

Ozempic and thin line between therapy and dependence

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Madam, Semaglutide (Ozempic), a GLP-1 receptor agonist initially developed for type 2 diabetes, has revolutionised obesity management. However, its increasing off-label use for cosmetic weight loss—particularly among non-diabetic individuals—has sparked ethical and clinical debate. Social media and celebrity endorsements are fuelling this trend, raising concerns about its misuse and long-term effects that are not yet fully understood.

GLP-1 receptor agonists, such as semaglutide, exenatide, and liraglutide, enhance glucose-dependent insulin secretion and promote satiety by acting on both central nervous system pathways and peripheral mechanisms. Recent neuroimaging and animal studies suggest that these agents also modulate the reward circuitry of the brain, particularly the mesolimbic dopamine system.¹ This dual role has generated interest in their possible utility in addiction treatment, including alcohol and nicotine dependence.² While promising, this opens a critical counterpoint: the potential for psychological reliance on the drug itself, especially when used in vulnerable populations, such as those with eating disorders or body dysmorphia.

Adverse effects such as anxiety, altered mood, and obsessive weight monitoring have been reported anecdotally, yet remain under-investigated.³ Moreover, sudden discontinuation often leads to rapid weight regain, raising the question: are patients becoming reliant on semaglutide not just physiologically but behaviourally? In Pakistan, where mental health conditions remain underdiagnosed and body image pressures are rising, the implications are profound. However, there is a glaring absence of local data exploring these behavioural patterns,

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psychological effects, or misuse trends of GLP-1 agonists.

There is an urgent need to examine semaglutide beyond its metabolic outcomes. Interdisciplinary research must explore its neuropsychiatric impact, especially among non-diabetic users.⁴ Regulatory frameworks must also be updated to address its off-label use, ensure ethical prescribing, and prevent unmonitored distribution, particularly through online or private sources.⁵ Educating both physicians and patients on realistic expectations and the risk of dependency-like behaviours is equally crucial.

Ozempic may be a game-changer—but like all potent agents, it demands vigilance. As we embrace its benefits, we must also anticipate and address its unintended consequences.

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