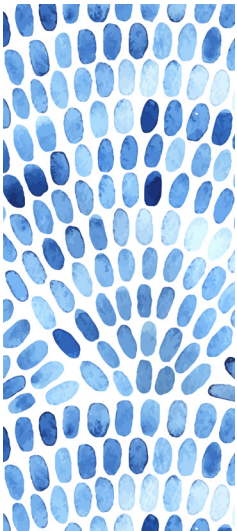




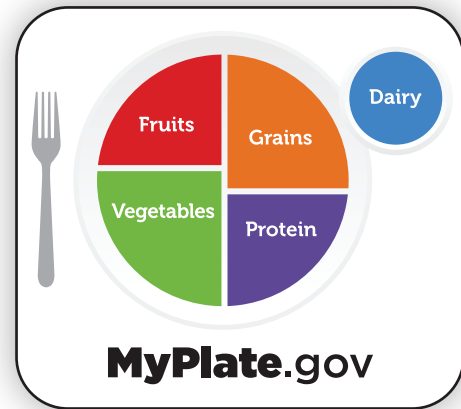
# A GUIDE TO WELLNESS WHEN TAKING GLP-1 MEDICATIONS



UnityPoint Clinic

# GLP-1 Medications

GLP-1 injection medications (liraglutide, semaglutide, tirzepatide) are a class of medications that mimic the natural hormone GLP-1 to help regulate glucose, reduce appetite and increase feelings of fullness. These medications can help with weight loss and are most effective when used in combination with a healthy diet and physical activity.



## Healthy Eating

Eating a well-balanced and healthy diet is important to meet nutritional needs. Nutrition and health information is everywhere, and there can be a significant amount of misinformation. Let's start with the basics of what our bodies need.

There are essential dietary components our bodies need daily, including protein, carbohydrates, fats, vitamins, minerals and water.

**Protein** is essential for building muscle and maintaining muscle mass. Protein also plays an important role in healing and cell formation. Both animal and plant sources can provide our bodies with high-quality protein.

**Carbohydrates** are made up of starches and sugars. Carbohydrates are a major fuel source for our bodies. We recommend focusing on complex carbs such as whole grains, starchy beans, whole fruits and vegetables. Try to limit simple carbohydrates such as sugars and sweets.

**Fats** are an essential part of a balanced diet and play a role in building/maintaining brain and nerve tissue. Neurotransmitters need an adequate amount of fat to properly function. They help signal the brain to release cues for fullness (satiety).

**Vitamins and minerals** are found in a variety of healthy foods and are important for many roles, including our immune system, nervous system and healing.

**Water** is key to maintaining proper hydration to keep our bodies running smoothly.

# Importance of Protein When Taking a GLP-1 Medication

GLP-1 medications help reduce hunger/appetite and slow digestion. This leads to increased feelings of fullness and less hunger. When taking in less food, it is important to maximize the quality of nutrition consumed, including lean protein, healthy carbohydrates, fiber and water.

When losing weight, the body is at risk of losing muscle mass. Studies of weight loss from GLP-1 medications have demonstrated that some of the weight lost is lean muscle mass (15% with liraglutide, 25% with tirzepatide, 40% with semaglutide). Loss-of-muscle is linked to several serious long-term diseases, such as sarcopenia, (involuntary loss of muscle mass, strength and function in older adults), osteoporosis and overall frailty. To minimize this, it is important to eat enough protein and include strength/resistance training as part of a comprehensive weight loss plan.

Protein is especially important to manage blood sugar. It helps maintain satiety (feeling of fullness), minimize muscle loss during weight loss and prevent weight recurrence.

Protein requirements differ by person and are based on several factors such as sex, age, physical activity level, as well as some health conditions such as chronic kidney disease.

The recommended amount of protein when taking a GLP-1 medication to help preserve muscle mass and assist with weight loss is generally 1-1.5 grams of protein per kilogram of body weight. However, individual daily protein targets vary drastically based on several factors.

Protein intake should be distributed throughout the day. It is generally recommended to eat three meals per day with at least 30g of protein with each meal.

## Where to Find Protein on a Nutrition Label

Nutrition Facts	
4 servings per container	
<b>Serving size</b>	<b>1 cup (180g)</b>
<b>Amount per serving</b>	
<b>Calories</b>	<b>245</b>
<b>% Daily Value*</b>	
<b>Total Fat</b> 12g	<b>14%</b>
Saturated Fat 2g	<b>10%</b>
Trans Fat 0g	
<b>Cholesterol</b> 8mg	<b>3%</b>
<b>Sodium</b> 210mg	<b>9%</b>
<b>Total Carbohydrate</b> 34g	<b>12%</b>
Dietary Fiber 7g	<b>25%</b>
Total Sugars 5g	
Includes 4g Added Sugars	<b>8%</b>
<b>Protein</b> 11g	
Vitamin D 4mcg	20%
Calcium 210mg	16%
Iron 4mg	22%
Potassium 380mg	8%
<small>*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

## How to Calculate Protein Needs

- 1 Convert weight from pounds (lbs.) to kilograms (kg): 1 pound = 2.2 kg  
  
(Example: 150 lbs. ÷ 2.2 kg = 68 kg)
- 2 Determine daily protein amount:  
weight (in kg) x recommended grams (1-1.5g) of protein.  
  
(Example: 68 kg x 1.5 g = 102 grams of protein per day)

### NOTE:

- An ounce of meat is about seven grams of protein.
- A piece of meat the size of a deck of cards is approximately three ounces (21 grams) of protein.



## High-Quality Protein Sources

It is strongly encouraged for anyone trying to lose weight to meet with a registered dietitian for individual recommendations.

### Animal Proteins

- Examples include beef, chicken, turkey, fish, pork, lamb, bison, eggs and dairy products (milk, yogurt, cheese, cottage cheese).

### Plant Proteins

- Examples include beans, peas, lentils, nuts, quinoa and soy products (tofu, tempeh, edamame, soy-based meat alternatives).

### Dietary Fat

The amount of fat consumed in the diet plays several important roles, such as absorbing certain vitamins, cell formation, cell function and satiety/fullness.

There are different types of dietary fats.

- Saturated fats and trans fats increase the risk of heart disease, vascular disease and stroke.
- Unsaturated fats include monounsaturated and polyunsaturated fats. These are considered healthy fats.

Recommended fat intake varies based on sex and total caloric intake. A general recommendation is 20-30% of daily calories come from fat.

- Recommendation for women eating 1,400 calories per day = 40-60 grams of total fat daily\*
- Recommendation for men eating 1,800 calories per day = 51-77 grams of total fat daily\*

*\*Prioritize intake of unsaturated fats and target keeping saturated fats as low as possible. Trans fats should be avoided.*

## Healthy Fat Sources

- Avocado and avocado oil
- Extra-virgin olive oil, olives
- Canola, vegetable and peanut oils
- Nuts and seeds
- Flax seed
- Fatty fish such as salmon

## Physical Activity to Maintain Muscle Mass

Guidelines for physical activity are 150-300 minutes of moderate-intensity activity per week or 75-150 minutes of vigorous activity per week. It is also generally recommended to include at least two days per week of strength training targeting all muscle groups.



# How to Use GLP-1 Injection Pens

For weekly injections using pens (semaglutide, tirzepatide)

For Zepbound® vials, go to [zepbound.lilly.com](https://zepbound.lilly.com)

For Saxenda® pens (daily injection), go to [saxenda.com](https://saxenda.com).

## Preparation

- Remove the single-use pen from the refrigerator.
- Make sure the medication is not frozen or cloudy and that it is free of particles. It should be clear/colorless.
- Verify the pen is the correct dose, isn't expired and isn't damaged.

## Injection

- Thoroughly wash hands.
- Choose an injection site and clean it with an alcohol swab. Do not touch the injection site after cleaning. Allow the skin to dry before injecting.
- Common injection sites include the upper leg (front or outer parts of the thigh), lower stomach (at least two inches away from belly button) or upper arm.
- It is not recommended to inject into an area where the skin is tender, bruised, red or hard. Avoid injecting into areas with scars or stretch marks.
- It is generally safe to inject into the same body area each week but be sure not to inject into the same spot each time.
- Consult the medication guide about specific injection device instructions. Helpful links:
  - o Wegovy: [wegovy.com](https://wegovy.com)
  - o Zepbound: [zepbound.lilly.com](https://zepbound.lilly.com)
  - o Saxenda: [saxenda.com](https://saxenda.com)

## Disposal

- Put the used pen into an FDA-cleared sharps disposal container. Do not throw the pen away in regular household trash.

- If there is no access to an FDA-cleared sharps disposal container, use a household container made of heavy-duty plastic, such as an empty liquid laundry detergent bottle. The container should have a tight-fitting, puncture-resistant lid. It should also be leak-resistant and properly labeled to indicate the container contains hazardous waste. Keep the container upright and stable during use.
- When the sharps disposal container is almost full, follow community/local guidelines for the proper way to dispose the full container.
- For more information about safe sharps disposal, visit the FDA website at [www.fda.gov/safesharpsdisposal](https://www.fda.gov/safesharpsdisposal)

## Side Effects of GLP-1 Injection Medications

The most common side effects of GLP-1 injection medications include nausea, vomiting, diarrhea, constipation, abdominal pain, cramping and bloating. Side effects often occur during dose increases. **If you have continued or severe side effects, such as being unable to keep down food or water, please contact your prescribing provider immediately.**

### Tips for Managing Side Effects

1. **Modify Eating Habits:** Eat slowly. Eat smaller-portion meals three times per day. Stop eating when satisfied. Remain upright shortly after eating instead of laying down.
2. **Limit Food Intake:** Reduce the amount of dietary fat consumed. Use lean cooking methods such as grilling, baking or air frying. Drink plenty of water throughout the day.
3. **To Help Prevent Nausea:** Avoid drinking at mealtimes and instead drink water 30-60 minutes before or after a meal.
4. **To Help with Constipation:** Focus on high-fiber foods such as whole grains, fruits and vegetables. Drink plenty of water. Increase physical activity.

# Intuitive Eating

Intuitive eating honors both physical and mental health.

## 10 Principles of Intuitive Eating

- 1 Reject diet mentality**  
Let go of the false hope that food restriction or dieting will lead to a better life.
- 2 Honor hunger**  
Learn to honor the first biological signal of hunger and rebuild trust in the body and food.
- 3 Make peace with food**  
Give permission to eat. Forbidding foods can lead to feelings of restriction and often to overeating and guilt.
- 4 Challenge the food police**  
These are feelings and thoughts that deal with negative self-talk and provoke feelings of guilt. It is crucial to stop this for intuitive eating to work.
- 5 Feel the body's fullness**  
Let body signals indicate when hunger has subsided. Focus on how food tastes and assess current fullness level.
- 6 Discover the satisfaction factor**  
Do not overlook the satisfaction that can come from the eating experience. Eat slowly, in an inviting environment, and focus on taste and texture of food.
- 7 Treat emotions with kindness**  
Emotional eating does not solve emotions such as boredom, depression or loneliness. It is important to address the source of emotions kindly and without food.
- 8 Respect the body**  
Accept all body sizes, every body deserves dignity. Avoid unrealistic expectations and avoid criticizing body size and shape.
- 9 Movement, feel the difference**  
Be active and feel the change. Shift focus to how it feels to move rather than how many calories are burned.
- 10 Honor health with gentle nutrition**  
Make food choices to honor well-being, taste and culture. Remember, eating perfectly is not required to be healthy. Progress, not perfection, is what counts.



## Considerations for Eating

When ready to eat, pause for a moment to assess hunger level. Is it physiological hunger or emotional hunger?

1. **Physiological hunger** is when the body actively shows its hunger, such as stomach growling, loss of energy or a slight headache. There are no guilty feelings and the person can stop eating when they feel full.
2. **Emotional hunger** is craving-based, driven by emotional triggers. It does not satisfy the feeling of hunger. Eating typically continues beyond feeling uncomfortable. It can also lead to feelings of guilt.

## Setting Goals

Setting goals is important to be successful in taking care of health. Goals give direction. They also help develop a plan of action and can assist with challenges that may come up.

### SMART Goals

**S**pecific –  
Be clear on what needs to be accomplished.

**M**easurable –  
Include a way to measure the goal and assess progress.

**A**ttainable –  
Make sure the goal is achievable with reasonable effort.

**R**elevant –  
Make sure the goal contributes/is relevant to the ultimate plan.

**T**imely –  
Set a deadline; this allows time for evaluation and can provide extra motivation.

### NOTES:

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