

GLP-1 Drugs: The Good, The Bad and The Promising

By Kelly Dorfman, MS, LND

“I lost five pounds but put it back on again,” sighed Latissa.* This was a typical update on the 56-year-old’s decades-long battle with her weight. The only thing she permanently seemed to have lost was her self-esteem.

“In more bad news,” she continued dejectedly, “my blood pressure is up.” This was not a surprise given her high-pressure job with frequent cross-country travel, prediabetes markers, and forty-five extra pounds. Her doctor recommended one of the GLP-1 drugs, but she declined.

“I can do this without medication,” she vowed, jaw clenched. “This time I will stick with the plan.”

Now I sighed. The last thing either of us wanted was another conversation about what it takes for her to lose weight. Latissa knew the drill. The problem was sticking to a strict low-carbohydrate diet for many months. She had successfully lost weight many times, only to have it pile back on when a business trip or family demands arose.

As gently as I could, I observed, “You can lose weight without drugs, but for some very good reasons you are not making enough progress to stop early heart disease markers. Maybe it is time to stop banging your head against the wall and consider how GLP-1 drugs could change our conversation about weight loss.”

Latissa looked skeptical. “I read they have a lot of side effects, and I don’t want to be dependent on them.” Latissa’s hesitation is understandable. These medications have moved quickly from relatively niche diabetes treatments to cultural lightning rods almost overnight. The public conversation has been loud, emotional, and often polarized. Before forming strong opinions, it helps to step back and understand what GLP-1 is — and why these drugs are reshaping the way we think about weight, metabolism, and appetite.

The Game Changers

GLP-1 is short for Glucagon-Like Peptide-1, a hormone made in our guts and brains that stabilizes blood sugar by increasing insulin sensitivity and satiety. A peptide means this hormone is a small protein. Natural substances, like hormones found in the body, cannot be patented, so GLP-1 drugs are laboratory-made substances that mimic what the body makes but are 1,000 to 10,000 times stronger and active over the course of a week rather than minutes.

GLP-1 was originally identified in lizards, but the first, weaker versions of the resulting drugs (approved in 2005) did not cause weight loss. It was not until 2017, with the approval of Ozempic (semaglutide injected once weekly) for treating type 2 diabetes and Wegovy (also semaglutide injected weekly) for treating obesity and heart disease, that patients noticed the unexpected weight-loss side effect.

Semaglutide slows digestion so the body releases less glucose after eating and significantly reduces appetite by targeting the place in the brainstem that processes hunger and fullness signals. Unfortunately, targeting these receptor sites also causes

nausea and vomiting. About one-third of patients stop semaglutide due to significant gastrointestinal (and other) side effects.

The next level of GLP-1 drugs to enter the market, Mounjaro and Zepbound (tirzepatide injected weekly), were designed to address gut complaints. They are the same drug, both produced by Eli Lilly, with two names to target separate markets (diabetes and obesity/heart disease). Tirzepatide contains GLP-1 plus a second factor called GIP (Gastric Inhibitory Polypeptide). GIP ameliorates nausea and slightly increases weight loss (according to studies).

The Price of Popularity

About one in three Americans has tried a GLP-1 drug, and about one in eight is currently using one. Celebrities like Oprah Winfrey, Serena Williams, and Amy Schumer are all fans. If everyone on Medicare who could benefit from them took them, they would bankrupt the system. Insurance companies sometimes limit how long they will pay, even though these drugs are designed to be taken for life and there is no evidence that the weight-loss effects can be maintained without them.

High demand and short supply drove the price up to over \$1,000 a month, the highest in the world. Massive public pressure and compounding pharmacies creating less expensive alternatives reduced the cost, but most people without insurance coverage still cannot afford the treatment.

An oral (and cheaper) version of Wegovy is now available. Early studies suggest patients did not lose as much weight (about 11% compared to 25% for the injectable versions), but there are many more GLP-1 medicines in the pipeline. Liraglutide (in mid-stage trials) reduced decline in cognitive function and the amount of amyloid plaque in the brain (a marker associated with Alzheimer's disease). When Alzheimer's disease is called type 3 diabetes, it is because of the known connections with metabolic and blood sugar control issues.

The Revelations

Among the many developments, two stood out the most for me. The first was a 2023 study following more than 17,000 people over four years that found there was no correlation between the amount of weight lost and how semaglutide protected against strokes, heart disease, and heart attacks. The reduction in vascular events occurred before any significant weight loss.

This is evidence that inflammation from overeating is far more dangerous than we have previously acknowledged. Eating more than the body needs is stressful and potentially even more problematic than carrying around extra weight.

The second revelation is how the biological effects of GLP-1 drugs help us better understand satiety, food noise, and how reward-driven behavior varies between people. Our harsh judgment of those struggling with weight is cringe-worthy in retrospect. We now know weight loss may be extremely difficult for people with certain biological tendencies. Some may be resistant to their own GLP-1 (like insulin resistance). Others

may not be able to lose weight unless their calorie intake is so low that they are always hungry.

While we acknowledge that food stimulates the same reward centers as gambling, sex, and drinking, we categorize alcoholism and sex/gambling addictions as diseases and overeating as a choice. It turns out that for some people, “food noise” can feel like the persistent call of the bottle or the compulsion to gamble.

An Inconvenient Truth

When people endeavor to lose weight, few know that the price of maintaining weight loss may be constant hunger. The body nudges back to its set point, and for every twenty pounds lost, calorie intake must be reduced permanently, even if only slightly, to maintain the lower weight. The result for some is hunger, as the body attempts to return to “normal” rather than the starvation program you adopted.

Failure to live with hunger could explain why only about 10% can successfully lose weight long term. Obesity levels have tripled between 1975 and 2022. We have been heralding the importance of discipline and self-care, shaming and blaming while Americans get heavier by the year.

There is no doubt that an ultra-processed diet shares a big chunk of the blame for this trend. Ultra-processed foods mess with satiety centers, and the percentage of calories absorbed is much higher than with whole food, but it looks like cheese puffs are here to stay. And they are particularly problematic for those with food noise.

The Good

1. An analysis of 464 outcomes from over 5,000 articles (including 123 meta-analyses) found improvement in endocrine, metabolic, cardiovascular, renal, and respiratory conditions, as well as cognitive improvement. In some populations, there was reduced mortality from all causes.
2. Scientists at Washington University School of Medicine evaluated health outcomes of more than 2 million diabetic veterans taking GLP-1 drugs. They reported widespread cognitive and behavioral health effects. There was decreased suicidal ideation, self-harm, bulimia, and serious mental health disorders such as schizophrenia.
3. Side effects can be managed effectively in most people with practitioner support. Professional support is key to optimizing benefits from these drugs. With fewer calories consumed, it becomes harder to meet nutritional requirements. Even the cleanest diet can have deficiencies, especially in fiber (to prevent constipation) and protein (to reduce possible muscle loss). People eating less of a poor diet may still reap benefits but are much more likely to have significant side effects.
4. Food noise goes away in most people. Patients report to me (often with tears in their eyes) that this has changed their lives and they never want to go back.

5. Working with prescribers to use the lowest effective dose, rather than pushing to maximum dosage and rapid weight loss (as the drug manufacturers recommend), may lead to slower weight loss but fewer side effects.
 6. Weight-bearing exercise helps prevent muscle loss and can be done inexpensively.
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The Bad

1. Nobody knows how these medicines will affect users long term. The same analysis that reported widespread improvements also found increased risk of diabetic retinopathy, ketoacidosis, hypoglycemia, and gastrointestinal problems, including diarrhea, constipation, nausea, and vomiting. Many patients stop taking the medication due to side effects.
Other reported side effects include pancreatitis, gastroparesis, thyroid nodules, kidney problems, hair loss, and muscle loss.
 2. Weight returned to pre-treatment levels within 1.7 years after stopping the medication, and health problems came roaring back even sooner, according to a University of Oxford study.
 3. Obesity rates differ across racial and ethnic groups in the U.S. CDC data show that Black and Hispanic adults have higher rates of obesity than White and Asian adults, differences shaped by longstanding inequities in access to healthcare, safe environments, and healthy food. Research also suggests that these same communities are less likely to be prescribed or use GLP-1 medications, even when medical need is similar, due to factors like insurance coverage and access to care.
 4. They are still expensive, and in February 2026, the FDA announced its intent to clamp down on compounding pharmacies using non-FDA-approved GLP-1 pharmaceutical ingredients. Compounders cannot claim they are using the same semaglutide or tirzepatide as the FDA-approved versions or that the compounded drugs are proven to produce results.
 5. For unknown reasons, about 11% of people do not lose weight on them, and some patients report they have lost their appetite completely.
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The Promising

1. Eli Lilly is developing a triple receptor agonist (retatrutide). A December 2025 study reported even more dramatic weight loss than semaglutide and tirzepatide (30% in 68 weeks).
2. Low-dose treatment may one day be helpful for autoimmune disease.
3. Because of how the drugs affect reward centers in the mesolimbic system, sex, gambling, shopping, and other addictions may respond to low-dose treatment. These studies are underway.

4. More oral versions are on the way to market. This could allow patients to control dosage better or explore low-dose treatment with their prescriber.

A Little Support Goes a Long Way

Reluctantly, Latissa agreed to try tirzepatide if she could stay on the lowest dose and did not have side effects. Her prescriber agreed, and the night before she took the first dose, she called so we could discuss her reservations and confirm the supplement program we adjusted to address potential side effects, given her medical history.

With shaking hands, she administered the first dose and never looked back. A month later she was a few pounds lighter in weight but many pounds lighter emotionally.

“My weight has been so upsetting for so long. Now I am not always thinking and worrying about what to eat and how much. Losing and gaining. It was making me crazy,” she reported, shaking her head. “I feel better already, and I am fine taking it slow. Mainly, I feel free.”

Latissa was lucky. Her insurance covers the medicine, and she got the support needed to use it successfully. This is not everyone’s story by a long shot, but it could be the story of more people. That would require more support for users beyond what physicians typically have time to provide, more availability and support for low-income and medically vulnerable communities, ways to individualize dosages, and lower costs in general.

On the darker side, individual reports of bizarre side effects, such as loss of interest in almost everything, hint at complex interrelationships between rewarding and pleasurable behaviors, addiction, and motivation. GLP-1 medications may be the cure for food noise for some people, but as more people try them for a wide range of addictions, we may discover they rewire the brain in ways we don’t like.

Stay tuned. This story is just getting interesting.

** Not her real name*

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