

Tirzepatide

Brand names: Mounjaro, Zepbound

Dosage form: Subcutaneous injection (2.5 mg, 5 mg, 7.5 mg, 10 mg, 12.5 mg, 15 mg per 0.5 mL in single-dose pen)

Drug class: Incretin mimetics

Medically reviewed by Melisa Puckey, BPharm. Last updated on Nov 10, 2023.

What is tirzepatide?

Tirzepatide (Zepbound, Mounjaro) is used for weight loss and type 2 diabetes in adults. Tirzepatide is a GIP and GLP-1 receptor agonist and works for weight loss by decreasing your appetite and slowing the movement of food from the stomach into the small intestine, which may make you feel full more quickly and for a longer period of time. Tirzepatide also decreases blood sugar levels by increasing insulin production and lowering the amount of sugar the liver makes.

Zepbound is FDA-approved for weight loss for adults with obesity or who are overweight and have weight-related medical problems. Zepbound helps you to lose weight and maintain weight loss and should be combined with diet and exercise.

Mounjaro is used to help lower blood sugar for adults with type 2 diabetes; it should be used together with diet and exercise.

Mounjaro and Zepbound both contain the same active ingredient, tirzepatide and are made by Eli Lilly and Company. They are both given as weekly injections under the skin and are available as single-dose pens in the same strengths 2.5 mg, 5 mg, 7.5 mg, 10 mg, 12.5 mg, 15 mg per 0.5 mL.

Tirzepatide is a GIP and GLP-1 receptor agonist, so it works (mechanism of action) by activating both GIP (glucose-dependent insulinotropic polypeptide) and GLP-1 (glucagon-like peptide-1) hormone receptors. GLP-1 helps control appetite and calorie intake, and GIP is thought to contribute to regulating food intake as well.

Tirzepatide (Mounjaro) can be used as a single therapy (on its own) or with other diabetes medicines, including sulfonylureas, SGLT2 inhibitors or metformin.

It is not known if Tirzepatide can be used in people who have had pancreatitis.

Tirzepatide should not be used in people who have type 1 diabetes.

Related/similar drugs

Ozempic, metformin, Mounjaro, Trulicity, phentermine, semaglutide, Wegovy

How much weight is lost on Zepbound?

Patients on Zepbound (tirzepatide) 5mg weekly lost 16.1 kg (35.5 lb) on average after 72 weeks. For Zepbound's 10mg weekly dose, the average weight loss was 22.2 kg (48.9 lb), and for Zepbound's 15mg weekly dose average weight loss was 23.6 kg (52.0 lb) over 72 weeks. Patients who used a placebo lost 2.4 kg (5.3 lb) over the 72 weeks. These results are from the clinical trial SURMOUNT-1, NCT04184622. Individual results may vary.

Important information

Tirzepatide may cause thyroid C-cell tumors. It is important to tell your doctor if you have a personal or your family has a history of thyroid cancer or a condition called Multiple Endocrine Neoplasia (MEN) syndrome. This is a syndrome that causes tumors to develop on endocrine glands. If you experience any of these symptoms: lump or swelling in your neck, difficulty in swallowing, hoarseness, or shortness of breath, then you should call your doctor immediately.

Keep all appointments with your doctor, health professionals, and the laboratory. Your doctor may order certain tests to check your body's response to this medicine.

Before using tirzepatide

- Tell your doctor and pharmacist if you are allergic to tirzepatide, any other medications, or any of the ingredients in this medicine. There is a list of ingredients in this medicine, at the bottom of this page.
- Tell your doctor if you have or have ever had kidney or pancreas disease, a history of diabetic retinopathy or any stomach problems such as difficulty digesting food.

- Tell your doctor if you plan to become pregnant, are pregnant, or are breastfeeding. If you become pregnant while taking this medicine, you should tell your doctor.

 Tirzepatide pregnancy and breastfeeding warnings (more detail)

How should I use tirzepatide?

You should follow the directions on your prescription label carefully and ask your pharmacist or doctor to explain any part you do not understand. It is important to use this medicine exactly as directed. Do not take more or less of it or take it more often than prescribed by your doctor.

Tirzepatide is a once-weekly injection given under the skin (subcutaneous) using a pre-filled single-dose pen.

It is usually given

- once a week.
- can be given with or without meals at any time of the day.
- may be injected into the thigh, abdomen, or upper arm.
- You should rotate injection sites with each dose.

Your doctor will probably start you on a low dose, which may be gradually increased, but not more than once every 4 weeks.

You may change the day of the week you use tirzepatide as long as there are at least three days between doses.

You may administer insulin in the same area as tirzepatide, but they should not be given right next to each other. Insulin and tirzepatide should be given as separate injections and **not** be mixed in the same injection.

Mounjaro controls type 2 diabetes but does not cure it. It may take four weeks or longer before you see the full benefit of this medicine. Continue to take this medicine even if you feel well. Do not stop taking this medicine without talking to your doctor.

For more detailed instructions with diagrams, on how to give Mounjaro, click here: [Instructions for Mounjaro](#)

Tirzepatide Dosing information

Usual Zepbound Dose for Weight Loss (Adult)

Initial dose: 2.5 mg under the skin (subcutaneously) once a week.

After 4 weeks: The dosage should be increased to 5 mg subcutaneously once a week.

Further dose increases: After at least 4 weeks on the current dose the dosage may be increased in 2.5 mg increments.

Recommended maintenance dose: 5 mg, 10 mg, or 15 mg injected subcutaneously once weekly.

Maximum dose: 15 mg subcutaneously once a week.

Usual Mounjaro Dose for Diabetes Type 2 (Adult)

Initial dose: 2.5 mg under the skin (subcutaneously) once a week.

After 4 weeks: The dosage should be increased to 5 mg subcutaneously once a week.

If additional glycemic control is needed: The dosage should be increased in 2.5 mg increments after at least 4 weeks on the current dose.

Maximum dose: 15 mg subcutaneously once a week.

Comments: The 2.5 mg dosage is for starting of treatment and is not intended for glycemic control. The day of weekly administration can be changed, if necessary, as long as the time between the 2 doses is at least 3 days (72 hours).

 Detailed Tirzepatide dosage information

What should I do if I miss a dose?

If you miss a dose of tirzepatide take the missed dose as soon as you remember it, if within 4 days after the missed dose. However, if it has been more than 4 days since your last dose, then skip the missed dose and continue your regular dosing schedule. Do **not** inject two doses within 3 days of each other.

What happens if I overdose?

In case of overdose, call the poison control helpline at 1-800-222-1222. Information is also available online at Poison Help. If the victim has collapsed, had a seizure, has trouble breathing, or can't be awakened, immediately call emergency services at 911.

What are the side effects of tirzepatide?

Common tirzepatide side effects

The most common tirzepatide side effects include abdominal pain, burping, constipation, diarrhea, dyspepsia, fatigue, gastroesophageal reflux disease, hair loss, hypersensitivity reactions, injection site reactions, nausea, and vomiting, which affects 5% or more patients.

Serious tirzepatide side effects

Stop using this medicine and get emergency medical help if you have:

- signs of an allergic reaction: hives; difficulty breathing; feeling light-headed; swelling of your face, lips, tongue, or throat; or
- pancreatitis with symptoms of severe pain in your upper stomach spreading to your back, nausea, and vomiting.

Tirzepatide side effects (more detail)

Call your doctor at once if you have:

- severe stomach problems;
- eye side effects or vision changes, including blurry vision or blurred vision;
- signs of a thyroid tumor symptoms may include swelling or a lump in your neck, trouble swallowing, a hoarse voice, or if you feel short of breath;
- gallbladder problem with symptoms including chalky-colored stools, stomach pain after eating, nausea, heartburn, bloating, and severe upper stomach pain that may spread to your back;
- low blood sugar symptoms may include headache, hunger, weakness, sweating, confusion, irritability, dizziness, fast heart rate, or feeling jittery or

- kidney problems with little or no urination, swelling in your feet or ankles, feeling tired or short of breath.

This is not a complete list of side effects, and others may occur. Call your doctor for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.

Interactions

Tell your doctor and pharmacist what prescription and over-the-counter medications, vitamins, nutritional supplements, and herbal products you are planning to take or are taking. They may interact with tirzepatide and your doctor may need to change the doses of your medications or monitor you carefully for side effects.

Birth control pills may not work as well while receiving this medicine. Your doctor may suggest you use another form of birth control for 4 weeks after starting tirzepatide and for 4 weeks after each dose change.

Taking tirzepatide with other medicines to treat diabetes, such as sulfonylureas or insulin, may increase your risk of hypoglycemia. Talk to your doctor and pharmacist about low blood sugar and how to manage it.

This list is not complete. Many other drugs may interact with Mounjaro, including prescription and over-the-counter medicines, vitamins, and herbal products. To check for interactions with this medicine, click the link below.

 [Tirzepatide drug interactions \(more detail\)](#)

Storage

- Store in the refrigerator between 36°F to 46°F (2°C to 8°C).
- Do not freeze. Do not use if frozen.
- Store the single-dose pens in the original carton until use to protect them from light.
- If needed, each single-dose pen can be stored at room temperature up to 86°F (30°C) for up to 21 days.

What are the ingredients in tirzepatide?

Active ingredient: tirzepatide

Mounjaro Inactive ingredients: sodium chloride, sodium phosphate dibasic heptahydrate, and water for injection. Hydrochloric acid solution and/or sodium hydroxide solution may have been added to adjust the pH.

Zepbound Inactive ingredients: sodium chloride, sodium phosphate dibasic heptahydrate, and water for injection. Hydrochloric acid solution and/or sodium hydroxide solution may have been added to adjust the pH.

Company

Mounjaro and Zepbound

Eli Lilly and Company.

Marketed by: Lilly USA, LLC Indianapolis, IN 46285, USA.

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References

1. Food and Drug Administration (FDA) Product Label Zepbound
2. Food and Drug Administration (FDA) Product Label Mounjaro
3. Tirzepatide Once Weekly for the Treatment of Obesity

Further information

Always consult your healthcare provider to ensure the information displayed on this page applies to your personal circumstances.