

What Happens When You Stop Taking GLP-1 Medications for Weight Loss?

GLP-1 medications for weight loss, such as semaglutide, Wegovy®, and Ozempic®, have surged in popularity recently. They are highly effective and can have benefits beyond weight loss, including improving blood glucose and reducing cardiovascular disease risk. However, many people eventually discontinue these medications due to side effects, cost, or other reasons.

Stopping weight loss medications results in hormone and metabolic changes that cause increased appetite, weight gain, and, sometimes, elevated blood sugar, putting many people right back where they started. Making changes to support metabolic health can help mitigate the effects of discontinuing weight loss medications.

Here's a look at how GLP-1 medications work and essential steps to avoid backsliding if the drug is discontinued.

How Do GLP-1 Medications Work for Weight Loss?

GLP-1 medications, also called GLP-1 receptor agonists, mimic the action of the GLP-1 (glucagon-like-peptide) hormone, which is naturally produced in your digestive tract. When you eat carbohydrates or sugar, GLP-1 triggers your pancreas to release insulin and suppress glucagon. Keeping these two hormones balanced is critical for a healthy blood sugar response. Thus, GLP-1 medications effectively improve blood glucose levels in people with diabetes.

In addition to its action on blood sugar, the GLP-1 hormone acts on your brain to reduce feelings of hunger. It also helps you feel fuller for longer by slowing the rate at which your stomach empties food into your intestines. It's these actions that make GLP-1 medications effective for weight loss.

The amount of weight loss varies depending on which medication you use, the dose, and any diet and lifestyle changes you make while taking the medication. Studies show that with long-term use (68 weeks), the average weight loss is between 5 and 15% of total body weight.¹

Common Reasons for Stopping Weight Loss Medications

GLP-1 medications are considered long-term treatments, but many people discontinue them for various reasons. More than one-third of users stop taking the medications by 12 months.² People are more likely to stop them if they use the medication for obesity only without diabetes.²

People may choose to stop taking weight loss medications because:

- Side effects such as nausea, vomiting, and diarrhea are commonly reported, especially when starting the medication. More serious side effects are rare but can include pancreatitis or gallbladder disease.
- Administration and storage requirements can be a barrier. GLP-1 medications are usually taken weekly or daily by injection instead of a pill. Unopened injection pens must be refrigerated, which may not always be convenient.
- The high cost of these medications is often a barrier to long-term use.
- Reaching a weight loss plateau may lead people to believe the medication is no longer working.

What Happens Once You Stop Taking GLP-1 Medications?

Without the effects of GLP-1, people report that their appetite returns to normal and their cravings return. Those who previously had a hard time managing emotional eating, cravings, or portions will likely have the same issues once they stop the medication. As such, most people regain their weight after stopping GLP-1 medication.

Studies suggest that about two-thirds of lost weight is regained within the first year after stopping the medication.^{3,4} In addition, the cardiometabolic benefits of the drug, such as improved blood sugar and reduced heart disease risk, can also be lost if insulin resistance returns.

However, as with any weight gain, GLP-1 weight rebound isn't instant or guaranteed. Weight gain happens over time, so knowing what to expect and taking steps to avoid rebound weight gain can help minimize it.

Working with your healthcare provider to taper the medication helps. In addition, studies show that people who incorporate lifestyle measures while on the medications have an easier time maintaining weight loss. For example, research shows that people who participated in a regular exercise program while taking GLP-1 medication were more likely to maintain weight loss and a healthier body composition after stopping it.⁵

How to Support Natural GLP-1 Production

As mentioned, GLP-1 is a naturally occurring hormone produced in the intestines and released in response to food intake. Decreased production or secretion of this hormone can contribute to obesity.

However, certain foods, nutrients, and lifestyle habits can improve natural GLP-1 production and function in the body.

- Protein stimulates GLP-1 production, which may be why it is known to be satiating.⁵ Eating lean protein with each meal and snack helps slow stomach emptying, keeping you feeling fuller for longer and curbing cravings. It also helps maintain muscle mass or rebuild muscle lost during weight loss, which can support metabolism as you age. Good sources include fish, poultry, lean meat, eggs, tofu, beans/legumes, and Greek yogurt.
- Dietary fiber is essential for GLP-1 hormone function. Gut microbes ferment indigestible fiber to produce short-chain fatty acids (SCFAs). These SCFAs then stimulate GLP-1 secretion.^{5,6} Fiber also slows digestion, supporting weight loss and healthy glucose and cholesterol levels. Aim for 25-35 grams of fiber daily from fruits, vegetables, oats, wheat bran, legumes, nuts, and seeds.
- Unsaturated fats have been shown to stimulate GLP-1 secretion and increase levels in the blood.⁴ Olive oil, nuts, seeds, and avocados are rich in unsaturated fats. Adding a small serving of these to your meals and snacks can help you fill up faster and hold you longer.
- Scientists are studying the effects of bitter flavor compounds in foods and botanicals on GLP-1 levels. Receptor cells throughout the digestive tract can sense these bitter compounds. Animal studies suggest these compounds stimulate the release of various gut hormones that control appetite and satiety, including GLP-1.⁷ Foods such as cruciferous vegetables (broccoli, kale, and cauliflower), buckwheat, bitter melon, and cocoa powder, as well as botanical supplements such as [berberine](#) can provide these bitter compounds.
- Studies show that 90 minutes of moderately intense exercise increases GLP-1 levels.⁸ Exercising after a meal, such as walking after dinner, can be especially helpful.
- GLP-1 is sensitive to fluctuations in circadian rhythm, the body's natural clock that regulates sleep and awake patterns. A study on healthy men found that just one occasion of sleep disruption delayed the release and affected levels of GLP-1 the next day.⁹ Travel and time zone changes, shift work, late-night exposure to blue light

from televisions, tablets, or phones, and certain medications can disrupt circadian rhythm and impact GLP-1 levels.

Good sleep habits include establishing a regular sleep-wake schedule, turning off blue light-emitting devices before bedtime, keeping your bedroom cool, dark, and comfortable, and using a [sleep support supplement](#) as needed. These can improve sleep quality which helps promote a healthy weight.

- Finally, supporting the gut microbiome also promotes healthy GLP-1 levels. Research on GLP-1 medications attributes their benefits for weight loss and metabolic health to their ability to alter the gut microbiome favorably.⁹ People with obesity, insulin resistance, and diabetes often exhibit reduced microbial diversity in their gut. However, GLP-1 medication use improves microbial diversity, supporting natural GLP-1 production and helping to regulate appetite, fullness, and digestion through the gut-brain axis.¹⁰

Diet and lifestyle strategies can also induce favorable changes in gut microbes. Eating a whole food, high fiber diet, engaging in regular exercise, getting adequate sleep each night, and consuming beneficial bacteria from fermented foods and a [broad spectrum probiotic](#) are natural ways to support gut health. These habits, when sustained, can help promote a diverse, rich microbiota, which, in turn, provides metabolic benefits.

GLP-1 medications are very effective for many people. However, they have drawbacks and may not be a suitable long-term weight loss option for everyone. Whether you are trying to achieve a healthy weight naturally or hoping to avoid rebound weight gain after stopping the medication, don't overlook these strategies to support your body's natural GLP-1 production.

References

1. Hamed K, Alosaimi MN, Ali BA, et al. Glucagon-like peptide-1 (GLP-1) receptor agonists: exploring their impact on diabetes, obesity, and cardiovascular health through a comprehensive literature review. *Cureus*. 2024 Sep;16(9). <https://pmc.ncbi.nlm.nih.gov/articles/PMC11444311/>
2. Do D, Lee T, Peasah SK, Good CB, Inneh A, Patel U. GLP-1 Receptor agonist discontinuation among patients with obesity and/or type 2 diabetes. *JAMA Network Open*. 2024 May 1;7(5):e2413172-. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/28192563>.
3. Jensen SB, Blond MB, Sandsdal RM, et al. Healthy weight loss maintenance with exercise, GLP-1 receptor agonist, or both combined followed by one year without treatment: a post-treatment analysis of a randomised placebo-controlled trial. *E Clin Med*. 2024 Mar 1;69. <https://www.sciencedirect.com/science/article/pii/S2589537024000543>
4. Wilding JP, Batterham RL, Davies M, et al. Weight regain and cardiometabolic effects after withdrawal of semaglutide: the STEP 1 trial extension. *Diabetes, Obes Metab*. 2022 Aug;24(8):1553-64. <https://pmc.ncbi.nlm.nih.gov/articles/PMC9542252/>
5. Bodnaruc AM, Prud'homme D, Blanchet R, Giroux I. Nutritional modulation of endogenous glucagon-like peptide-1 secretion: a review. *Nutr Metab*. 2016 Dec;13:1-6. <https://pmc.ncbi.nlm.nih.gov/articles/PMC5148911/>
6. Mansuy-Aubert V, Ravussin Y. Short chain fatty acids: the messengers from down below. *Front Neurosci*. 2023 Jul 6;17:1197759. <https://www.frontiersin.org/journals/neuroscience/articles/10.3389/fnins.2023.1197759/full>
7. Rezaie P, Bitarafan V, Horowitz M, Feinle-Bisset C. Effects of bitter substances on GI function, energy intake and glycaemia-do preclinical findings translate to outcomes in humans?. *Nutrients*. 2021 Apr 16;13(4):1317. <https://pmc.ncbi.nlm.nih.gov/articles/PMC8072924/#sec3-nutrients-13-01317>
8. Fujiwara Y, Eguchi S, Murayama H, Takahashi Y, Toda M, Imai K, Tsuda K. Relationship between diet/exercise and pharmacotherapy to enhance the GLP-1 levels in type 2 diabetes. *Endocrinol Diabetes Metab*. 2019 Jul;2(3):e00068. <https://pmc.ncbi.nlm.nih.gov/articles/PMC6613229/>
9. Liu C, Liu Y, Xin Y, Wang Y. Circadian secretion rhythm of GLP-1 and its influencing factors. *Front Endocrinol*. 2022 Dec 2;13:991397.

<https://www.frontiersin.org/journals/endocrinology/articles/10.3389/fendo.2022.991397/full>

10. Fleishman, C. New weight loss drugs & gut microbiota. International Probiotics Association. Published December 31, 2023. Accessed November 7, 2024. <https://internationalprobiotics.org/home/new-weight-loss-drugs-gut-microbiota/>.