Use of GLP-1 receptor agonists to treat substance and alcohol use disorders is promising, but premature, say researchers

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Semaglutide, a glucagon-like peptide-1 receptor agonist (GLP-1RA) originally formulated to treat diabetes, has gained traction as the latest
and greatest weight loss drug. Among the hype, anecdotal observations from patients and providers alike have suggested the drug may also play a role in treating alcohol use disorder and other substance use disorders.

Christian Hendershot, Ph.D., associate professor of psychiatry and director of the Clinical and Translational Addiction Research Program in the Department of Psychiatry and Bowles Center for Alcohol Studies, UNC School of Medicine, co-penned a commentary in *Nature Medicine* addressing the recent trend. Although evidence from *preclinical studies* has shown that GLP-1RAs can reduce the rewarding properties of addictive drugs, more studies are needed to verify their efficacy and safety in patients who use alcohol and other drugs.

"The practice of evidence-based medicine is critically important, and although the data on semaglutide are promising, it is premature to prescribe off-label semaglutide to these patients," said the authors.

Randomized controlled trials (RCT)s are specifically needed to understand the safety, tolerability, and efficacy of GLP-1RAs. Both rigorous and thorough, RCTs will help researchers understand the impact the drug has on co-morbid conditions (such as *metabolic disorders*) and other medication interactions (such as stimulants). Additionally, RCTs will also assist researchers in identifying patient subgroups that are more or less tolerable to GLP-1RAs.

Hendershot is leading two randomized *clinical trials* on semaglutide for *substance use*, "Semaglutide for Alcohol Use Disorder" and "Effects of Semaglutide on Nicotine Intake," which are currently underway at UNC.

In the meantime, providers are advised to prescribe US Food and Drug agency (FDA)-approved medications for alcohol use disorder, such as acamprosate and naltrexone, or offer patients other effective and
available psychosocial, behavioral, and pharmacological treatments.

"Although we believe that off-label use of GLP-1RAs for alcohol use disorder is premature, the increased attention to this topic may have the benefit of increasing awareness of alcohol use disorder, its impact on health, and the existence and availability of approved medications to treat alcohol use disorder," said the authors.

**More information:** Lorenzo Leggio et al, GLP-1 receptor agonists are promising but unproven treatments for alcohol and substance use disorders, *Nature Medicine* (2023). [DOI: 10.1038/s41591-023-02634-8](https://doi.org/10.1038/s41591-023-02634-8)

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