

# The Effects of Ozempic and Other Weight Loss Injections

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## STORY AT-A-GLANCE

- › Semaglutide – the active ingredient in not only Ozempic and Wegovy but also Saxenda and Victoza – is touted as a wonder drug for weight loss but comes with serious side effects
- › Research from the University of British Columbia revealed the drugs are associated with an increased risk of stomach paralysis, pancreatitis and bowel obstruction
- › The Therapeutic Goods Administration, Australia’s regulatory authority for drugs, is investigating at least three deaths linked to Ozempic and other weight loss injections
- › New understandings of how Ozempic works suggest its mechanisms may have more to do with your brain than your gut
- › Drugs like Ozempic closely mimic the effects of Akkermansia, a key bacteria strain in your microbiome; naturally increasing Akkermansia may have weight loss effects

They’re described as wonder drugs for weight loss, but semaglutide – sold under the name Ozempic as a diabetes drug and, in a higher dose, under the name Wegovy as a weight loss drug – and other weight loss injections have a dark side.

Semaglutide – the active ingredient in not only Ozempic and Wegovy but also Saxenda and Victoza – touts weight loss rates of 14.9% among adults with obesity,<sup>1</sup> and social media is filled with success stories of dramatic weight loss from the drugs.

Dr. Katherine Samaras, professor of medicine and endocrinologist at St. Vincent's Hospital in Darlinghurst, Australia, told 60 Minutes that Ozempic is game-changing and transformative, going so far as to compare it to the introduction of penicillin.<sup>2</sup>

But around the world, families are mourning the loss of loved ones who took the drugs and paid the ultimate price. Others are dealing with debilitating side effects, some of them permanent.

## **Ozempic Slows the Passage of Food Through Your Stomach**

**Semaglutide** is a glucagon-like peptide 1 receptor agonists (GLP-1RAs). As a peptide hormone, GLP-1 is, among other things, part of a group of incretin hormones, which are released when you eat to regulate insulin, along with many other functions.<sup>3</sup>

Along with affecting insulin, GLP-1 may influence the nervous system, leading to an appetite-reducing response. However, one of their mechanisms is delayed gastric emptying, meaning they radically slow the passage of food through your stomach. This makes you feel fuller longer, but if food moves too slowly, serious consequences result.

Delayed gastric emptying is the hallmark of gastroparesis, or stomach paralysis — a known side effect of the drugs. Nausea and vomiting are common symptoms of gastroparesis that occur so frequently among Ozempic users that social media influencers are now advising people on how to manage these and other side effects.<sup>4</sup>

Due to the delayed stomach emptying that occurs with semaglutide, the American Society of Anesthesiologists (ASA) released a warning for those taking the drugs before elective surgery.<sup>5</sup>

They suggest stopping this and other GLP-1 receptor agonists before the procedure, as they could increase the risk of complications associated with anesthesia — namely that you could regurgitate food that's still sitting in your stomach, even if you've fasted appropriately.

# Weight Loss Injections Linked to Serious Gastrointestinal Conditions

Research from the University of British Columbia revealed that GLP-1 agonists are associated with an increased risk of several serious health conditions, including stomach paralysis, pancreatitis and bowel obstruction.<sup>6</sup> Compared to those using the weight loss drugs bupropion-naltrexone, those taking GLP-1 agonists like Ozempic had a:<sup>7</sup>

- 9.09 times higher risk of pancreatitis
- 4.22 times higher risk of bowel obstruction
- 3.67 times higher risk of gastroparesis

"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 study author Mohit Sodhi.<sup>8</sup>

## Ozempic Linked to Fatal Intestinal Blockages

These trendy weight loss medications cause other significant risks as well and may even cause a potentially fatal intestinal obstruction. Diabetic patients who use the drugs have a 4.5 times higher risk of intestinal obstruction than those using other medications. A study of 25,617 people also found use of GLP-1 agonists increases the rate of intestinal obstruction by 3.5-fold.<sup>9</sup>

The drugs were also found to increase the length and weight of the small intestine in animal studies, while in humans they may increase intestinal length and villus height; villi are the hairlike projections inside the small intestine that help absorb nutrients. Writing in *Acta Pharmaceutica Sinica B*, researchers explained how this could seriously affect intestinal function, increasing obstruction risk:<sup>10</sup>

*"Because GLP-1RAs [GLP-1 receptor agonists] could cause continuous increases in the intestinal length and villus height, the small intestine may become as inelastic and fibrotic as a loose spring, leading to long-term upper intestinal obstruction ..."*

60 Minutes covered the story of Trish Webster, a woman from Australia who died from an intestinal blockage after using Ozempic and Saxenda for five months. She experienced diarrhea, constant nausea and vomiting while taking the drugs before eventually collapsing. Her cause of death is listed as "acute gastrointestinal illness."<sup>11</sup>

The Therapeutic Goods Administration, Australia's regulatory authority for therapeutic goods, including drugs and medical devices, is investigating at least three deaths linked to Ozempic and other weight loss injections. Tim Ramsay died just 19 days after using Saxenda, while a 39-year-old woman also died after taking Ozempic injections to lose weight.<sup>12</sup>

In other cases, those who have taken the injections experience life-changing side effects making them wish they never touched the drugs. Joanne Knight had been taking Ozempic for about two years when she became unable to swallow food. The reason? Her stomach was full of food. Violent vomiting and constant nausea followed, along with a diagnosis of severe gastroparesis.<sup>13</sup>

"I wish I never touched it. I wish I'd never heard of it in my life," Knight told CNN. "This medicine made my life hell. So much hell. It has cost me money. It cost me a lot of stress; it cost me days and nights and trips with my family. It's cost me a lot, and it's not worth it. The price is too high."<sup>14</sup>

## **Ozempic May Work via Your Brain**

New understandings of how Ozempic works suggest its mechanisms may have more to do with your brain than your gut. The Atlantic reported:<sup>15</sup>

*"In recent years, studies have shown that GLP-1 from the gut breaks down quickly and has little effect on our appetites. But the hormone and its receptors*

*are naturally present in many parts of the brain too. These brain receptors are likely the reason the GLP-1 drugs can curb the desire to eat – but also, anecdotally, curb other desires as well. The weight-loss drugs are ultimately drugs for the brain.*

*Obesity medications differ in a key way from the natural molecule they're meant to mimic: They last a lot longer. GLP-1 released in the gut has a half-life of just minutes in the bloodstream, whereas semaglutide and tirzepatide [Eli Lilly's obesity drug] have half-lives measured in days. This is by design. Both drugs were specifically engineered to resist degradation, so that they need to be injected only once a week.*

*... The medications are also given at levels much higher than natural GLP-1 ever reaches in the bloodstream ... By indiscriminately flooding the body with long-lasting molecules, the injections likely allow engineered GLP-1 drugs to penetrate parts of the body that the natural gut hormone cannot – namely, deep in the brain."*

Semaglutide's brain effects may explain why many people taking the drugs also lose the desire to engage in behaviors like drinking alcohol, shopping and smoking. Research published in *The Journal of Clinical Investigation Insight* found semaglutide reduces alcohol drinking in rodents and modulates central gamma-aminobutyric acid (GABA) neurotransmission.<sup>16</sup>

"Growing evidence indicates that the glucagon-like peptide-1 (GLP-1) system is involved in the neurobiology of addictive behaviors," the researchers explained.<sup>17</sup> While the drugs are now being looked at for treatment of alcohol use disorder and other conditions, the consequences of allowing such drugs to tinker with the brain are unknown.

## **Ozempic Mimics Akkermansia**

*Akkermansia muciniphila* is a bacterium that's a keystone strain in your microbiome. Having higher levels of *Akkermansia* is associated with lower weight, while lower levels

of Akkermansia are linked to obesity. Interestingly enough, drugs like Ozempic closely mimic the effects of Akkermansia. In my interview with Dr. Colleen Cutcliffe, a microbiome scientist and the CEO and cofounder of Pendulum, a company that creates microbiome products, she explains:

*"What happens in your body naturally, if you've got all the right microbes, is that you eat a meal, your microbiome metabolizes that food and generates postbiotics [excretions from beneficial bacteria] like butyrate [and] a protein called P9. Some of these postbiotics then signal your body to produce GLP-1.*

*All that signaling is happening from the microbiome directly to the L cells. And so you eat a meal, your microbiome digests them, these postbiotics get created and tell your L cells, 'Hey, go produce GLP-1,' and then you get a spike in GLP-1 in your body.*

*GLP-1 stimulates your body too. It says, 'We've got to metabolize the sugar in the bloodstream, release insulin.' It also signals to your brain, 'We just ate, we're full, we don't need to eat again.' After a period of time, GLP-1 goes down – until the next time you eat a meal. Then it spikes again.*

*So that's the natural way of things. There are only two strains that have been published, to date, that have been shown to be able to stimulate L cells to produce GLP-1, and one of them is Akkermansia. It actually secretes three different [postbiotics] that stimulate L cells to produce GLP-1.*

*So, what's been found is that if you are low or missing Akkermansia, your body is not naturally producing as much GLP-1 as it's supposed to be. By giving people back Akkermansia, you can now have these physiological benefits of reducing A1C and lowering blood glucose spikes.*

*To be clear, the natural GLP-1 you produce is different from the drug. The drug is a mimic. It's an analog. It looks like GLP-1. It gets injected into the bloodstream directly, which means that rather than the natural spike after you*

*eat [followed by a decline], the [drug] is keeping those levels really high all the time.*

*So, this signaling of 'we got to metabolize sugar in the blood and we're full, we just ate' is going on constantly. That's why people experience these incredible, amazing overnight effects because that's how those drugs are working. But if you actually have the right microbes, you can generate your body's natural GLP-1 and get back into this natural cycle."*

## **A Natural Ozempic?**

Certain foods will naturally feed beneficial microbes that may help with weight loss naturally. Polyphenol-containing fruits, vegetables and berries, for example, have been shown to increase Akkermansia levels. I suspect a high-quality Akkermansia probiotic supplement may significantly accelerate the process, but the good news is the abundance of Akkermansia in your gut can easily be enhanced through dietary interventions, such as:<sup>18</sup>

- **Supplementing with probiotics and prebiotics that promote Akkermansia growth in the gut** – Specific examples include Lactobacillus rhamnosus, Bifidobacterium animalis, Lactococcus lactis (probiotics) and oral fructo-oligosaccharides (oligofructose or FOS, a common prebiotic).
- **Eating more fiber** – The short-chain fatty acids that form from fiber as it ferments in your intestines feed beneficial bacteria, including Akkermansia.
- **Increasing FODMAP's in your diet** – FODMAP refers to "fermentable oligo-, di- and mono-saccharides and polyols," which include fructose (found in fresh fruit) and lactose (found in milk and other dairy products).
- **Boosting intake of dietary polyphenols** – Black tea, red wine grape extract, cranberry extract and Concord grape, specifically, have all been shown to significantly promote growth of Akkermansia.

- **Avoiding alcohol and high-fat diets** — Several studies have shown a correlation between high-fat diets (60% fat or higher) and significantly reduced Akkermansia colonization. Ditto for alcohol consumption.

Berberine is another compound that's described as "[nature's Ozempic](#)." It's a chemical found in plants such as goldenseal and European barberry.<sup>19</sup> Research shows it helps regulate blood sugar and may help with weight loss.

A 2022 systematic review of the literature demonstrated that supplementing with berberine had a positive effect on lipid profile, fasting blood glucose, obesity parameters and systolic blood pressure.<sup>20</sup>

In a 2022 paper in *Frontiers in Cellular and Infection Microbiology*, the researchers wrote, "Studies have shown that BBR [berberine] can alleviate the pathological conditions of metabolic disorders, and the mechanism is related to the regulation of gut microbiota ... meanwhile, the structure and function of gut microbiota also changed after intervention by berberine."<sup>21</sup>

Berberine may also delay the amount of time it takes for food to pass through your small intestine,<sup>22</sup> and preferentially nourish microbes that produce beneficial short-chain fatty acids known to have many health benefits.<sup>23</sup> A comprehensive approach is necessary to lose weight and maintain it naturally, however, and this involves dietary changes.

Collectively, consuming too much [linoleic acid \(LA\)](#) is the primary factor driving the overweight and obesity epidemics. LA is the most common omega-6 fat found in seed oils like soybean, cottonseed, sunflower, rapeseed (canola), corn and safflower. Reducing your intake of seed oils and all processed foods is a powerful way to support a healthy weight. Ideally, consider cutting LA down to below 5 grams per day.

## Sources and References

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