



In this newsletter, you will learn about what obesity is, what causes it, and its impact on Canadians.

# What is obesity?

Obesity is a **chronic disease** that can get worse over time—similar to conditions like high blood pressure or diabetes. It is known as a disease involving extra or abnormal body fat that affects your health, and is classified as having a BMI (body mass index) of  $\geq 30 \text{ kg/m}^2$ .<sup>1,2</sup>



**How do you calculate Body Mass Index (BMI)?**  
 $\text{BMI} = \text{Weight (kg)} / \text{Height (m)}^2$

Obesity is a complex disease linked to many serious complications, including type 2 diabetes, cardiovascular disease, sleep disorders, mental health issues, and some cancers.<sup>3</sup>

Around the world, medical associations like the World Health Organization have recognized obesity as a chronic disease



“Obesity is a chronic disease, prevalent in both developed and developing countries, and affecting children as well as adults.”  
 —The World Health Organization<sup>4</sup>

**Remember, obesity is a chronic disease, so managing obesity is a life-long process—just like any other chronic condition.**<sup>5</sup>

There is more to losing weight than just willpower...

Obesity has many contributing factors<sup>1,2</sup>

 <p><b>Environmental</b>                  Aspects of our surroundings can contribute to the development of obesity, including easy access to unhealthy or oversized food portions, and occupations that require being seated most of the time.<sup>6,7</sup></p>	 <p><b>Genetic</b>                  Some people are more likely to have obesity based on their genes and family history.<sup>6</sup></p>	 <p><b>Physiological</b>                  The imbalance of energy taken in (eating) compared to energy out (physical activity) can contribute to obesity.<sup>6</sup> Everyone's metabolism is different, meaning energy intake vs output can vary from person to person.<sup>8</sup></p>	 <p><b>Psychological</b>                  Stress, boredom, tiredness, and mental conditions, such as depression, may be linked to developing obesity.<sup>6,9-11</sup></p>	 <p><b>Socio-economic</b>                  Lower household incomes and people in lower education levels are more likely to develop obesity.<sup>12</sup></p>
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The number of Canadians with obesity is growing

**3x** 3 times more Canadians with obesity since 1985.<sup>13</sup>

 In 2016 and 2017, close to **two out of three** adult Canadians reported carrying excess weight.<sup>14</sup>

Obesity affects people of all ages. In fact, childhood obesity is on the rise and has **doubled** over the past 40 years. Since the amount of body fat changes as they grow, a child's BMI or weight category (underweight, healthy weight, overweight or obese) is determined by their weight, height, gender, and age.<sup>15</sup>

 As of 2016, approximately **1 in 3** Canadian children were considered to have excess weight. This can increase their risk of developing obesity and other conditions as they age.<sup>16,17</sup>

 By 2030, **>30%** of Canadian adults are expected to have obesity.<sup>18</sup>

Hear from someone living with obesity

“Obesity is a medical condition that gets between a person and the life they can lead if they are not carrying that extra weight around... it's no different than if a person has diabetes”

As the rate of obesity **continues** to rise in Canada, it is time to take action to help people understand that living with this complex disease is not their fault but requires proper treatment and care.<sup>19</sup>

**Want to learn more?**  
 For additional information about obesity and available resources:

 <p>Visit Obesity Canada</p>	 <p>Speak to your healthcare professional</p>	 <p>Contact your human resources department</p>
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 **We want to hear from you!**  
 Email us at [NNCICustomerCare@novonordisk.com](mailto:NNCICustomerCare@novonordisk.com) to share your ideas and public comments.

Next time, we'll find out more about weight bias, stigma, and discrimination and how they affect people living with obesity.

**References:** 1. Mayo Clinic. Obesity. 2015. Available at: <https://www.mayoclinic.org/diseases-conditions/obesity/symptoms-causes/syc-20375742>. Retrieved July 10, 2019. 2. Pi-Sunyer F, et al. Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults. *NHLBI*. 1998;98-4083. 3. Lau DCW, et al. 2006 Canadian clinical practice guidelines on the management and prevention of obesity in adults and children. *CMAJ*. 2007;176(8):1-117. 4. Allison DB, et al. Obesity as a disease: a white paper on evidence and arguments commissioned by the Council of the Obesity Society. *Obesity (Silver Spring)*. 2008;16(6):1161-1177. 5. Obesity Canada. What Causes Obesity. 2019. Available at: <https://obesitycanada.ca/understanding-obesity/>. Retrieved July 18, 2019. 6. NIH. What causes overweight and obesity? Available at: <https://www.nhlbi.nih.gov/health/health-topics/topics/obe/causes>. 7. Park J. Obesity on the Job. *Statistics Canada*. 2009:14-22. 8. McMurray R, et al. Examining Variations of Resting Metabolic Rate of Adults: A Public Health Perspective. *Med Sci Sports Exerc*. 2014;46(7):1352-1358. 9. Collins J. Behavioral And Psychological Factors In Obesity. *The Journal of Lancaster General Hospital*. 2009;4(4). 10. Vgontzas AN, et al. Obesity-related sleepiness and fatigue: the role of the stress system and cytokines. *Ann N Y Acad Sci*. 2006;1083:329-344. 11. Evans J, et al. Sleep laboratory test referrals in Canada: Sleep Apnea Rapid Response Survey. *Can Respir J*. 2014;21(1):4-10. 12. NIH. Clinical Guidelines On The Identification, Evaluation, And Treatment Of Overweight And Obesity In Adults. 1998. Available at: [http://www.nhlbi.nih.gov/guidelines/obesity/ob\\_gdlns.pdf](http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf). Retrieved May 22, 2019. 13. Twells LK, et al. Current and predicted prevalence of obesity in Canada: a trend analysis. *CMAJ Open*. 2014;2(1):E18-E26. 14. Statistics Canada. Obesity in Canadian adults, 2016 and 2017. Available at: <https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2018033-eng.pdf>. Retrieved May 22, 2019. 15. Dietitians of Canada. BMI for Children/Teens. 2019. Available at: <https://www.dietitians.ca/Your-Health/Assess-Yourself/Assess-Your-BMI/BMI-Children.aspx>. Retrieved July 31, 2019. 16. Rao DP, et al. Childhood overweight and obesity trends in Canada. *Health Promotion and Chronic Disease Prevention in Canada*. 2016;36(9):194-198. 17. Biro M, et al. Childhood Obesity and Adult Morbidities. *American Journal of Clinical Nutrition*. 2010;91:1499-1505. 18. Bancej C, et al. Trends and projections of obesity among Canadians. *Health Promotion and Chronic Disease Prevention in Canada*. 2015;35(7):109-111. 19. World Health Organization. Obesity and Overweight. 2018. Available at: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>. Retrieved July 30, 2019.