

GLP-1 and GLP-1/GIP Medicines

GLP-1 (glucagon-like peptide-1) and GIP (glucose-dependent insulintropic polypeptide) are both hormones released in the gut after eating. These hormones are also known as “incretins.” This handout is about medicines that affect these hormones.

How These Medicines Work

- Increase insulin released from the pancreas after eating
- Lowers the amount of glucose the liver makes
- Slows down stomach emptying which makes you feel full sooner and slows how quickly blood sugars rise after eating
- Works in the brain to signal fullness and reduce appetite

Possible Benefits

These medicines help people in different ways. Your results may be different because everyone’s health is unique.



Diabetes: These medicines are often used to manage diabetes and to lower blood sugars.



Heart health: Some medicines have been shown to reduce the risk of heart attack, stroke, and death from heart disease.



Kidney health: Some medicines may help to slow down kidney damage.



Weight management: These medicines can aid in weight loss and help to keep weight off while taking the medicine.



Liver health: Some of these medicines have been shown to reduce inflammation and scarring in the liver in people with metabolic dysfunction-associated steatohepatitis (MASH).



Some have shown a reduction in severity of sleep apnea in people with obstructive sleep apnea and obesity.

Getting the Most Benefit from These Medicines

It is important to work with your full care team to tailor your nutrition, physical activity and other medicines. We strongly recommend that you meet with these care team members if taking these medicines:

- ☐ Registered Dietitian Nutritionist
- ☐ Diabetes Education
- ☐ Medication Management Pharmacist

Ask your doctor for a referral if this has not already been done.

Reasons Not to Take These Medicines

These medicines should not be used by:

- People with a personal or family history of medullary thyroid cancer or Multiple Endocrine Neoplasia syndrome type 2 (MEN 2)
- People who are pregnant or planning to become pregnant

Other Conditions to Discuss Before Starting a GLP-1

- Pancreatitis
- Gallbladder problems
- Gastroparesis
- Retinopathy
- Eating disorder
- Other stomach problems

How to Take

Most of these medicines are injected under the skin. Some are taken daily, and others are taken weekly. Use as directed. Use the website links or scan the QR codes below to view instructions.

Ozempic[®], Wegovy[®], and Foundayo[®] are daily pill options. See the chart below for more information.

Missed Doses or Changes with Medicine

- If you take your GLP-1 medicine weekly and miss 3 or more doses, call your doctor to find out how to restart.
- If you take your GLP-1 medicine daily and you miss 3 or more days, call your doctor to find out how to restart.
- If you change from one GLP-1 medicine to another, be sure to get new instructions about how to take the medicine. The injection devices are often different

How to Take Injectable Medicines	Storage	Other Notes
Liraglutide (Victoza[®])  https://www.victoza.com/getting-started-on-victoza-/your-first-injection.html	Prior to initial use, store in the fridge. After initial use, the pen may be stored at room temperature (up to 86°F). The medication expires 30 days after first use of the pen. Protect from freezing, excessive heat, and sunlight. Keep pen capped when not in use.	Daily injection Multi-dose pen
Liraglutide (Saxenda[®])  https://www.novomedlink.com/obesity/products/treatments/saxenda/dosing-administration/using-the-saxenda-pen.html#howtouse	Prior to initial use, store in the fridge. After initial use, the pen may be stored at room temperature (up to 86°F). The medication expires 30 days after first use of the pen. Protect from freezing, excessive heat, and sunlight. Keep pen capped when not in use.	Daily injection Multi-dose pen
Dulaglutide (Trulicity[®])  https://trulicity.lilly.com/how-to-use#how-to-use-trulicity-pen	Store your pen in the fridge. If needed, it can be stored unrefrigerated at $\leq 86^{\circ}\text{F}$ for up to 14 days. Protect from freezing, excessive heat, and sunlight.	Weekly injection Single use pen
Semaglutide (Ozempic injection[®])  https://www.ozempic.com/ozempic-pen/dosing.html#ifu	Prior to initial use, store in the fridge. After initial use, store at room temperature (up to 86°F). The medication expires 56 days after first use of the pen. Protect from freezing, excessive heat, and sunlight. Keep pen capped when not in use.	Weekly injection Multi-dose pen

How to Take Injectable Medicines	Storage	Other Notes
Semaglutide (Wegovy® injection)  https://www.wegovy.com/obesity/starting-wegovy/starting-wegovy-pen.html	Store your pen in the fridge. If needed, it can be stored unrefrigerated at $\leq 86^{\circ}\text{F}$ for up to 28 days. Protect from freezing, excessive heat, and sunlight.	Weekly injection Single use pen
Tirzepatide (Mounjaro®)  https://mounjaro.lilly.com/how-to-use-mounjaro	Store your pen in the fridge. If needed, it can be stored unrefrigerated at $\leq 86^{\circ}\text{F}$ for up to 21 days. Protect from freezing, excessive heat, and sunlight.	Weekly injection Single use pen
Tirzepatide (Zepbound®)  https://zepbound.lilly.com/sleep-apnea/how-to-use	Single use pen Store your pen in the fridge. If needed, it can be stored unrefrigerated at $\leq 86^{\circ}\text{F}$ for up to 21 days. Multi-dose Kwik pen Before initial use, store in the fridge. After initial use, store at room temperature (up to 86°F). The medicine expires 30 days after first use of the pen. Protect from freezing, excessive heat, and sunlight. Keep pen capped when not in use.	Weekly injection Available as single use pen or multi-dose pen

How to Take Oral Medicines	Storage	Other Notes
Semaglutide (Ozempic pill®)  https://www.ozempic.com/ozempic-pill/how-ozempic-pill-works.html	Store in original container at room temperature (up to 86°F); protect from moisture.	Must be taken on an empty stomach in the morning with less than 4 oz of water. Do not eat, drink or take other medicines or supplements for at least 30 minutes.
Semaglutide (Wegovy pill®)  https://www.wegovy.com/obesity/starting-wegovy/starting-wegovy-pill.html	Store in original container at room temperature (up to 86°F); protect from moisture.	Must be taken on an empty stomach in the morning with less than 4 oz of water. Do not eat, drink or take other medicines or supplements for at least 30 minutes.
Orforglipron (Foundayo®)  https://foundayo.lilly.com/how-to-take	Store in original container at room temperature (up to 86°F). Protect from light.	Take daily with or without food.

Side Effects and How to Manage

Let your care team know if you have any of these problems and/or need help managing them.

Possible side effects	Tips for management
Stomach type side effects • Nausea/vomiting • Acid reflux • Upset stomach • Diarrhea	In the first few weeks of starting the medicine or taking a higher dose, you may be more likely to have these types of side effects. The signal of "fullness" does not reach your brain until you are beyond full. Consider eating smaller portion sizes. Do something else for 20-30 minutes before deciding if you are still hungry. Other tips: • Eat slowly. • Stay sitting up after a meal. Avoid eating before bedtime. • Certain foods can trigger side effects. Limit/avoid: ○ Greasy, fatty or deep-fried foods ○ Spicy foods • Use a food diary to track foods/drinks that cause the least/most problems for you.
Dehydration	These medicines may reduce thirst. Aim for at least 64 oz of water per day. Keep your water bottle with you and fill it regularly throughout the day.
Constipation	• Include fiber at each meal and snack. • Stay adequately hydrated by drinking plenty of water or other sugar-free beverages. • Get regular exercise. • Some people may need to take over the counter fiber supplements and/or MiraLAX® to maintain regular bowel movements.
Loss of muscle	A small amount of muscle loss can be normal when losing weight; however, there are things that can be done to ensure you don't lose too much muscle or "lean body mass." • Ensure you are getting enough protein in your diet. • Do strength training exercises 2-3 times per week. Examples can be found in the resource below. Aim for 2-3 sets of 8-12 repetitions for each exercise you try. • Sessions can be as brief as 20-30 minutes to start. Slowly work up to 90-120 minutes per week spread over 2-4 sessions. • Muscle soreness is normal and even a good sign. If you feel significant pain or discomfort during exercise or pain that lasts more than 24 hours after exercise, stop and check with your doctor before you continue. • Resource: Resistance Training During Weight Loss: A Practical Guide (http://bit.ly/3SCpFCJ)
Injection site reactions	Use good injection technique: Clean the injection area and rotate injection sites. Allow the medicine to come to room temperature before injecting to help prevent stinging. Report any redness, swelling, pain, or blisters at the injection site.



Nutrition to Keep You Healthy

When using these medicines, you will likely not experience usual hunger. Despite this, you should still aim to get adequate nutrition as this can help manage side effects and prevent malnutrition.

- **Eat consistent meals.** Try to eat at least 3 meals per day with a variety of food groups at each meal, always including a protein
- **Focus on protein intake.** Protein intake is important to preserve muscle mass and prevent malnutrition. Protein rich foods include meat, eggs, fish, dairy products, beans, lentils, nuts and seeds. You should aim for at least 80 grams of protein a day. Talk with your dietitian about a plan for you.
- **Include fiber at each meal and snack.** Foods containing fiber include whole grains, fruits, vegetables, beans/lentils, nuts. Try to include 25-35 grams fiber per day. Increase fiber slowly to prevent constipation. Fiber and water work together. Make sure you increase your water intake as you increase your fiber. You may need to eat smaller, more frequent meals based on your symptoms.
- **Use a food diary** to monitor protein and fiber intake.
- **Be mindful of sweets** as this may affect your ability to get enough protein and fiber.
- **Meet with a registered dietitian.** Everyone's experience with these medicines is different. A dietitian can make a plan for you and support your success. Studies show that meeting with a dietitian provides better outcomes when taking these medicines.

Read more

High Protein Food Sources

<https://patient.uwhealth.org/healthfacts/265>



Fiber Focus

<https://patient.uwhealth.org/healthfacts/403>



Tips for Relieving Constipation

<https://patient.uwhealth.org/healthfacts/242>



Additional Safety with GLP-1s

Pregnancy and Lactation

GLP-1 medicines are not recommended during pregnancy. They should be stopped at least 2 months before trying to get pregnant. Oral birth control pills can be less effective with some GLP-1 medicines. Please talk to your doctor if you are considering becoming pregnant or would like to discuss other options for preventing pregnancy. GLP-1 medicines have not been studied in women who are breast feeding.

Alcohol

GLP-1 medicines can reduce your tolerance to alcohol. Alcohol can increase the risk of side effects with GLP-1s. Alcohol may also work against the benefits of GLP-1s. For example:

- Alcohol can have hidden calories which can counteract weight loss effects.
- Alcohol can increase the risk of high or low blood sugar.

If you chose to drink alcohol, we suggest no more than 1 drink per day for a woman or 2 drinks per day for a man.

Compounded Medicines

Compounded medicines are not regulated by the Food and Drug Administration (FDA) like other prescription products. There are safety concerns with fake or impure ingredients and inaccurate dosing. The FDA has received multiple reports of safety issues related to the use of compounded GLP-1 products. Avoid these products.

Procedures/Surgery

If you plan to have a procedure or surgery, ask if you should stop taking your GLP-1 medicine. This may only be necessary on the day of your surgery.

When to Contact Your Doctor

Contact immediately:

- Significant/severe belly pain, vomiting, or bloating that does not go away.
- No bowel movement for 3 or more days
- No passing gas
- Unable to eat at least 2 meals per day
- Concerns that you are becoming dehydrated (dizziness, lightheadedness, dry mouth, urinating less often)
- Sudden vision changes
- Low blood sugar (repeated blood sugars less than 70 mg/dL or ever less than 54 mg/dL)

Contact if these conditions develop:

Let your provider know if you have any of the conditions listed below or develop them while taking a GLP-1.

- Pancreatitis
- Gallbladder problems
- Gastroparesis
- Unintended weight loss/malnutrition – if unable to eat regularly or concerned about too much weight loss
- Eating disorder
- Other stomach problems
- Pregnancy
- New diagnosis of retinopathy
- A lump or swelling in your neck, hoarseness, trouble swallowing, or shortness of breath

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 6/2026 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#8318