

Editorial

Diabetes: A Modern Health Crisis and the Need for Integrated Care

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E D I T O R I A L

Diabetes, a term that captures the dual epidemic of diabetes and obesity, represents one of the most pressing health challenges of the 21st century. The convergence of these conditions exacerbates their impacts, leading to severe complications and an increased burden on healthcare systems.¹ Addressing diabetes requires an integrated care approach that combines clinical, behavioural, and public health strategies to effectively manage and prevent these intertwined conditions.

The prevalence of diabetes and obesity has been rising at an alarming rate globally. According to the World Health Organization, more than 890 million adults were obese in 2022, while the International Diabetes Federation reported that approximately 537 million adults were living with diabetes in 2021.^{2,3} The coexistence of these conditions, known as diabetes, creates a vicious cycle where obesity increases the risk of developing type 2 diabetes, and diabetes, in turn, exacerbates weight gain and associated metabolic dysfunctions.

The pathophysiological mechanisms linking diabetes and obesity are complex and multifaceted. Obesity leads to insulin resistance, a hallmark of type 2 diabetes, through several pathways including inflammation, lipotoxicity, and hormonal imbalances. Excess adipose tissue, particularly visceral fat, releases pro-inflammatory cytokines and free fatty acids that interfere with insulin signalling pathways, resulting in hyperglycaemia. Furthermore, the adipose tissue itself undergoes dysfunction, contributing to the metabolic derangements seen in diabetes.⁴

Diabetes significantly increases the risk of developing cardiovascular diseases, non-alcoholic fatty liver disease, and various forms of cancer.⁵ Moreover, individuals with diabetes often experience a reduced quality of life due to complications such as neuropathy, retinopathy, and nephropathy. The psychological burden is also substantial, with higher rates of depression and anxiety reported among affected individuals.⁶

The management of diabetes poses unique challenges due to the need for simultaneous control of both diabetes and obesity. Traditional treatment strategies often address these conditions separately, leading to suboptimal outcomes. Medications for diabetes may promote weight

gain, while weight-loss interventions might complicate glycaemic control. Therefore, an integrated approach is essential to manage diabetes effectively.

An integrated care model for diabetes involves a multidisciplinary team that includes endocrinologists, dietitians, exercise physiologists, behavioural therapists, and primary care physicians. This team works collaboratively to develop personalised treatment plans that address both weight management and glycaemic control.

- 1. Lifestyle Modifications:** Lifestyle interventions remain the cornerstone of diabetes management. These include dietary modifications, increased physical activity, and behavioural changes aimed at achieving and maintaining weight loss.⁷ Evidence suggests that even modest weight loss can significantly improve insulin sensitivity and glycaemic control.
- 2. Pharmacotherapy:** Medications that address both diabetes and obesity are increasingly being developed. For instance, GLP-1 receptor agonists, such as liraglutide and semaglutide, have shown efficacy in reducing body weight and improving glycaemic control simultaneously.⁸ These medications can be particularly useful in achieving the dual goals of diabetes management.
- 3. Bariatric Surgery:** For individuals with severe obesity and uncontrolled diabetes, bariatric surgery is an effective intervention. Procedures such as gastric bypass and sleeve gastrectomy have been shown to result in significant and sustained weight loss, as well as remission of diabetes in many patients.⁹ However, surgical interventions require careful patient selection and long-term follow-up.
- 4. Behavioural Therapy:** Addressing the psychological aspects of diabetes is crucial for long-term success. Cognitive-behavioural therapy and motivational interviewing can help patients in the development of healthier eating habits, increased physical activity, and adherence to treatment plans.¹⁰

Beyond individual management, public health strategies play a critical role in combating the diabetes epidemic. Policies that promote healthy eating, physical activity, and weight management at the population level are essential. This includes initiatives such as taxation on sugary beverages, food labelling regulations, and the creation of environments that encourage physical activity.¹¹

Diabetes represents a significant modern health crisis

that requires a comprehensive and integrated approach to management and prevention. By combining lifestyle interventions, pharmacotherapy, surgical options, and behavioural therapy within a multidisciplinary framework, healthcare providers can effectively address the dual challenges of diabetes and obesity. Additionally, public health policies must support these efforts to create a healthier environment that reduces the incidence and impact of diabetes.

Conflict of Interest: None

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