

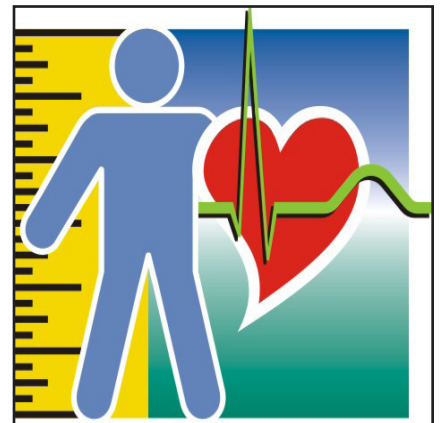
## Article

### Health Fact Sheet

# Body mass index of Canadian children and youth, 2009 to 2011

Health Statistics Division

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The following symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0 <sup>s</sup>	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
<sup>p</sup>	preliminary
<sup>r</sup>	revised
x	suppressed to meet the confidentiality requirements of the <i>Statistics Act</i>
<sup>E</sup>	use with caution
F	too unreliable to be published
*	significantly different from reference category ( $p < 0.05$ )

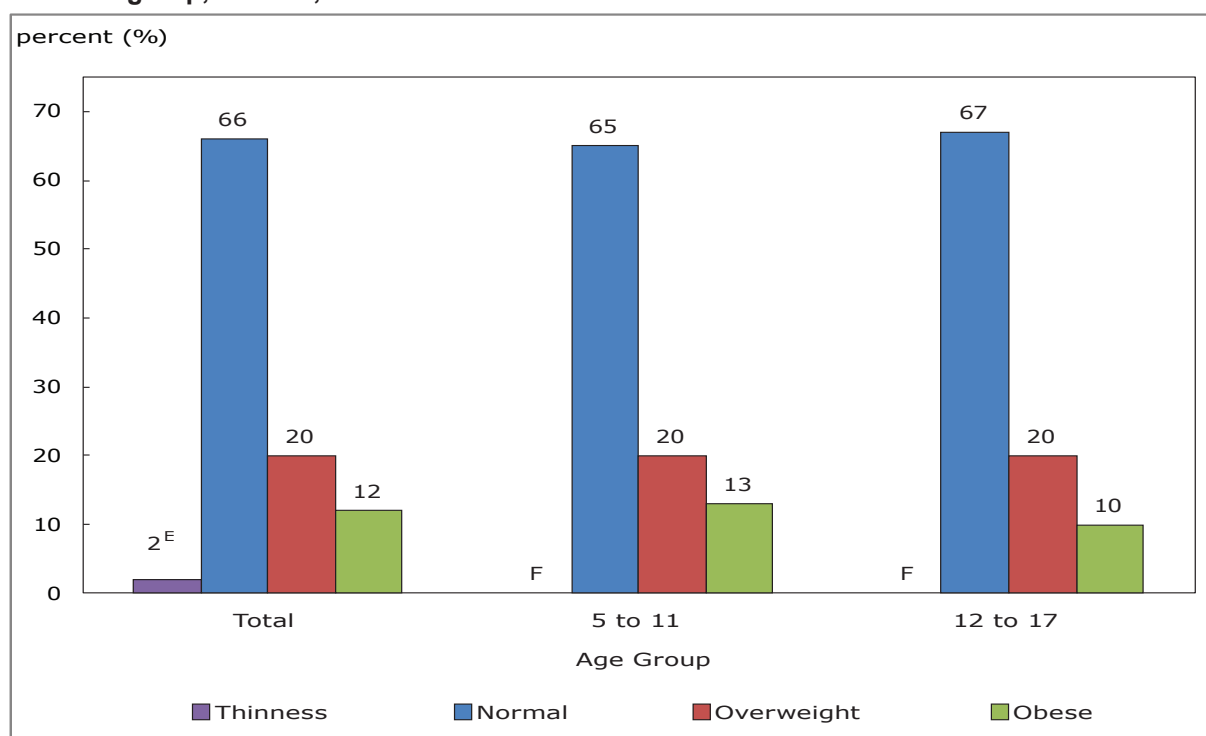


## Body mass index of Canadian children and youth, 2009 to 2011

Based on their measured body mass index (BMI), 32% of Canadian children and youth aged 5 to 17 years were overweight or obese in 2009 to 2011.

Excess weight in childhood has been linked to a number of health problems and is a major public health concern. Overweight and obese children have a higher risk of type 2 diabetes, hypertension, poor emotional health and diminished social well-being.<sup>1</sup> Overall, 32% of Canadian children aged 5 to 17 had a BMI that classifies them as overweight or obese, while 66% had a normal BMI. When both sexes were combined there was no difference in the likelihood of being overweight or obese between 5 to 11 year olds and 12 to 17 year olds (Chart 1).

**Chart 1** Distribution of household population aged 5 to 17, by body mass index norms<sup>†</sup> and age group, Canada, 2009 to 2011



<sup>E</sup> Use with caution (data with a coefficient of variation (CV) from 16.6% to 33.3%)

<sup>F</sup> Too unreliable to be published (data with a coefficient of variation (CV) greater than 33.3%; suppressed due to extreme sampling variability)

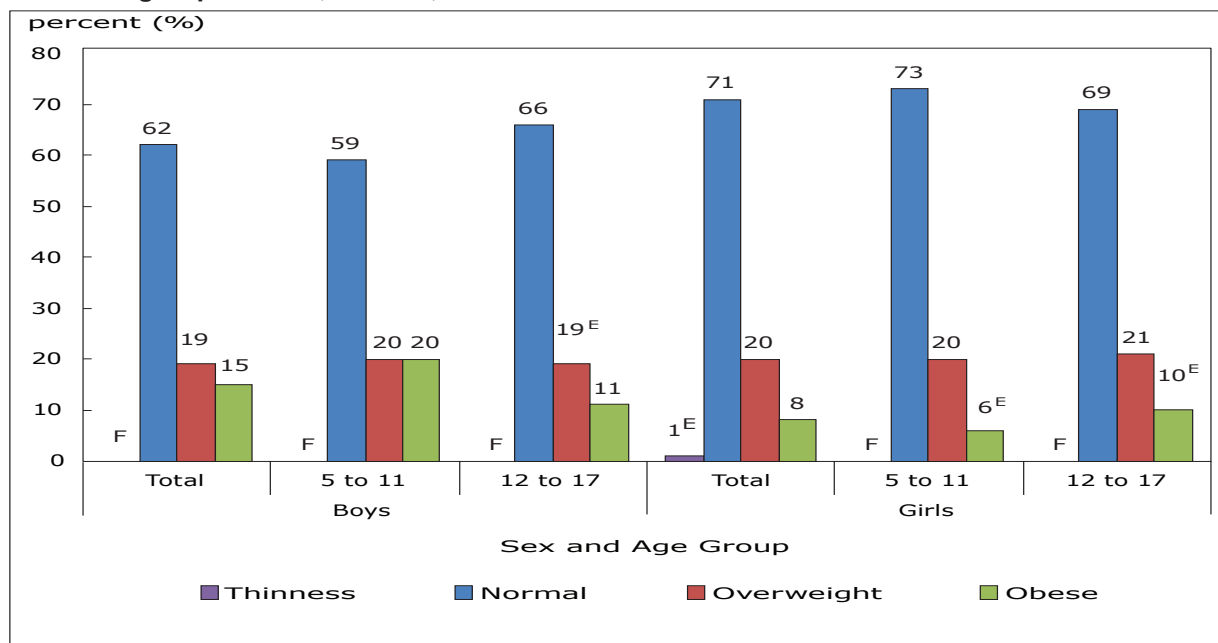
<sup>†</sup> BMI classification based on de Onis M. et al.<sup>2</sup>

**Source:** Canadian Health Measures Survey, 2009 to 2011. The CHMS collects health information on the Canadian household population aged 3 to 79.

There was no significant difference in the likelihood of being classified as overweight between sexes, however boys (15%) were significantly more likely to be obese than girls (8%). This appears to be a result of a higher prevalence of obesity in boys aged 5 to 11 (20%) than girls of the same age (6%) as older boys and girls show no significant difference in their rates of obesity. Boys aged 5 to 11 were also significantly more likely to be obese than boys aged 12 to 17 (11%) (Chart 2).



**Chart 2 Distribution of household population aged 5 to 17, by body mass index norms<sup>†</sup> and age group and sex, Canada, 2009 to 2011**



<sup>E</sup> Use with caution (data with a coefficient of variation (CV) from 16.6% to 33.3%)

<sup>F</sup> Too unreliable to be published (data with a coefficient of variation (CV) greater than 33.3%; suppressed due to extreme sampling variability)

<sup>†</sup> BMI classification based on de Onis M et al.<sup>2</sup>

**Source:** Canadian Health Measures Survey, 2009 to 2011. The CHMS collects health information on the Canadian household population aged 3 to 79.

## About body mass index

Body mass index (BMI) is the ratio of a person's weight in kilograms divided by their height squared in meters (kg/m<sup>2</sup>). BMI can be interpreted using the following classification table based on the World Health Organization's BMI-for-age Growth References for children and adolescents aged 5 to 17 years.<sup>2</sup> This approach is thought to provide more accurate estimates than previous methods used to estimate the prevalence of overweight and obesity in the Canadian population.<sup>3</sup>

This classification system uses the following cut-offs<sup>2</sup>:

Less than or equal to 2 standard deviations below the mean	Thinness
Greater than 2 standard deviations below the mean and less than or equal to 1 standard deviation above the mean	Normal weight
Greater than 1 standard deviation and less than or equal to 2 standard deviations above the mean	Overweight
Greater than 2 standard deviations above the mean	Obesity



## References

1. Roberts KC, Shields M, Groh MD, Aziz A, Gilbert JA. Overweight and obesity in children and adolescents: Results from the 2009 to 2011 Canadian Health Measures Survey. *Health Reports*. 2012;23(3):1-5.
2. de Onis M, Onyango AW, Borghi E, Siyam A, Nishida C, Siekmann J. Development of a WHO growth reference for school-aged children and adolescents. *Bulletin of the World Health Organization*. 2007;85(9):660-7.
3. Analyses of cycle 1 of the Canadian Health Measures Survey, including previous versions of this fact sheet, used different BMI cut-off points. As a result, the estimates are not comparable.

For more information on the Canadian Health Measures Survey, please contact Statistics Canada's National Contact Centre (toll-free 1-800-263-1136; 613-951-8116; [infostats@statcan.gc.ca](mailto:infostats@statcan.gc.ca)).