CONDITION

Childhood obesity

Learn how childhood obesity is assessed, what can contribute to it, possible health effects, and how families and healthcare teams can support healthy growth.

WHAT IT IS
Chronic medical condition with BMI at or above the 95th percentile

BODY SYSTEM
Whole body

MAIN SYMPTOMS
Snoring, daytime sleepiness, shortness of breath, joint pain

WHAT CAUSES IT
Interacting genetic, biological and environmental factors

HOW IT IS DIAGNOSED
Height and weight measurements, age- and sex-specific BMI growth chart

MAIN TREATMENT
Structured family-based nutrition, activity, sleep and behavioral support

CAN IT BE CURED?
No, chronic and needs ongoing management

IS IT AN EMERGENCY?
Sometimes, severe vomiting, confusion or fainting

LONG-TERM OUTLOOK
Complications are possible but not inevitable

Overview

Childhood obesity is a chronic medical condition in which a child has a body mass index, or BMI, at or above the 95th percentile for their age and sex. A percentile compares a child's BMI with that of other children of the same age and sex. In growing children, adult BMI cutoffs are not used.

BMI is calculated from height and weight. It is a screening measure rather than a direct measurement of body fat. A clinician interprets it alongside the child's growth pattern, stage of development, medical history, and overall health. For children younger than 2, clinicians generally use weight-for-length charts instead of BMI.

Obesity can affect physical and emotional health. It may increase the chance of high blood pressure, abnormal cholesterol, type 2 diabetes, liver disease, sleep apnea, and joint problems.

Weight-related teasing and stigma can also harm mental health and make it harder for families to seek care.

A child's weight is not simply a matter of willpower. Genes, biology, medications, sleep, stress, family circumstances, food access, and opportunities for physical activity can all contribute. Care should be respectful, family-centered, and focused on health rather than appearance or blame.

Symptoms

Obesity itself may not cause noticeable symptoms. It is often identified when a clinician reviews a child's growth chart during a routine visit.

Some children develop symptoms related to an associated condition. These can include:

Darkened skin can be a sign of insulin resistance, meaning the body is not responding normally to insulin. Insulin is the hormone that helps move sugar from the blood into cells. Insulin resistance does not always mean that a child has diabetes, but it may prompt further evaluation.

Body size alone does not show whether a child has a complication. Some children with obesity have normal blood pressure and laboratory results, while others develop health concerns without obvious symptoms.

- Snoring, restless sleep, morning headaches, or daytime sleepiness
- Shortness of breath or difficulty keeping up with usual activities
- Hip, knee, ankle, or back pain
- Frequent thirst or urination
- Dark, thickened, velvety skin, often around the neck or underarms
- Irregular menstrual periods or increased facial or body hair
- Ongoing sadness, anxiety, social withdrawal, or concerns about bullying

Causes and risk factors

Childhood obesity usually develops through several interacting factors. In most cases, there is no single cause.

Genes influence appetite, how the body uses energy, and where fat is stored. Children may also share family eating patterns, routines, and environments. A strong family history of

obesity or type 2 diabetes can increase risk, but it does not determine a child's future health.

Environmental and social factors can make healthy routines harder. Families may have limited access to affordable nutritious food, safe places to play, reliable transportation, or healthcare. Caregiver work schedules, housing instability, neighborhood safety, and food marketing can also affect eating, sleep, and activity.

Other possible contributors include:

Hormone conditions are an uncommon cause of obesity. A clinician may consider them when weight gain occurs with slowed height growth, delayed development, or other specific findings. Children with common obesity often continue to grow normally or faster in height.

Rapid weight gain can also follow an injury, illness, change in medication, or major disruption in family life. These details are useful to discuss without assigning blame.

- Frequent intake of sugar-sweetened drinks or highly processed foods
- Limited access to fruits, vegetables, whole grains, and other filling foods
- Low levels of physical activity or long periods of sedentary screen use
- Too little sleep or an irregular sleep schedule
- Chronic stress, depression, anxiety, trauma, or emotional eating
- Certain medicines, including some corticosteroids like prednisone or hydrocortisone , seizure medicines, and psychiatric medicines
- Rare genetic syndromes or hormone disorders

Diagnosis

A clinician usually begins by measuring height and weight and plotting them on an age- and sex-specific growth chart. BMI is then calculated and followed over time. A BMI from the 85th percentile to below the 95th percentile is called overweight. A BMI at or above the 95th percentile is classified as obesity.

The clinician will look at the full growth pattern rather than relying on one measurement. Measurement errors, recent illness, puberty, and differences in body build can affect interpretation.

The visit may include questions about:

A physical examination may include blood pressure, growth and puberty assessment, skin findings, and evaluation of the heart, lungs, abdomen, and joints.

Depending on the child's age, BMI, symptoms, and risk factors, the clinician may recommend

blood tests. These may check cholesterol, blood sugar, and liver enzymes. Additional testing may be appropriate when symptoms suggest sleep apnea, a hormone condition, or another medical problem. Broad hormone testing is not routinely needed when a child is growing normally in height and has no suggestive symptoms.

The goal of evaluation is not only to label a BMI category. It is to understand the child's health, identify complications early, and build a realistic care plan with the family.

- Meals, snacks, drinks, food access, and family routines
- Physical activity, screen time, sleep, and snoring
- Medicines and medical conditions
- Menstrual periods and signs of puberty
- Mood, stress, eating behaviors, bullying, and body image
- Family history of diabetes, high cholesterol, heart disease, or liver disease

Treatment and management

Treatment focuses on supporting healthy growth, improving health concerns, and helping the family build sustainable routines. For some growing children, slowing weight gain while height increases may improve BMI over time. Other children may benefit from gradual weight reduction under clinical supervision. The appropriate goal depends on age, growth, health conditions, and stage of development.

The main treatment is a structured, family-based program that addresses nutrition, activity, sleep, and behavior. The American Academy of Pediatrics and the U.S. Preventive Services Task Force support comprehensive programs with repeated contact over several months. Programs with at least 26 hours of contact tend to provide the most benefit, although local access varies.

Nutrition care should avoid shame and overly restrictive dieting. A clinician or registered dietitian may help a family work toward regular meals, age-appropriate portions, more fiber-rich foods, and fewer sugar-sweetened drinks. Changes are often easier when they apply to the household rather than singling out one child.

Physical activity should be enjoyable, safe, and suited to the child's abilities. Walking, active games, dancing, swimming, cycling, and organized sports can all count. A gradual approach may be needed when a child has pain, breathing problems, or limited stamina.

Sleep is also important. A consistent schedule and assessment for snoring or sleep apnea may improve daytime energy and support other health goals. Families may also discuss practical

limits on recreational screen time, especially when screens interfere with sleep, movement, or meals.

Behavioral support can help families set specific goals, solve barriers, track progress, and respond to setbacks. Mental health care may be important when a child has depression, anxiety, binge eating, trauma, or weight-related bullying.

For some adolescents, prescription weight-management medicine may be considered in addition to intensive lifestyle treatment. Eligibility depends on age, BMI, health conditions, and the medicine's approved use. These medicines have different benefits, side effects, monitoring needs, and costs. They are not substitutes for ongoing nutrition, activity, sleep, and behavioral support.

Adolescents age 13 or older with severe obesity may be offered referral to a specialized center for evaluation for metabolic or bariatric surgery. Evaluation does not mean surgery will occur. A multidisciplinary team reviews physical health, emotional readiness, family support, potential benefits, and long-term follow-up needs.

Unsupervised supplements, detox products, and highly restrictive diets may be unsafe for growing children. Families should discuss weight-loss products or major diet changes with a qualified healthcare professional.

Complications

Complications are possible, but they are not inevitable. Risk is influenced by the severity and duration of obesity, genetics, puberty, family history, and other health factors.

Possible physical complications include:

Emotional and social effects can be just as important. Children may experience teasing, discrimination, low self-esteem, anxiety, depression, social isolation, or disordered eating. Weight stigma can occur at school, in sports, online, and even in healthcare settings. Adults should address bullying directly and avoid negative comments about bodies, food, or weight.

- High blood pressure and abnormal cholesterol
- Prediabetes or type 2 diabetes
- Metabolic dysfunction-associated steatotic liver disease, meaning excess fat and inflammation in the liver
- Obstructive sleep apnea, in which breathing repeatedly narrows or stops during sleep
- Asthma symptoms or reduced exercise tolerance

- Hip, knee, ankle, or back problems
- Earlier puberty in some children
- Polycystic ovary syndrome, which can cause irregular periods and excess hair growth
- Increased likelihood of obesity and related illness in adulthood

Follow up

Routine follow-up allows the healthcare team to review growth, blood pressure, symptoms, laboratory results, family goals, and treatment barriers. Visits may be more frequent during an intensive program or after starting a medicine. Progress can include better sleep, improved stamina, healthier laboratory results, or more regular routines even when BMI changes slowly.

Schedule a routine appointment if a child has ongoing snoring, increasing joint pain, rapid weight gain, irregular periods, persistent sadness, concerning eating behaviors, or significant bullying.

Contact a healthcare professional promptly if a child develops frequent thirst and urination, unexplained weight loss, or marked fatigue. These can occur with high blood sugar and need timely assessment.

Seek urgent or emergency care for severe vomiting, abdominal pain, deep or unusually fast breathing, confusion, fainting, or difficulty waking. These symptoms can signal a serious problem, including a diabetes-related emergency. Immediate help is also needed if a child is at risk of self-harm or expresses suicidal thoughts.

Sources

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