Managing weight & diabetes.

Body Mass Index and Waist Circumference

How to calculate Body Mass index (BMI)

BMI is a simple calculation using a person’s height and weight. The formula is BMI = kg/m2 where kg is a person’s weight in kilograms and m2 is their height in metres squared. A BMI of 25.0 or more is overweight while the healthy range is 18.5 to 24.9. BMI applies to most adults 18-65 years.

BMI is not used for muscle builders, long distance athletes, pregnant women, the elderly or young children. This is because BMI does not take into account whether the weight is carried as muscle or fat, just the number. Those with a higher muscle mass, such as athletes, may have a high BMI but not be at greater health risk. Those with a lower muscle mass, such as children who have not completed their growth or the elderly who may be losing some muscle mass may have a lower BMI. During pregnancy and lactation, a woman’s body composition changes, so using BMI is not appropriate.

Link to Health Canada’s Canadian Guidelines for Body Weight Classification in Adults at http://www.hc-sc.gc.ca/fn-an/nutrition/weights-poids/guide-lb-adult/index-eng.php where you will also find a BMI calculator.

Waist Circumference (WC)

WC is an indicator of health risk associated with excess fat around the waist. A waist Circumference of 102 cm (40 inches) or more in men, or 88 cm (35 inches) or more in women, is associated with health problems such as type 2 diabetes, heart disease and high blood pressure.
How to measure Waist Circumference

1. Remove clothing from the waist line.
2. Stand with feet shoulder width apart (25-30cm or 10-12 inches) and back straight.
3. Locate the top of the hip bone. This is the part of the hip bone at the side of the waist not at the front of the body. Use the area between the thumb and index finger to feel for the hip bone at the side of the waist.
4. Align the bottom edge of the measuring tape with the top of the hip bone. Wrap the tape measure all the way around the waist. Ensure that the tape measure is parallel to the floor and not twisted.
5. Take 2 normal breaths and on the exhale of the second breath tighten the tape measure so it is snug but not digging into the skin.
6. Take the measure of the waist to the nearest 0.5 cm (1/4 inch)

These instructions are taken from the Heart and Stroke Foundation website. Follow the link below to view the video demonstration. http://www.heartandstroke.com/site/c.ikIQLcMWJtE/b.3876195/

Gender and ethnic specific waist circumferences

The Canadian Diabetes Association 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada provides a guideline for waist circumference targets on based gender and ethnicity. Below is a table summarizing waist circumference measurements that lead to increased health risks.

Ethnic-specific values for waist circumference (WC)

<table>
<thead>
<tr>
<th>Country or Ethnic Group</th>
<th>Central obesity as defined by WC</th>
</tr>
</thead>
<tbody>
<tr>
<td>European, Sub-Saharan African, Eastern Mediterranean and Middle Eastern (Arab)</td>
<td>Men - cm (inches) 94 (37.6) or greater</td>
</tr>
<tr>
<td>South Asian, Chinese, Japanese, South and Central American</td>
<td>Men - cm (inches) 90 (36) or greater</td>
</tr>
</tbody>
</table>

Related articles: managing weight and diabetes