

# Canadian Guidelines for Body Weight Classification in Adults - Quick Reference Tool for Professionals -

## Highlights

- The Canadian Guidelines for Body Weight Classification in Adults uses the body mass index and waist circumference as indicators of health risk.
- This classification system is aligned with the World Health Organization's (WHO) recommendations widely adopted internationally.
- This classification system is derived from population data. When used with individuals, weight classification is only one component of a more comprehensive health assessment needed to clarify health risk.

- The classification system is not intended for use with:
  - those under 18 years of age, and
  - pregnant and lactating women.

Special consideration is also needed when using the classification system. It may underestimate or overestimate health risks in specific groups such as: young adults who have not reached full growth, adults who naturally have a very lean body build, highly muscular adults, adults over 65 years of age, and certain ethnic and racial groups. More information is provided in the full report available online ([www.healthcanada.ca/nutrition](http://www.healthcanada.ca/nutrition)).

## Body Mass Index (BMI)

- The BMI (weight (kg)/height (m)<sup>2</sup>) is not a direct measure of body fat but it is the most widely investigated and most useful indicator, to date, of health risk associated with under and overweight.

Classification	BMI Category (kg/m <sup>2</sup> )	Risk of developing health problems
Underweight	< 18.5	Increased
Normal Weight	18.5 – 24.9	Least
Overweight	25.0 – 29.9	Increased
Obese		
Class I	30.0 – 34.9	High
Class II	35.0 – 39.9	Very high
Class III	≥ 40.0	Extremely high

*Note: For persons 65 years and older the 'normal' range may begin slightly above BMI 18.5 and extend into the 'overweight' range.*

Adapted from: WHO (2000) *Obesity: Preventing and Managing the Global Epidemic: Report of a WHO Consultation on Obesity*.

## Some health problems associated with body weight

Overweight and obesity	Underweight*
Type 2 diabetes Dyslipidemia Hypertension Coronary heart disease Gallbladder disease Obstructive sleep apnea Certain cancers	Undernutrition Osteoporosis Infertility Impaired immunocompetence

\*May indicate an eating disorder or other underlying illness.

## Waist Circumference (WC)

- WC is an indicator of health risk associated with excess abdominal fat.

To determine WC, the measurer should stand beside the individual. WC is measured at the part of the torso located midway between the lowest rib and the iliac crest (top of pelvic bone). The tape should fit without compressing any underlying soft tissues.

WC Cut-off Points	Risk of developing health problems*
Men ≥ 102 cm (40 in.)	Increased
Women ≥ 88 cm (35 in.)	

\*Risk for type 2 diabetes, coronary heart disease, hypertension.

Adapted from: WHO (2000) *Obesity: Preventing and Managing the Global Epidemic: Report of a WHO Consultation on Obesity*.

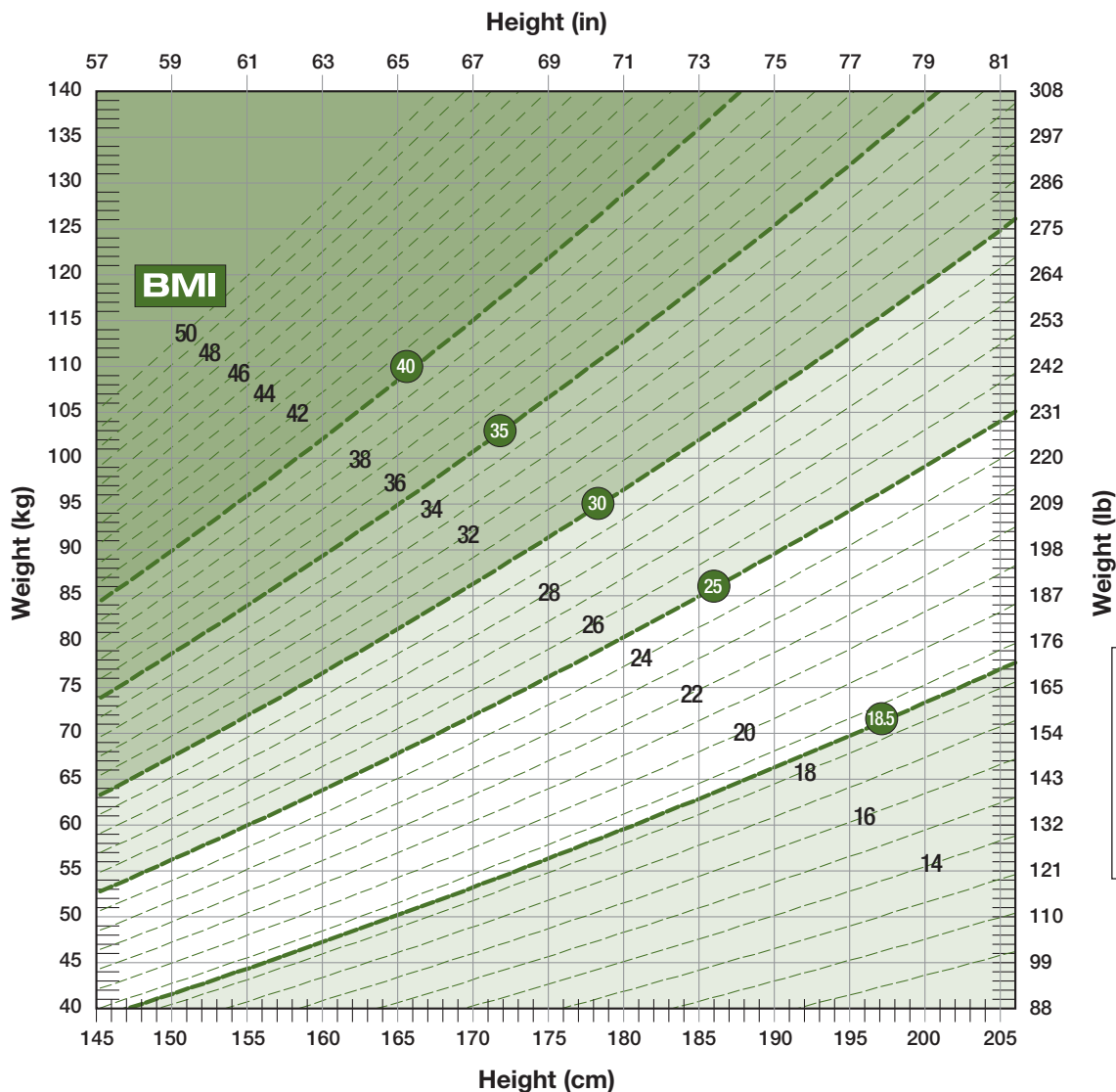
## Health risk classification using both BMI and WC

- WC measurement can be used for individuals with a BMI in the 18.5-34.9 range. For BMIs ≥ 35.0, WC measurement does not provide additional information regarding level of risk.

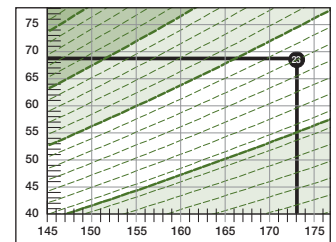
		BMI		
		NORMAL	OVERWEIGHT	OBESE Class 1
WC	< 102 cm (Males) < 88 cm (Females)	Least Risk	Increased Risk	High Risk
	≥ 102 cm (Males) ≥ 88 cm (Females)	Increased Risk	High Risk	Very High Risk

Adapted from: National Institutes of Health (1998) *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report*.

# - Body Mass Index (BMI) Nomogram -



For a quick determination of BMI ( $\text{kg}/\text{m}^2$ ), use a straight-edge to help locate the point on the chart where height (in or cm) and weight (lb or kg) intersect. **Read the number on the dashed line closest to this point.** For example, an individual who weighs 69 kg and is 173 cm tall has a BMI of approximately 23.



Refer to the table below to identify the level of health risk associated with a particular BMI.

## BMI Formula

**BMI can also be calculated using this formula**

$$\text{BMI} = \frac{\text{weight in kilograms}}{(\text{height in metres})^2}$$

Note: 1 inch = 2.54 centimetres and 1 pound = 0.45 kilograms

BMI	Risk of developing health problems
< 18.5	Increased
18.5 – 24.9	Least
25.0 – 29.9	Increased
30.0 – 34.9	High
35.0 – 39.9	Very high
≥ 40.0	Extremely high

*Note: For persons 65 years and older the 'normal' range may begin slightly above BMI 18.5 and extend into the 'overweight' range.*

Adapted from: WHO (2000) Obesity: Preventing and Managing the Global Epidemic: Report of a WHO Consultation on Obesity.

To clarify risk for each individual, other factors such as lifestyle habits, fitness level, and presence or absence of other health risk conditions also need to be considered.

The full report "Canadian Guidelines for Body Weight Classification in Adults", and other resources are available online at:

[www.healthcanada.ca/nutrition](http://www.healthcanada.ca/nutrition)

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ISBN 0-662-33496-5

Cat. No: H49-179/2003-1E

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