

Study links popular weight-loss drugs to stomach paralysis, other serious gastrointestinal conditions

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They're being hailed as an effective way to lose weight, but diabetes drugs like Ozempic may come with a heightened risk of severe

gastrointestinal problems.

That's according to new research from the University of British Columbia showing that medications known as GLP-1 agonists—which includes brands like Wegovy, Ozempic, Rybelsus and Saxenda—are associated with an increased risk of serious medical conditions including stomach paralysis, pancreatitis and [bowel obstruction](#).

While previous studies highlighted some of these risks in patients with diabetes, this is the first large, population-level study to examine adverse gastrointestinal events in non-diabetic patients using the drugs specifically for [weight](#) loss. The findings were published in [JAMA](#).

"Given the wide use of these drugs, these adverse events, although rare, must be considered by patients thinking about using them for weight loss," said first author Mohit Sodhi, a graduate of UBC's experimental medicine program and fourth year UBC medical student studying the adverse events of commonly prescribed medications.

"The risk calculus will differ depending on whether a patient is using these drugs for diabetes, obesity or just general weight loss. People who are otherwise healthy may be less willing to accept these potentially serious adverse events."

GLP-1 agonists were originally developed for managing type 2 diabetes, but exploded in popularity over the past decade as an off-label weight-loss tool, reaching approximately 40 million prescriptions in the U.S. in 2022.

It was only in 2021 that some forms of the medications were approved as a treatment for obesity. However, randomized [clinical trials](#) examining the efficacy of the medications for weight loss were not designed to capture rare gastrointestinal events due to their small sample sizes and

short follow-up periods.

"There have been anecdotal reports of some patients using these drugs for weight loss and then presenting with repeated episodes of nausea and vomiting secondary to a condition referred to as gastroparesis," said senior author Dr. Mahyar Etminan, an epidemiologist and associate professor in the department of ophthalmology and visual sciences at the UBC faculty of medicine. "But until now, there hasn't been any data from large epidemiologic studies."

To help fill this knowledge gap, UBC researchers examined health insurance claim records for approximately 16 million U.S. patients and looked at people prescribed either semaglutide or liraglutide, two main GLP-1 agonists, between 2006 and 2020. They included patients with a recent history of obesity, and excluded those with diabetes or who had been prescribed another anti-diabetic [drug](#).

The researchers analyzed the records to see how many patients developed one of four gastrointestinal conditions, and compared that rate to patients using another [weight loss](#) drug, bupropion-naltrexone. Compared to bupropion-naltrexone, GLP-1 agonists were associated with a:

- **9.09 times higher risk of pancreatitis**, or inflammation of the pancreas, which can cause severe abdominal pain and, in some cases, require hospitalization and surgery.
- **4.22 times higher risk of bowel obstruction**, whereby food is prevented from passing through the small or large intestine, resulting in symptoms like cramping, bloating, nausea and vomiting. Depending on the severity, surgery may be required.
- **3.67 times higher risk of gastroparesis**, or stomach paralysis, which limits the passage of food from the stomach to the [small intestine](#) and results in symptoms like vomiting, nausea and

abdominal pain.

The study also found a higher incidence of biliary disease, a group of conditions affecting the gall bladder, but the difference was not found to be statistically significant.

The researchers say that although the events are rare, with millions around the world using the drugs, it could still lead to hundreds of thousands of people experiencing these conditions.

"These drugs are becoming increasingly accessible, and it is concerning that, in some cases, people can simply go online and order these kinds of medications when they may not have a full understanding of what could potentially happen. This goes directly against the mantra of informed consent," said Sodhi.

In the meantime, the researchers hope that regulatory agencies and drug makers will consider updating the warning labels for their products, which currently don't include the risk of gastroparesis.

"This is critical information for patients to know so they can seek timely medical attention and avoid serious consequences," said Sodhi.

More information: Risk of Gastrointestinal Adverse Events and Glucagon-Like Peptide-1 Receptor Agonists for Weight Loss, *Journal of the American Medical Association* (2023). [DOI: 10.1001/jama.2023.19574](https://doi.org/10.1001/jama.2023.19574)

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