

Measuring Obesity in Children

By Shirley Schantz, RN, EdD, ARNP

Overweight and obesity are serious health concerns for children and adolescents. Almost 32 percent of children in the United States between the ages of two to 19 are overweight or obese. The number of overweight children has more than tripled throughout the past three decades. Overweight and obesity are the result of too many calories taken in for the amount of calories used (activity) and is influenced by heredity and family, dietary patterns, environment, lack of physical activity, socioeconomic status and health.

Obese children and adolescents are more likely to become obese as adults. About 80 percent of children who are overweight at ages 10-15 will be obese adults at age 25. If overweight begins before eight years of age, obesity in adulthood is likely to be more severe. As a result of obesity in children, it is estimated that this generation of young people will be the first expected to not live as long as their parents, and for children born in 2000, the lifetime risk of developing diabetes is estimated to be 30 percent in girls and 40 percent in boys if nothing is done.

Causes of Obesity in Children

The causes of overweight and obesity in children and adolescents are a combination of unhealthy eating patterns, a lack of physical activity, genetics, lifestyle, behavioral, psychological, socio-cultural and environmental influences. Childhood obesity can lead to various additional health risks, including type 2 diabetes, high blood pressure, coronary heart disease, high cholesterol, joint disorders, mental health issues and asthma. A family history of diabetes and being African American, Hispanic or Native American increases the risk of children and adolescents getting diabetes.

To prevent and manage overweight in children and adolescents, those who are overweight or obese must be correctly identified. One way to identify if a child or adolescent is overweight or obese is body mass index (BMI).

What is BMI?

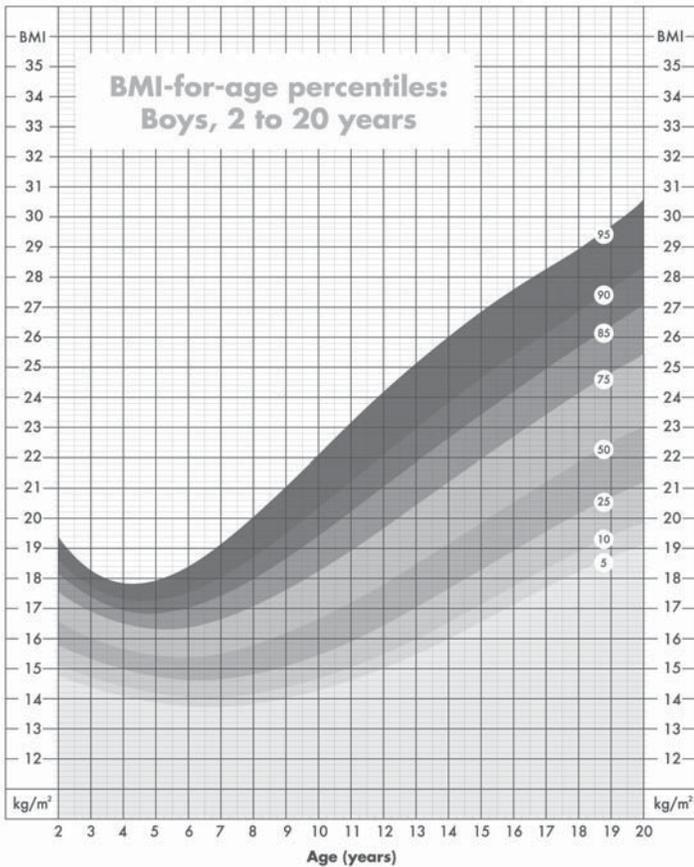
BMI is a number calculated from a child's weight and height. BMI does not measure body fat directly but is a reliable indicator of body fatness for most children and teens and connects to direct measures of body fat. BMI is an accepted screening tool for a first assessment of body fat.

BMI is the screening tool used by the doctor or school nurse to identify overweight and obese children and adolescents who need further assessment or tests for health risks. It also indicates possible treatment and provides parents with information to help them take appropriate action. All parents should be provided with a clear and respectful explanation of the BMI results and a list of appropriate follow-up actions.

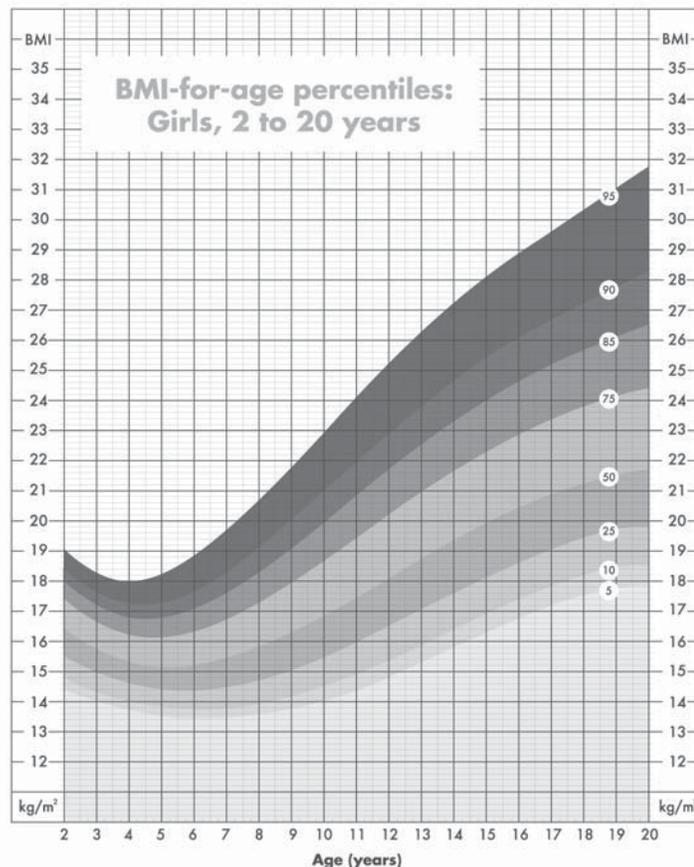
The CDC and the American Academy of Pediatrics (AAP) have recommended the use of BMI to screen for overweight and obesity in children beginning at two years old. When BMI is calculated, the age and sex of the child is taken into consideration and is referred to as BMI-for-age.

A percentile is a number that indicates where the child is compared to other children of the same age and sex. For example: What does it mean if my child is in the 60th percentile? The 60th percentile means that compared to children of the same age and sex, 60 percent (or 60 out of a hundred) have a lower BMI. Or, a 9-year-old girl at the 95th percentile has a higher BMI than 95 out of every 100 9-year-old girls. A youth's weight status is then identified from his or her BMI-for-age percentile.

The CDC has developed an online youth BMI calculator to compute BMI and the corresponding BMI-for-age percentile and weight status category. The site provides an interpretation of the result and can display it on the appropriate growth chart. To calculate your child's BMI visit www.apps.nccd.cdc.gov/dnpabmi/Calculator.aspx.



5th percentile 10th percentile 25th percentile 50th percentile 75th percentile 85th percentile 90th percentile 95th percentile



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SOURCE: Developed by the National Center for Health Statistics in collaboration with
the National Center for Chronic Disease Prevention and Health Promotion(2000).
<http://www.cdc.gov/growthcharts>



Importance of Measuring Obesity in Children

BMI measurement increases awareness for children and families about possible health risks for children and adolescents, and families may be motivated to take action after receiving their child's BMI results. Parents are encouraged to share the BMI results with physicians or primary health care providers. The best person to say whether your child's measurements are within a healthy range is your child's healthcare provider.

Emerging school-based efforts have focused on improving the quality of food sold in schools, limiting sales of less nutritious foods, improving physical education and health education, and encouraging increased physical activity either within the school day or through extracurricular activities. Parents have the power to change things at home and at school.

Further information about childhood overweight and obesity can be found on the OAC Web site at www.obesityaction.org, the CDC Web site at www.cdc.gov, and at the National Diabetes Education Program (NDEP) site for children and adolescents -Tips for Teens - Lower Your Risk for Type 2 Diabetes at www.ndep.nih.gov.

Determining a Child's BMI-for-age Percentile.

To plot your child's BMI-for-age percentile, you must first calculate his/her BMI. Once you calculate his/her BMI, find the age of your child on the bottom of the BMI-for-age percentile chart and look to the left or right to locate their BMI. Plot the point on the graph using a pen or pencil. Once you have plotted the measurement locate the corresponding shaded color on the bottom of the chart to determine your child's BMI-for-age percentile. You are then able to find your child's weight status by viewing the Weight Status Category table located on the right.

Weight status category	Percentile range
Underweight	Less than 5th percentile
Healthy weight	5th - 85th percentile
Overweight	85th - 95th percentile
Obese	95th percentile and greater

About the Author:

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