

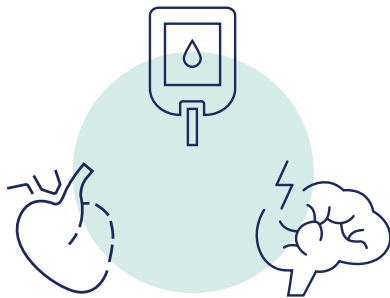
Childhood obesity



Childhood obesity is one of the most serious global public health challenges of the 21st century, affecting every country in the world.¹

What is childhood obesity?

Childhood obesity is a **chronic and multifactorial disease** that is influenced by physiological, psychological, environmental, socio-economic and genetic factors.^{2,3}



Obesity can affect children and adolescents across the world and can have a **lifelong impact**.⁴⁻⁶



75-80% of adolescents who live with obesity are likely to have obesity as an adult.⁷

Childhood obesity is associated with weight-related complications as listed below, and in some cases premature death in adulthood.^{4,8}



Type 2 diabetes

Early onset of obesity is likely to lead to **earlier onset of associated complications** as illustrated in the **rise of type 2 diabetes** diagnosed in young adults with obesity (aged under 40 years).⁹⁻¹¹



Cardiovascular disorders

Children and adolescents with obesity are more likely to have **multiple cardiovascular risk factors**, compared to those without obesity.¹² However, data showed that individuals who were overweight or had obesity in childhood but normalised their weight before adulthood had a cardiovascular risk profile similar to those with normal weight during childhood.¹³



Obstructive sleep apnoea

The prevalence of obstructive sleep apnoea among children and adolescents with obesity can be as high as **59%**.¹⁴



Psychological distress

Psychological distress is greater in children with obesity as they are often teased or bullied about their weight.¹⁵⁻¹⁷



Quality of life

Social problems lead to low QoL which can affect academic performance.^{18,19}

Prevalence of childhood obesity

The prevalence of paediatric obesity has risen **more than 10-fold** over the past **40 years**.¹



Globally, over 340 million children and adolescents aged 5–19 were overweight or had obesity in 2016.⁴ Childhood obesity has been recognised as a disease and we need to be aware of the seriousness of this health issue.^{20,21}

Addressing childhood obesity

There is a need for multiple approaches to help children with obesity with long-term weight management:^{22,23}



Lifestyle and behavioural therapy are an important part of any weight management effort.²³



In order to prevent overweight and obesity, the World Health Organization recommends providing general nutrition counselling to caregivers and families of infants and children aged less than 5 years.²⁴



For some, this is not sufficient. In these cases, there is a need for **other treatments**, yet current options are limited. Guidelines recommend to consider referral to an appropriate specialist for children who have overweight or obesity and have significant comorbidities or complex needs.^{8,25}

Obesity management guidelines recommend a **tailored plan** to meet individual needs, appropriate to the child or young person's age, gender, ethnicity, cultural background, economic and family circumstances, any special needs and the extent of their overweight or obesity. This should include helping them and their family to **set goals, monitor progress** against them and **provide feedback**.²⁶ Although a BMI decrease of 1.5 kg/m² may seem small, if maintained for the long term, children and adolescents with overweight or obesity may benefit by maintaining weight as they grow.³

For more information on obesity and resources, please visit rethinkobesity.global

Further information can be found in paediatric obesity management guidelines:

- Canadian Task Force on Preventive Health Care guideline 2015. <http://www.cmaj.ca/content/cmaj/187/6/411.full.pdf>
- Endocrine Society Clinical Practice Guideline on Paediatric Obesity 2017. <https://www.endocrine.org/clinical-practice-guidelines/pediatric-obesity>
- National Health and Medical Research Council Clinical Practice Guidelines 2013. <https://nhmrc.gov.au/file/4916/download?token=KYKNOAH8>
- NICE Obesity clinical guideline 2014. <https://www.nice.org.uk/guidance/cg189/resources/obesity-identification-assessment-and-management-pdf-35109821097925>
- WHO Primary Healthcare Guidelines 2017. <https://www.who.int/publications/i/item/9789241550123>

References: 1. World Health Organization. Taking Action on Childhood Obesity. Available at: <https://www.who.int/end-childhood-obesity/publications/taking-action-childhood-obesity-report/en/>. Last Accessed: February 2021. 2. Wright SM and Aronne LJ. Causes of obesity. *Abdom Imaging*. 2012; 37:730–732. 3. National Institutes of Health. Clinical Guidelines On The Identification, Evaluation, And Treatment Of Overweight And Obesity In Adults. Available at: http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf. Last accessed: February 2021. 4. World Health Organization. Obesity and Overweight Factsheet no. 311. Available at: <http://www.who.int/mediacentre/factsheets/fs311/en/>. Last accessed: February 2021. 5. Bray GA, Kim KK, Wilding JPH, et al. Obesity: a chronic relapsing progressive disease process: A position statement of the World Obesity Federation. *Obes Rev*. 2017; 18:715–723. 6. Abarca-Gómez L, Abden ZA, Hamid ZA, et al. Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: a pooled analysis of 2416 population-based measurement studies in 128.9 million children, adolescents, and adults. *The Lancet*. 2017; 390:2627–2642. 7. Lifshitz F. Obesity in children. *J Clin Res Pediatr Endocrinol*. 2008; 1:53–60. 8. Styne DM, Arslanian SA, Connor EL, et al. Pediatric Obesity-Assessment, Treatment, and Prevention: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab*. 2017; 102:709–757. 9. The Lancet. Type 2 diabetes: the urgent need to protect young people. *Lancet* (London, England) vol. 392,10162 (2018): 2325. doi:10.1016/S0140-6736(18)33015-00. 10. Song SH, Hardisty CA. Early-onset Type 2 diabetes mellitus: an increasing phenomenon of elevated cardiovascular risk. *Expert Rev Cardiovasc Ther*. 2008 Mar;6(3):315–22. doi: 10.1586/14779072.6.3.315. PMID: 18327993. 11. Twig G, Zucker I, Afek A, et al. Adolescent Obesity and Early-Onset Type 2 Diabetes. *Diabetes Care*. 2020; 43:1487–1495. doi:10.2337/dci19-1988. 12. Freedman DS, Mei Z, Srinivasan SR, et al. Cardiovascular risk factors and excess adiposity among overweight children and adolescents: the Bogalusa Heart Study. *J Pediatr*. 2007; 150:12–17 e12. 13. Juonala M, Magnussen C, Berenson G, et al. Childhood adiposity, adult adiposity, and cardiovascular risk factors. *N Engl J Med*. 2011; 365:1876–1885. doi:10.1056/NEJMoa1010112. 14. Verhulst SL, Van Gaal L, De Backer W, et al. The prevalence, anatomical correlates and treatment of sleep-disordered breathing in obese children and adolescents. *Sleep Med Rev*. 2008; 12:339–346. 15. American Academy of Pediatrics. About childhood obesity. Available at: <http://www.aap.org/obesity/about.html> Last accessed: February 2021. 16. Sahoo K, Sahoo B, Choudhury AK, et al. Childhood obesity: causes and consequences. *J Family Med Prim Care*. 2015; 4:187–192. 17. Schwimmer JB, Burwinkle TM and Varni JW. Health-related quality of life of severely obese children and adolescents. *JAMA*. 2003; 289:1813–1819. 18. Sawyer MG, Harchak T, Wake M, et al. Four-year prospective study of BMI and mental health problems in young children. *Pediatrics*. 2011; 128:677–684. 19. Strauss RS. Childhood obesity and self-esteem. *Pediatrics*. 2000; 105:e15. 20. AMA. Recognition of Obesity as a Disease H-440.842. Available at: <https://policysearch.ama-assn.org/policyfinder/detail/obesity?uri=%2FAMADoc%2FHOD.xml-0-3858.xml> Last accessed: February 2021. 21. World Health Organization. Childhood overweight and obesity. Available at: <http://www.who.int/dietphysicalactivity/childhood/en/> Last accessed: February 2021. 22. Cardel MI, Jastreboff AM and Kelly AS. Treatment of Adolescent Obesity in 2020. *JAMA*. 2019. 23. Matson KL and Fallon RM. Treatment of obesity in children and adolescents. *J Pediatr Pharmacol Ther*. 2012; 17:45–57. 24. World Health Organization. Guideline: assessing and managing children at primary health-care facilities to prevent overweight and obesity in the context of the double burden of malnutrition. Available at: <https://www.who.int/publications/i/item/9789241550123>. Last accessed: February 2021. 25. National Institute for Health and Care Excellence. Obesity: identification, assessment and management. Available at: <https://www.nice.org.uk/guidance/cg189/resources/obesity-identification-assessment-and-management-pdf-35109821097925>. Last accessed: February 2021. 26. National Institute for Health and Care Excellence. Weight management: lifestyle services for overweight or obese children and young people. Available at: <https://www.nice.org.uk/guidance/ph477/resources/weight-managementlifestyle-services-for-overweight-or-obese-children-and-young-people-pdf-1996362978757>. Last accessed: February 2021.