National Health and Nutrition Examination Survey

nhanes

CDC
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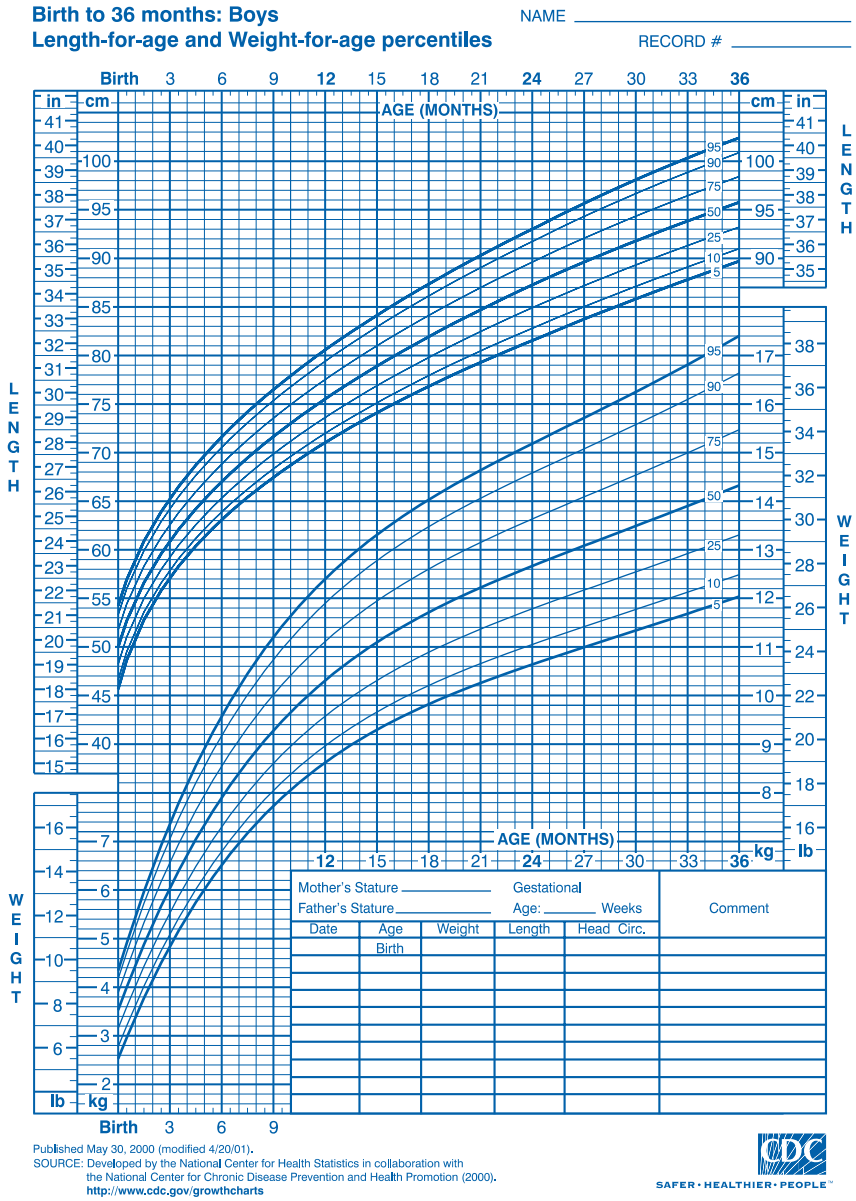
Centers for Disease Control and Prevention Growth Charts for the United States, 2000

Many parents are familiar with the growth charts used by pediatric health care providers. The growth charts are the most widely used tools to track growth and development in children and assist in signaling potential growth problems. The charts consist of a series of curves called "percentiles" that show the growth of children across the United States.

The new 2000 Centers for Disease Control and Prevention (CDC) pediatric growth charts are a revised version of the 1977 National Center for Health Statistics (NCHS) growth charts. NCHS and the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) worked with experts from various Federal agencies and academia to revise the charts. The charts consist of percentiles related to weight, length, and head circumference for infants (birth–36 months), and percentiles related to weight, height, and body mass index for children (2–19 years of age). The charts are used to compare a child's growth to the growth of children in the United States. On the chart to the right, a 6-month-old infant boy weighing 19 pounds and measuring 27 inches in length is just above the 75th percentiles of both weight and length. This means that he is heavier and longer than 75 percent of U.S. children.



What's new in the 2000 CDC growth charts?

- The 2000 CDC charts are representative of the United States population, reflecting the Nation's cultural and racial diversity.
- The 2000 CDC growth charts now include an assessment for body mass index (BMI). BMI is a single number that evaluates an individual's weight in relation to their height.

BMI is generally used as the first indicator in assessing a person's body fat and has been the most common method of determining when adults are overweight or obese. Health care providers know that children who have a high body mass index and a family history of weight problems may have future weight problems. This tool will help identify weight problems in children.

- The 2000 CDC growth charts track children through 19 years of age, 2 years longer than the 1977 NCHS charts.
- The 3rd and 97th percentiles were added to each of the new growth charts. In addition, to identify children at risk for weight problems, the 85th percentile was added to the weight-for-stature and BMI-for-age charts.
- The 2000 CDC growth charts meet both research and clinical needs by providing graphs and computer software containing the growth charts.
- The transition between the infant charts and the charts for older children ages 24–36 months is better in the 2000 CDC growth charts than in the 1977 NCHS growth charts. This is because nationally representative data have been used for both the infants and older children.

How to calculate BMI

To determine the BMI of a 7-year-old girl weighing 55 pounds and measuring 48 inches, calculate weight in kilograms divided by height in meters squared (kg/m^2). To convert from English to metric units, multiply the entire equation by 703 (BMI=55÷48÷48×703=16.8). Plotting 16.8 at age 7 on the BMI chart on the right for girls shows that she is just above the 75th percentile, so her BMI is higher than approximately 75 percent of girls in the United States.

Electronic growth charts

The 2000 CDC growth charts have received widespread distribution through the internet, (http://www.cdc.gov/growthcharts), professional organizations, pharmaceutical companies, and in CDC's EpiInfo program. EpiInfo 2000, available free on the internet, has a nutrition module that plots children on growth charts and calculates percentiles (http://www.cdc.gov/epiinfo).

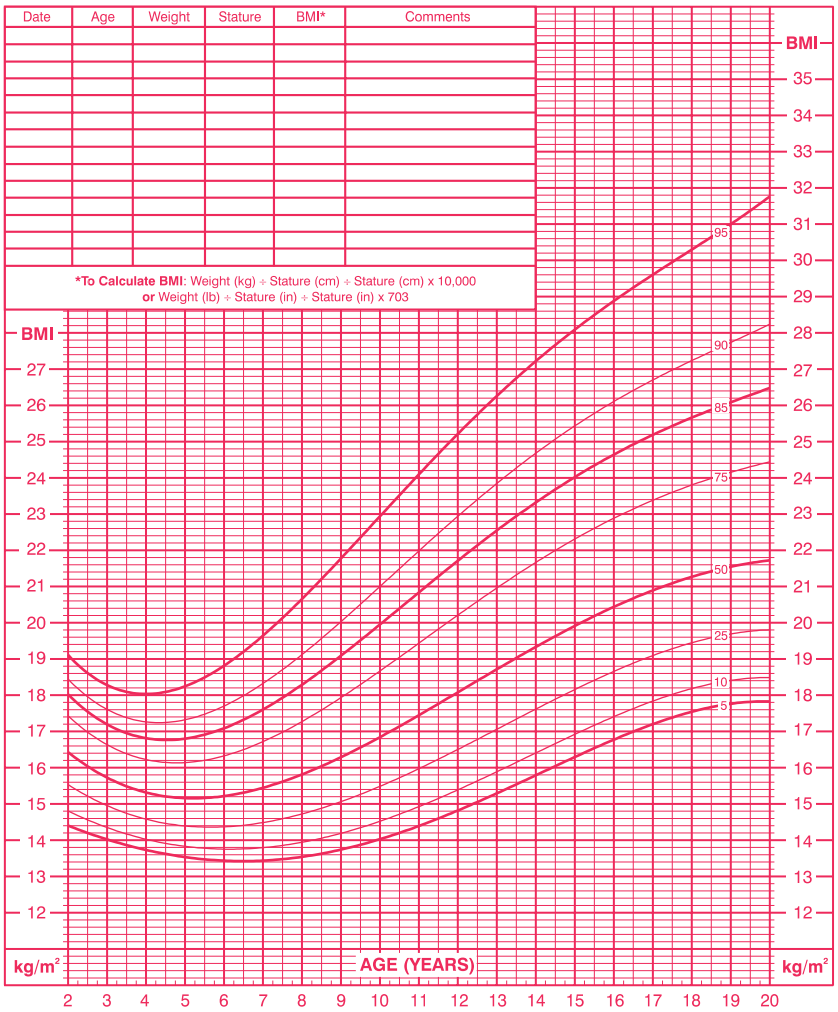
2 to 20 years: Girls
Body mass index-for-age percentiles

NAME _____

RECORD # _____

Date	Age	Weight	Stature	BMI*	Comments

***To Calculate BMI**: Weight (kg) ÷ Stature (cm) ÷ Stature (cm) x 10,000
or Weight (lb) ÷ Stature (in) ÷ Stature (in) x 703



Published May 30, 2000 (modified 10/16/00).
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

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How has the National Health and Nutrition Examination Survey (NHANES) contributed to the 2000 CDC growth charts?

CDC's new charts are based primarily on data gathered through NHANES, the only survey that collects data from actual physical examinations on a cross-section of people from all over the United States. In order to revise the growth charts, the NHANES survey conducted from 1988 through 1994 contained more than 8,000 children ages 2 months–6 years. NHANES has shown that in the past two decades the number of overweight children and teens has doubled. Health care providers hope that the new BMI charts will be used to identify overweight children and teens for intervention at an early age. This tool may be used to develop and implement prevention and intervention programs that aim at reducing the prevalence of overweight persons in the United States.

For more information about NHANES please visit our Web site:
http://www.cdc.gov/nchs/nhanes.htm