



Body Mass Index (BMI)-for-Age Percentile Reference (For posting)

1. Determine accurate weight and height

Record measurements on the data entry table on the CDC/NCHS growth chart and PM 160



Calibrated Scale

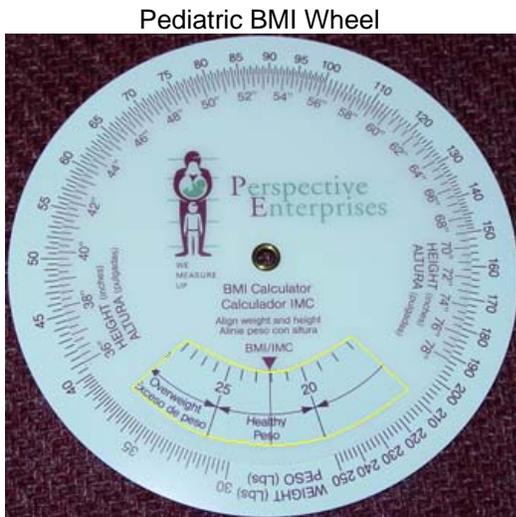


Stadiometer

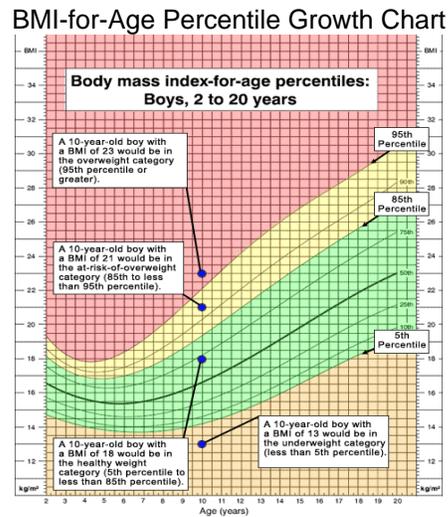
2. Determine BMI value

Record on data entry table/growth chart

3. Plot BMI value on BMI-for-age percentile growth chart



Line up height and weight
Read value in window



<http://www.cdc.gov/growthcharts>

4. Record BMI-for-age percentile on the PM 160

Example:

HEIGHT IN INCHES 0 3 9 2 4	WEIGHT LBS OZS 0 4 1 0 0	BODY MASS INDEX (BMI) PERCENTILE 9 7 %	BLOOD PRESSURE
HEMOGLOBIN	HEMATOCRIT		BIRTH WEIGHT LBS OZS

Age/Sex: 3 year old boy

Height: 39 1/2 inches Weight: 41 pounds BMI Value: 18.5 kg/m²

Estimated BMI Percentile (read from growth chart): > 95th %ile (Record best estimate)

or Calculated BMI Percentile (from calculator): 97th %ile (Record 97)

Weight Category: "Obese" (Provider interprets weight category.) Record in "Comments" box.



Definitions and Tools for Obtaining BMI-for-Age Percentile

What Is BMI?

Body Mass Index (BMI) is a value calculated from an individual's weight and height. BMI provides a reliable indicator of body fatness for most individuals and is used to **screen** weight categories and health problems associated with weight.

How Do I Calculate BMI?

BMI value is calculated by using an equation or a calculating tool.

English Formula: $Weight\ in\ pounds \div Height\ in\ inches \div Height\ in\ inches \times 703 = BMI\ value$

Metric Formula: $Weight\ in\ kilograms \div Height\ in\ meters \div Height\ in\ meters = BMI\ value$

(Calculating tools: CDC online calculator, BMI wheels and software programs use this equation)

What Is BMI-for-Age Percentile?

The BMI-for-age percentile provides a comparison of one child's BMI value to other children who are the same age and sex. BMI value and BMI-for-age percentile are **NOT** the same. BMI value must be plotted on the CDC/NCHS BMI-for-age percentile growth chart for children (2-20 years) in order to provide a comparison to other children their age and sex. *(For recommended growth charts, go to:*

<http://www.cdc.gov/growthcharts> Individual Growth Charts, Set 2, Body mass index-for-age percentile – boys and girls, 2-20 years.) Growth charts display a range of percentiles; the major percentile channels between 5-95th percentiles are marked by channel lines. For example, when a child's BMI value is plotted at the 95th %, this means their BMI is the same or higher than 95 percent of other children who are the same age and sex. American Medical Association and American Academy of Pediatrics recommend tracking growth measurements (including BMI) over time and plotting them to determine a child's growth trend and possible health problems associated with weight.

Tools to Determine BMI Value and BMI-for-Age Percentile

Centers for Disease Control and Prevention (CDC)

BMI Calculator for Child and Adolescent:

Online software that calculates **BMI percentile** from height, weight, age and sex data

<http://apps.nccd.cdc.gov/dnpabmi/Calculator.aspx>

(Free, easy-to-use, precise, requires computer access, printable)

BMI Table for Calculated Body Mass Index (BMI) Values for Selected Heights and Weights for Ages 2 to 20 Years: <http://www.cdc.gov/nccdphp/dnpa/bmi/00binaries/bmi-tables.pdf>

Checkbook Size BMI Table: <http://www.cdc.gov/nccdphp/dnpa/bmi/00binaries/bmi-checkbook.pdf>

Online or printable tables of sequential heights and weights for determining BMI value

Plot BMI value on growth chart to determine BMI-for-age percentile.

(Free, requires computer access or printable, somewhat bulky, must graph for percentile)

BMI Wheels (pediatric version)

The BMI wheel is an easy-to-use tool for rapid and accurate calculation of Body Mass Index (BMI) value. It is CD-sized and has a double-sided design to calculate BMI value using a single wheel. Smaller weights and heights are on one side of the wheel (pediatric sized) and higher weights and heights are on the other side (adolescent/adult sized). When ordering, request "**pediatric**" BMI wheels that have 20-450 lb. weight range and BMI values calibrated to tenths. Companies who make BMI wheels include:

- Trowbridge and Associates- <http://www.trowbridge-associates.com/>
- Perspective Enterprises - <http://www.perspectiveent.com/>
- IWA Incorporated- <http://www.IWASlidecharts.com/>

(Some free, easy-to-use, quick readings, mobile, no computer access require, must graph for percentile)

Downloadable software programs for handheld PDAs

For electronic growth charts and BMI-for-age percentile calculations, Stat Coder.Com is one company that provides PDA software for free @ <http://www.statcoder.com/growthcharts.htm>

(Some free, moderate difficulty, precise, mobile, handheld device required)