

Study finds semaglutide associated with reduction in incidence and recurrence of alcohol-use disorder

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A new study by researchers at the Case Western Reserve University School of Medicine reveals that the popular diabetes and weight-loss

drugs Wegovy and Ozempic are linked to reduced incidence and recurrence of alcohol abuse or dependence.

The team's findings, recently published in the journal [*Nature Communications*](#), may suggest a possible new treatment for [excessive alcohol use](#)—including alcohol-use disorder (AUD), a [health condition](#) that causes about 178,000 deaths in the United States each year, according to the Centers for Disease Control.

To date, the U.S. Food and Drug Administration (FDA) has approved only three medications to treat AUD.

The [active ingredient](#) in Wegovy and Ozempic is semaglutide, which belongs to a class of medications known as glucagon-like peptide-1 receptor agonists (GLP-1). GLP-1 helps regulate blood sugar in type 2 diabetes and reduces appetite.

The researchers examined electronic health records of nearly 84,000 patients with obesity. They found those treated with semaglutide, compared to those treated with other anti-obesity medications, showed a 50% to 56% decrease for both the initiation and re-occurrence of alcohol-use disorder in the year following.

"This is very promising news in that we may have a new therapeutic method to treat AUD," said Rong Xu, a professor of biomedical informatics at the School of Medicine and the study's lead researcher.

Xu, also director of the medical school's Center for AI in Drug Discovery, was joined by medical school co-authors Nathan Berger, the Hanna-Payne Professor of Experimental Medicine, and Pamela Davis, the Arline H. and Curtis F. Garvin Research Professor. Nora D. Volkow, director of the National Institute for Drug Abuse, also co-authored the study.

"We collected real-world evidence in a manner similar to our previous two studies reported earlier this year," Berger said. "In [January](#) we showed that semaglutide is associated with a decrease in [suicidal thoughts](#), and in [March](#), we demonstrated that semaglutide is also associated with a reduction in both new diagnoses and recurrence of cannabis-use disorder."

Similar findings were replicated when the team examined [electronic health records](#) for about 600,000 patients with type 2 diabetes. Again, they found consistent reductions in alcohol-use disorder diagnoses among those treated with semaglutide.

"While the findings are promising and provide preliminary evidence of the potential benefit of semaglutide in AUD in real-world populations," Davis said, "further randomized clinical trials are needed to support its use clinically for AUD."

More information: William Wang et al, Associations of semaglutide with incidence and recurrence of alcohol use disorder in real-world population, *Nature Communications* (2024). [DOI: 10.1038/s41467-024-48780-6](https://doi.org/10.1038/s41467-024-48780-6)

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