

GLP-1 Agonists

(liraglutide, semaglutide tirzepatide)

The GLP-1 agonists treat for diabetes and obesity. Specifically, they are approved for people with a body mass index (BMI) over 30 (or over 27 if they have an obesity-related health condition like high blood pressure or cholesterol). They also reduce weight gain on psychiatric medications and help prevent diabetes on antipsychotics.

These medications work by mimicking a hormone (GLP) that goes up when we eat. They are also active in the brain, and studies suggest they may help cognition and reduce addictive behaviors like alcohol and nicotine use and binge eating.

These medications are expensive and may not be approved by insurers. Unfortunately, we are not able to authorize the medication because it is not FDA approved in our area of specialty (psychiatry). One of them, liraglutide, is available as a generic (but only in low doses).

The GLP-1 agonists should be used with diet and exercise. Read more about a simple diet/exercise plan that improves depression and concentration at:

chrisaikenmd.com/antidepressantdiet

How to take it?

These medications are injected. The needle is very small and for most people it is painless. The medications come in a prefilled injection pen. Ask your pharmacist which type of needles are best to use with your pen.

Inject under the skin. Do not self-inject this medicine if you do not fully understand how to give the injection and properly dispose of used needles and injection pens.

You may take them at any time of the day, with or without a meal.

Storing unopened injection pens: Store in the refrigerator. Do not store near the refrigerator's cooling element.

Storing after your first use: You may keep "in-use" injection pens in the refrigerator or at room temperature. Protect the pens from moisture, heat, and sunlight. Use within 30 days. Remove the needle before storing an injection pen, and keep the cap on the pen when not in use.

Throw away used needles in a puncture-proof container (ask your pharmacist where you can get one and how to dispose of it). Keep this container out of the reach of children and pets.

Do not use medication if it has changed colors or has particles in it. Call your doctor for a new prescription. Do not freeze the med, and throw away the medication if it has become frozen.

Key Points

1. Helps weight loss, diabetes, addictions
2. Inject beneath the skin
3. Prevent side effects: Exercise, eat more protein, and don't over-eat

Warnings

You should not use GLP-1's if you are allergic to them, or if you have multiple endocrine neoplasia type 2 (tumors in your glands), a personal or family history of medullary thyroid cancer, insulin-dependent diabetes, or if you are in a state of diabetic ketoacidosis.

Before using GLP-1 agonists, tell us if you have stomach problems causing slow digestion, kidney or liver disease, or if you have ever had pancreatitis or gallstones.

You should not breast-feed while using them and their safety is unknown in pregnancy.

Never share an injection pen with another person, as that can spread diseases like hepatitis or HIV.

Side effects

The GLP-1 agonists can cause muscle wasting. To prevent this, eat more protein and exercise while taking them.

The main side effects are due to slowing of the gastrointestinal tract: upset stomach, nausea, vomiting, diarrhea, and constipation. Avoid overeating to prevent these problems.

Medical risks include pancreatitis and gallstones (biliary disease). In animals, high doses caused tumors of the thyroid but this effect has not occurred in humans. People with a history of medullary thyroid cancer or a personal or family history of multiple endocrine neoplasia 2 should not take them.

Get emergency medical help if you have any of these signs of an allergic reaction: hives; difficult

breathing; swelling of your face, lips, tongue, or throat.

Less serious side effects may include:

Headache, dizziness, cold symptoms such as stuffy nose, sneezing, sinus pain, sore throat; back pain; tired feeling; mild skin rash; or redness or rash where the medicine was injected.

What if I miss a dose?

Use the missed dose as soon as you remember. Skip the missed dose if it is almost time for your next scheduled dose. Do not use extra medicine to make up the missed dose.

Drug Interactions

GLP-1 agonists may make it harder for your body to absorb other medications.

—Chris Aiken, MD, updated 6/23/2025

GLP-1 Agonist	Typical Weight loss	Typical Dose
Liraglutide (Victoza, Saxenda)	5-10% in 1-1.5 year	Daily. Start: 0.6 mg, increase by 0.6 mg weekly toward 3 mg.
Semaglutide (Ozempic, Wegovy)	10-15% in 1-1.5 year	Weekly. Start: 0.25 mg, increase every 4 weeks toward 2.4mg
Tirzepatide (Mounjaro, Zepbound)	18% in 1.5 year	Weekly. Start: 2.5mg, increase by 2.5 mg every 4 weeks toward 5, 10 or 15 mg