



## Calculating BMI

The formula for calculating BMI is:

$$\text{BMI (kg / m}^2\text{)} = \frac{\text{Weight (kg)}}{\text{Height (m)}^2}$$

To complete the calculation you divide the weight in kilograms by the height in metres twice:

$$\text{Weight (kg)} \div \text{height (m)} \div \text{height (m)} = \text{BMI}$$

### Calculation checklist

The following is a checklist for the correct calculation of BMI

- ✓ Weight is in kilograms and recorded to the nearest 0.1kg
- ✓ Height is in metres, accurate to the nearest mm (or 0.1cm or 0.001m)
- ✓ Weight is divided by the height twice
- ✓ The BMI result is rounded to one decimal place

### Steps in plotting BMI

Plotting BMI is very similar to plotting height and weight on a centile chart. The instructions below provide the main steps in plotting BMI:

1. Select the correct BMI chart (i.e. Girls' chart or Boys' chart)
2. Have the child's calculated BMI and exact age ready
3. On the BMI chart, track along the X axis (bottom line) to find the age of the child
4. Track up the Y axis (side line) to find the BMI for the child
5. Make a cross or dot at the point at which the age and BMI lines meet
6. Make a note of the BMI percentile as you would for height or weight, such as:
  - "On the 75<sup>th</sup> percentile"
  - "Just below the 50<sup>th</sup> percentile"
  - "Between the 85<sup>th</sup> and 95<sup>th</sup> percentile"

### Things to watch out for when plotting BMI

The main points to look out for when plotting BMI are:

- ✓ The BMI is correct
- ✓ The correct chart is being used (BMI is gender specific)
- ✓ The child is 2 or more years of age
- ✓ The BMI is plotted against the correct age



### Interpreting BMI

BMI Percentile	Interpretation	Comments
Below 5 <sup>th</sup>	Low weight	Some children are naturally thin and healthy, whereas others may be failing to thrive, use clinical judgement
5 <sup>th</sup> to 85 <sup>th</sup>	Healthy weight	This is the healthy weight range
85 <sup>th</sup> to 95 <sup>th</sup>	Overweight	Overweight, may benefit from some simple diet and lifestyle changes
95 <sup>th</sup> and over	Very overweight / obese	<b>Generally obese children should be referred to as being overweight when talking to parents (obese is an unacceptable word to use).</b> Children in this group would benefit from some diet and lifestyle changes

### Website for BMI charts – boy and girl

[http://www.health.vic.gov.au/childhealthrecord/growth\\_details/index.htm](http://www.health.vic.gov.au/childhealthrecord/growth_details/index.htm)