need for special approaches to help these children develop healthy eating behaviors. Since unhealthy eating behaviors may be an attempt to control a situation that feels out of control, the American Academy of Pediatrics (AAP) recommends that caregivers work to help children and teens find more effective ways to have a voice in their own lives.¹³ The AAP suggests that caregivers ask about food preferences and develop new family traditions to promote healthy habits and help foster children feel like they belong.¹³ Spending time together during meals can also help foster relationships.²⁵

It is important that caregivers recognize that problematic eating behaviors such as hoarding or stealing food are logical behaviors for a child who grew up without reliable access to food, and therefore harsh punishment should not be used. Reassure children that they will not have to go hungry and are in a safe home. At the same time caregivers can set limits and point out that stealing and hoarding are not acceptable behaviors.²⁶ Keeping nutritious snacks available and encouraging children to ask for food when they are hungry are also ways to promote healthy eating behaviors and discourage hoarding and stealing food.²⁶

Challenges for adolescents and their caregivers⁴

Adolescence is an important time to establish healthy behaviors, since many habits formed during adolescence will last into adulthood. Adolescents are growing rapidly during this time and adequate nutrition is essential. However, adolescents typically spend less time at home than when they were younger, which limits caregivers' ability to prepare healthy meals and encourage activity. Although the caregiver's role is changing,

adolescents still need guidance from caregivers and there are ways that caregivers can promote healthy lifestyle behaviors.

Talking with teenagers about healthy nutrition and activities is still very important. Caregivers can make suggestions and offer advice, but should also allow adolescents to make their own choices. When teenagers are at home, caregivers can encourage family meals and prepare healthy foods. Since teenagers consume one third of their calories from snacks, caregivers can have snacks such as applesauce, fruit, and air-popped popcorn available. Skipping meals, especially breakfast, is often a problem at this age, so caregivers can keep quick breakfast items on hand. Ideas include a bagel that can be toasted and topped with peanut butter, hard boiled eggs, yogurt, or nuts and raisins that can be taken along with the teenager when he or she leaves for school.

Discussing food choices made outside the home is another important way to promote healthy nutrition. While it may not be reasonable to ask a teenager to completely avoid fast-food restaurants, caregivers can talk about making healthier choices such as a chicken sandwich rather than a burger, thin crust vegetarian pizza instead of thick crust pepperoni pizza, or a side salad instead of fries. Encourage smaller portion sizes as well.

Promoting activity can also be a challenge during the teenage years. Teenagers may prefer to spend time on other activities, such as spending time on the computer or watching television. Many middle and high schools have cut physical education programs. However, it is still important to encourage adolescents to find ways to be active. Improvements in nutrition and activity must be made for long term weight control.

Diet pills may seem appealing to some teenagers as a “quick fix” to a weight problem. It is important for caregivers to let teenagers know that no over-the-counter drug has been proven safe or effective for teenagers. Teenagers should not take these diet pills. Only one prescription weight-loss drug, called Orlistat, has been approved by the FDA for use in children older than 12 years. This drug is useful only in a small percentage of teens who meet strict criteria, and it must be used under prescription supervision. According to the American Academy of Pediatrics, a small number of surgery centers in the U.S. will perform weight-loss surgery on extremely overweight adolescents. These surgeries carry risks which must be weighed against possible benefits. Prescription weight-loss drugs and surgeries are not substitutes for healthy behaviors.

Websites

Kidshealth.org. Overweight and Obesity.

http://kidshealth.org/parent/general/body/overweight_obesity.html

Medline Plus. Obesity in Children.

<http://www.nlm.nih.gov/medlineplus/obesityinchildren.html>

MyPlate

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

Kidshealth.org. MyPlate Food Guide.

http://kidshealth.org/parent/nutrition_center/healthy_eating/myplate.html

Medline Plus. Child Nutrition.

<http://www.nlm.nih.gov/medlineplus/childnutrition.html>

Let's Move

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

Medline Plus. Exercise for Children.

<http://www.nlm.nih.gov/medlineplus/exerciseforchildren.html>

Hip Hop to Health.

<http://www.hiphoptohealth.com>

Additional Resources:

Center for Childhood Obesity
1323 San Anselmo Avenue
San Anselmo, CA 94960
Phone: (415) 453-8886
Email: info@childobesity.com
Web: <http://www.childobesity.com/>

The Obesity Society
8757 Georgia Avenue, Suite 1320
Silver Spring, MD 20910
Phone: (301) 563-6526
Web: <http://www.obesity.org/>

YMCA
101 N Wacker Drive
Chicago, IL 60606
Phone: 1 (800) 872-9622
E-mail: fulfillment@ymca.net
Web: <http://www.ymca.net/>

Illinois Association of Park Districts
211 E. Monroe Street | Springfield, IL 62701-1186
Phone: (217) 523-4554
E-mail: iapd@ILparks.org
Web: <http://www.ilparks.org/>

Boys and Girls Clubs of America
Kemper Midwest Training and Service Center
1590 Wilkening Road
Schaumburg, IL 60137
Phone : (847) 490-5220
E-mail : info@bgca.org
Web : <http://www.bgca.org/>

Illinois Department of Public Health
535 West Jefferson Street
Springfield, Illinois 62761
Phone: (217) 782-4977
E-mail: DPH.MAILUS@illinois.gov
Web: <http://www.idph.state.il.us/>

Women, Infants, and Children (WIC)
Illinois Department of Human Services
100 South Grand Avenue East
Springfield, IL 62762
Phone : 217-782-2166
Email : DHS.WebBits@illinois.gov
Web: <http://www.dhs.state.il.us/page.aspx?item=30513>

Expanded Food and Nutrition Education Program (EFNEP)
Vicki Rowe, PhD
Interim Director of Programming/EFNEP/SNAP-Ed
University of Illinois
520 Bevier Hall
905 S. Goodwin
Urbana, IL 61801
Phone: 217-244-2857
Email: vrowe@illinois.edu
Web: <http://www.csrees.usda.gov/nea/food/efnep/efnep.html>
<http://web.extension.illinois.edu/cook/efnep/>

Illinois Nutrition Education and Training Program
245 W. Exchange St.
Ste. 4
Sycamore, IL 60178
Phone: 1-800-466-7998
Web: <http://www.kidseatwell.org/>

Coordinated Approach to Child Health (CATCH)
Phone: 1-800-793-7900
Email: Help@CATCHInfo.org
Web: <http://catchinfo.org/>

Choosy Kids
3160 Collins Ferry Rd
Morgantown, WV 26505
Phone: 1-304-777-4543
Email: info@choosykids.com
Web: www.choosykids.com

Girls on the Run International
120 Cottage Place
Charlotte, NC 28207
Phone : 1-800-901-9965
Email : info@girlsontherun.org
Web : <http://www.girlsontherun.org/illinois.html>

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