

## EDITORIAL

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<p><b>To Cite:</b> Eliby D. How can we combat the obesity epidemic? JHD. 2022;7(1):490–493. <a href="https://doi.org/10.21853/JHD.2022.156">https://doi.org/10.21853/JHD.2022.156</a></p> <p><b>Corresponding Author:</b> Djamila Eliby Melbourne School of Psychological Sciences University of Melbourne Melbourne, Australia <a href="mailto:djamila.eliby@unimelb.edu.au">djamila.eliby@unimelb.edu.au</a></p> <p><b>Copyright:</b> ©2022 The Authors. Published by Archetype Health Pty Ltd. This is an open access article under the <a href="https://creativecommons.org/licenses/by-nc-nd/4.0/">CC BY-NC-ND 4.0 license</a>.</p>	<p><b>SUMMARY</b> Rising obesity rates globally present a significant health, economic, and societal burden. Examining the adverse effects of the obesogenic environment on dietary decision-making, and the personal motivators for behaviour change, may present as unique points of intervention for obesity management. The influence of the social and physical environment on eating behaviours also requires consideration in the context of both physical and mental health. An understanding of the extrinsic and intrinsic psychological factors motivating successful weight management is critical for practical translation into the healthcare context.</p> <p><b>Key Words</b> Obesity; dietary choice; behaviour change; health warnings; weight loss</p>
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## INTRODUCTION

The World Health Organization has reported that worldwide obesity rates have nearly tripled since 1975.<sup>1</sup> Along with the ensuing economic and societal burden, obesity is a significant risk factor for chronic conditions such as cardiovascular disease, diabetes, and some cancers.<sup>1</sup> Although underlying genetic, physical, and psychiatric predisposition can exacerbate weight gain, numerous studies have shown that poor dietary choices in the long-term can result in an energy surplus and ensuing health consequences. The most recent systematic analysis of the 2017 Global Burden of Disease Study<sup>2</sup> paints a sobering picture:

*Our findings show that suboptimal diet is responsible for more deaths than any other risks globally, including tobacco smoking, highlighting the urgent need for improving human diet across nations.*

*. . . unlike many other risk factors, dietary risks affected people regardless of age, sex, and sociodemographic development of their place of residence. Although the impact of individual dietary factors varied across countries, non-optimal intake of three dietary factors (whole grains, fruits, and sodium) accounted for more than 50% of deaths and 66% of disability-adjusted life-years attributable to diet.*

Suboptimal dietary choices are partially attributable to our food-rich environments wherein positive food cues tend to activate immediate and hedonic goals towards palatable foods at the expense of long-term health goals.<sup>3</sup> Such cues can disrupt our attentional and

appetitive responses, illustrated by the powerful influence that food advertising can have over the type and quantity of foods consumed.<sup>4</sup> Moreover, obese individuals are potentially more vulnerable to these effects due a heightened food cue reactivity.<sup>5</sup>

Additionally, the expected taste of foods is easier to process and more readily integrated into the decision-making circuit compared to perceived health attributes, even amongst individuals of a normative weight. Support for this comes from eye- and mouse-tracking studies which have demonstrated that only the taste attributes of foods captured automatic visual attention,<sup>6</sup> and that these were processed more rapidly in the choice process compared to any health considerations.<sup>7</sup> Overcoming these innate, stimulus-driven responses remains a major challenge for the maintenance of dietary restraint in an increasingly obesogenic environment.

With influence from the highly effective plain packaging laws enforced in the Australian tobacco industry, there is emerging research demonstrating the effects of product health warning labels at the time a dietary decision is made. One study showed that brief exposure to health warnings (ie, concerning various negative health consequences of excess energy intake) could prime healthier eating behaviours in normal-weight individuals via a propensity towards healthy snack items and a decreased tendency towards tastier but unhealthier options.<sup>8</sup> It was also shown that the warning labels reduced automatic, appetitive responses towards palatable food cues as measured by several neural correlates of selective attention and cue-induced craving.

Further investigation used a neural decoding approach to build on this study, demonstrating that health and taste attributes were represented in brain activity within the first second of cognitive processing both when participants were explicitly and tacitly instructed to reflect on them.<sup>9</sup> This holds promise for interventions such as health warning labels that must be able to rapidly prime an implicit health goal before a dietary decision is made. However, it is pertinent to extend this research to other populations given differing physiological and behavioural responses to food cues as a function of body weight. Furthermore, the impact of such warning labels on food choices in real-world settings and over multiple time points is warranted, given the potential for habituation effects over time.

A parallel stream of research shows that people find personal appearance to be an important source of motivation when it comes to weight loss, particularly among younger adults.<sup>10</sup> Understanding the source of this motivation draws from the principles of social cognitive theory which puts forward the idea that self-regulation is guided by observations of behaviour models as portrayed in the media.<sup>11</sup> Exposure to unrealistic ideals of body appearance (eg, celebrities or models) can intensify the self-discrepancy between one's actual self and one's ideal self, which is related to negative outcomes. However,

proponents of the regulatory focus theory posit that self-resembling avatars can counteract the negative effects of a self-discrepant view of one's body,<sup>12</sup> which highlights the potential for such personalised digital tools in obesity prevention.

Existing interventions have used computer-generated future self-images to make long-term weight goals more immediately tangible as reflected by a significant weight loss in participants who only received general lifestyle recommendations alongside their future self-image.<sup>13</sup> This suggests that seeing a visual representation of one's future body shape could serve as a personalised motivator to adopt healthy behaviours, such as eating more healthily and engaging in regular exercise. These interventions show promise, though further study is needed to establish the extent of their effectiveness.

Aside from this, factors such as our physical and social environment exert a powerful influence over our eating behaviours. For instance, the average working adult consumes about one-third of their daily calorie intake at the workplace and may face barriers to healthy eating due to factors related to the job such as a pressured working environment and related work stress, limited access to healthy foods, boredom, and social influences.<sup>14</sup> With the COVID-19 pandemic forcing a huge proportion of the workforce into isolation, these effects may extend to the home with detrimental effects on physical activity and healthy eating behaviours.

However, there are active steps individuals can take to change our relationship with the direct environment and with our relationship to food. Fostering a supportive social network that normalises healthier food choices, and altering elements of both the home and working environment (ie, increasing the availability of healthy foods, improving means to prepare meals, reducing access to discretionary options) are steps in the right direction.

Finally, an emphasis on the positive effects of healthy eating for mental wellbeing cannot be overemphasised in relation to the rise in prevalence of mental disorders due to COVID-19. The bidirectional associations found between obesity and depression, and between depression and diet quality (irrespective of body weight),<sup>15</sup> increasingly places nutrition research at the nexus of physical and mental health. Prospective trials may benefit from the emerging research suggesting that eating healthily not only helps to lose weight but could also help to improve our mental wellbeing.

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#### ACKNOWLEDGEMENTS

None

#### PEER REVIEW

Not commissioned. Externally peer reviewed.

#### CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

#### FUNDING

None

#### ETHICS COMMITTEE APPROVAL

None

