EClinicalMedicine

Switching the focus from weight to health: Canada's Adult Obesity Practice Guideline set a new standard for obesity management --Manuscript Draft--

Manuscript Number:	eclinm-D-20-00700
Article Type:	Commentary
Keywords:	Obesity
Corresponding Author:	Rachel Batterham UCL: University College London London, United Kingdom
First Author:	Rachel Batterham
Order of Authors:	Rachel Batterham
Manuscript Region of Origin:	UNITED KINGDOM
Abstract:	None

Switching the focus from weight to health: Canada's Adult Obesity Practice Guideline set a new standard for obesity management

Rachel L Batterham MBBS, PhD ¹⁻³

- ¹ UCL Centre for Obesity Research, Division of Medicine, Rayne Building, University College London, 5 University Street, WC1E 6JF, London, UK
- ² Bariatric Centre for Weight Management and Metabolic Surgery, University College London Hospital (UCLH) Bariatric Centre for Weight Management and Metabolic Surgery, UCLH, London, UK

Email: <u>r.batterham@ucl.ac.uk</u>

³ National Institute of Health Research, UCLH Biomedical Research Centre, London, UK

For the majority of human existence, food supply has been scarce; stored energy, in the form of adipose tissue, was therefore vital for survival. Consequently, multiple powerful biological mechanisms developed to drive eating when food was available. These once life-preserving mechanisms are now key contributors to the global obesity epidemic.

Adipose tissue is more than an energy reservoir; it is a complex metabolic organ secreting a myriad of adipocytokines with diverse roles, including regulating body weight, immune function and inflammation¹. Excess or dysfunctional adipose tissue is associated with many health conditions that lead to reduced quality of life and premature death. The World Health Organization define obesity as the excess accumulation of body fat that may adversely impact upon health² and in light of the association between BMI and obesity-related diseases at a population level recommend body mass index (BMI: weight/height²) is used to define overweight and obesity (BMI $\geq 25 \text{kg/m}^2$ and $>30 \text{kg/m}^2$ respectively). The over-arching approach for managing people with obesity has been focused on 'eat less and exercise more'. However, this approach has clearly been unsuccessful. The global prevalence of obesity continues to rise, nearly tripling between 1975 and 2016, with more than 2 billion people affected by overweight or obesity causing an estimated 2.8 million deaths per year².

Scientific advances over the last 20 years have markedly improved our understanding of the complexities of body weight regulation, resulting in the development of novel drugs and bariatric surgical procedures that target the body's own appetite regulating mechanisms³. Obesity results from a complex interplay of multiple genetic, metabolic, behavioural, socioeconomic and environmental factors that vary from person-to-person. Importantly, we know that weight loss triggers powerful compensatory biology mechanisms that drive weight regain and underlie the difficulties that people face in maintaining weight loss⁴. The scientific evidence is unequivocal that obesity is not a personal choice, which can be reversed easily by eating less and exercising more. Misconceptions that body weight is entirely under volitional control drive weight discrimination and stigma that cause morbidity and mortality, independent of BMI⁵. Several professional organisations (World Obesity Federation, European Association for the Study of Obesity, Canadian Medical Association, American Medical Association, Israel Medical Association and The Royal College of Physicians') and governments (Portugal, Netherlands, Italy and Germany) recognise obesity as a disease However, research shows that individuals can experience good health at different BMI levels, thus defining obesity based on BMI alone may under- or over-diagnose individuals with obesity⁶. Until now, these scientific and medical advances have not been translated into clinical practice.

The Canadian Adult Obesity Clinical Practice Guideline (CPG), was developed over three and a half years by individuals with lived experience of obesity, primary healthcare professionals, obesity experts and researchers. It provides the most extensive review of published evidence regarding obesity management to date and represents a step change in obesity care⁷. The guideline re-defines obesity as a prevalent, complex, progressive and relapsing chronic disease, characterised by abnormal or excessive body fat (adiposity) that *impairs health*. Importantly, this definition switches the focus from a person's BMI to how their weight impacts upon their health, changing the outcome focus from weight loss to patient-centered health outcomes. The CPG still recommends that BMI and waist circumference are used to screen for obesity but in conjunction with assessment of the impact of excess adiposity upon

physical and psychological health. For example, the Edmonton Obesity Staging System (EOSS) a 5-stage system of obesity classification based upon metabolic, physical and psychological parameters which is a better predictor of all-cause mortality than BMI or waist circumference alone and is to guide clinical decision-making⁸. Importantly, the CPG emphasizes that healthcare professionals need to move beyond the simplistic approach of 'eat less, move more' and acknowledge that obesity is a chronic complex disease requiring lifelong support.

The CPG provides an evidenced-based road map for managing people living with obesity (19 in-depth chapters published in full on https://obesitycanada.ca/guidelines/chapters/) together with 80 key recommendations⁷. Empirical studies over a 40-year period have evidenced that people living with obesity experience weight discrimination and stigma from healthcare professionals, which negatively impacts their health. The importance of eliminating weight bias in obesity management, practice and policy cannot be over emphasized and is the focus of the first chapter.

The CPG offers key practical advice regarding assessing and managing people living with obesity with empathy and compassion, including asking a person's permission before discussing their weight and using appropriate person-first language. It highlights the importance of identifying the root causes of each individual's weight gain, identifying their potential barriers to weight management and, in collaboration, agreeing realistic health goals that matter to them and a treatment plan. Importantly, the guideline states that people living with obesity should have access to evidence-informed interventions, including medical nutrition therapy, physical activity interventions, pharmacotherapy and surgery and includes dedicated chapters on each of these. The CPG includes a chapter on supporting healthy weight gain in pregnancy and a chapter on emerging technologies and virtual medicine in obesity management, the latter now being more pertinent given the challenges of the COVID-19 pandemic.

The CPG brings the approach to assessing and managing people living with obesity in-line with scientific and medical knowledge, by switching the focus from weight to health and recognising that obesity is a complex chronic disease that requires lifelong support. The CPG represents a turning point not only for obesity care in Canada but provides a blue-print for improving the health of people living with obesity globally.

Contributors

RLB authored the manuscript

Declaration of Competing Interests

RLB has received personal consultancy fees from Novo Nordisk, ViiV, Pfizer and Boehringer-Ingelheim, outside this work.

References

- 1. Chait A, den Hartigh LJ. Adipose Tissue Distribution, Inflammation and Its Metabolic Consequences, Including Diabetes and Cardiovascular Disease. *Front Cardiovasc Med* 2020; **7**: 22.
- 2. World Health Organization. Obesity and Overweight. Factsheet 311. 2020. Available at: http://www.who.int/ (accessed October 2020)
- 3. MacLean PS, Blundell JE, Mennella JA, Batterham RL. Biological control of appetite: A daunting complexity. *Obesity (Silver Spring)* 2017; **25 Suppl 1**: S8-S16.
- 4. Sumithran P, Prendergast LA, Delbridge E, et al. Long-term persistence of hormonal adaptations to weight loss. *N Engl J Med* 2011; **365**(17): 1597-604.
- 5. Rubino F, Puhl RM, Cummings DE, et al. Joint international consensus statement for ending stigma of obesity. *Nat Med* 2020; **26**(4): 485-97.
- 6. Garvey WT, Mechanick JI. Proposal for a Scientifically Correct and Medically Actionable Disease Classification System (ICD) for Obesity. *Obesity (Silver Spring)* 2020; **28**(3): 484-92.
- 7. Wharton S, Lau DCW, Vallis M, et al. Obesity in adults: a clinical practice guideline. *CMAJ* 2020; 192(31): E875-E91.
- 8. Sharma AM, Kushner RF. A proposed clinical staging system for obesity. Int J Obes (Lond) 2009; 33(3): 289-95.