

Determining Healthy Weight Range in Children and Adolescents

It is important to assess a child/adolescent's height and weight as part of a comprehensive assessment and to determine a healthy weight range for the individual. Determining a healthy weight range helps to inform the treatment plan, and can also be used to assess progress along the way.

There are many factors that influence an individual's weight, and these should always be considered in determining the healthy weight range, including; age, gender, ethnicity, family genetics, height and bone structure, timing of puberty, hormones, metabolic rate, chronic disease, food intake and habits, activity levels, history of dieting and psychosocial environment.

A healthy weight range should always be used, rather than a specific target weight. It is important to note that the healthy weight range may shift as other signs of physical recovery may not be evident when the individual is in the healthy weight range, such as vital signs remaining abnormal or absence of menses in females.

For children and adolescents, BMI is age and gender specific to account for the body composition changes that occur throughout these years of development. 'BMI for age' growth charts are used so that individuals size and growth patterns can be viewed relative to other children of the same age and gender.

American Centre for Disease Control (CDC) growth charts are recommended for 2-18yr olds. These are available at www.cdc.gov/growthcharts

To assess a child/adolescents height and weight, and to determine a healthy weight range you will need to:

- Accurately measure height and weight and plot on growth charts.
- Obtain previous height and weight measurements and plot on growth charts to obtain a pattern of growth or growth trajectory (Serial measures provide a pattern of growth, one-off measurements show only a child's size).
- Calculate BMI and plot on the BMI-for-age percentile chart.
BMI is calculated as follows: $BMI = \text{weight (kg)} \div \text{height (m)}$
- Interpret the individuals BMI using the following guidelines:
 - A normal BMI is from 5th percentile to <85th percentile. However the 5th percentile is often too low for physical recovery to occur for individuals with eating disorders.
 - A BMI between the 25th and 85th percentiles is recommended, as this is more likely to correlate with physical recovery.

Weight Status Category	BMI for age (Percentile Range)
Underweight	Less than the 5 th percentile
Normal or Healthy Weight	5 th percentile to less than the 85 th percentile
At Risk of Overweight	85 th to less than the 95 th percentile
Obese	Greater than the 95 th percentile

Himes and Dietz (1994); World Health Organization (1996)

Calculate the weight range required to correlate with a healthy BMI range whilst considering the individuals previous growth trajectory, expected ongoing growth, as well as the numerous factors that impact an individual's weight.