Childhood Obesity Assessment Guidelines

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Whom to Assess?

The American Academy of Pediatrics recommends that body mass index (BMI) is calculated and plotted at every well-child visit age 2 years and above, regardless of a child's age or weight.

Whom is at Higher Risk?

Overweight and obesity are complex diseases that have many different influences on the origin of the disease.

The 2023 AAP Clinical Guidelines for the Evaluation and Treatment of Children and Adolescents with Obesity list the following factors contributing to overweight and obesity: policy, neighborhood, family/home environment, and individual factors.

Risk Factors That May Contribute to Childhood Overweight and Obesity[1]

Policy Factors	Neighborhood and Community Factors	Home Environment and Family Factors	Individual Factors
• Marketing of unhealthy foods • Under-resourced communities • Food insecurity	• School environment • Access to fresh food • Presence of fast food • Access to a safe area for physical activity • Environmental health	• Parenting feeding style • Family home environment organization • Sugar-sweetened beverages • Portion sizes • Snacking behaviors • Dining out and family meals • Screen time • Sedentary behavior • Sleep duration • Environmental smoke exposure • Psychosocial stress • Adverse childhood experiences	• Genetic factors • Prenatal risk factors • Postnatal risk factors • Childhood risk factors

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Source: American Academy of Pediatrics. https://pubmed.ncbi.nlm.nih.gov/36622115

Measuring Height and Weight

Use standardized clinical procedures to assess height and weight at each patient visit.

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Best Practices to Measure Height:

- Use a stadiometer. Calibrate regularly with an object of known height (e.g. 60 cm calibration bar).
- Remove shoes and hair ornaments.
- Position the child against the wall or stadiometer.
- Stand with feet flat, together, and against the wall.
- Legs are straight, arms are at the sides, and shoulders are level.
- Heels, buttocks, and shoulders are in contact with the stadiometer.
- Ask the child to hold their breath.
- Lower sliding indicator to the vertex of the skull.
- Record height to the nearest 0.1 cm.

Best Practices to Measure Weight:

- Use a digital scale. Calibrate regularly with an object of known weight (e.g. fifty-pound weight).
- Place scale on firm flooring (e.g. tile, concrete; not carpet).
- Remove shoes, heavy clothing, and items in your pocket.
- Ensure the scale tares out to zero before the child steps on the scale.
- Stand with both feet in the center of the scale and arms hanging loosely at the side.
- Take reading when digital readout is constant, and the child is motionless.
- Record weight to the nearest 0.1 kg. Weighing when fasted and at the same time of the day is the best practice for accuracy, though this is not always feasible in a clinical setting.
- Measuring weight in a private area is recommended to provide supportive and non-biased behaviors.

In the case of virtual visits, parents/caregivers can measure height and weight at home. **A handout to provide families to help them accurately measure height and weight is available on the Pennington Biomedical website (https://www.pbrc.edu/research-trials/BMI-Calculator.aspx).**

Calculating BMI & BMI Percentile

Based on the child's height, weight, age, and sex, the BMI percentile is plotted using the Centers for Disease Control and Prevention (CDC) Growth Chart to account for sex and height differences in growth during childhood. The BMI percentile can be automatically calculated in an electronic medical record upon entering the child's height, weight, date of birth, date of visit, and sex. Families may also wish to plot their child's BMI growth on a paper chart. The resource page contains links to the CDC growth charts and extended growth chart for children and adolescents between the ages of 2 and 20 years old, respective to the child or adolescent BMI percentile.

BMI Category	Terminology	BMI
<5th percentile	Underweight	<18.5 kg/m^2
5th-84th percentile	Healthy weight	18.5-24.9 kg/m^2
85th-94th percentile	Overweight	25-29.9 kg/m^2
≥95th percentile	Obesity (Class I)	30-34.9 kg/m^2
≥120% to <140% of 95th percentile	Severe obesity (Class II)†	35-39.0 kg/m^2
≥140% of 95th percentile	Severe obesity (Class III)†	≥40 kg/m^2

† Severe obesity Class II and Class III are determined by either BMI Category or BMI, whichever is lower based on age and sex.

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