

Managing Low Blood Sugar After Bariatric Surgery

This handout explains why low blood sugar can happen after bariatric surgery, how to recognize symptoms, what to do when symptoms happen, and how to prevent them.

What is low blood sugar?

Reactive hypoglycemia (low blood sugar after eating) happens when your blood sugar drops too low after you eat or drink certain foods following bariatric surgery. It may also be called *hyperinsulinemic hypoglycemia* (too much insulin causing low blood sugar).

This problem:

- is most common after gastric bypass surgery
- often starts 1 year or more after surgery
- usually causes symptoms 1–4 hours after eating or drinking

Why Low Blood Sugar Can Happen After Surgery

Bariatric surgery changes how food moves through your digestive system. It also changes how gut hormones work, including *GLP-1* (a hormone that increases insulin release). *Insulin* (a hormone made by the pancreas) helps move sugar from the blood into the body's cells for energy. When too much insulin is released, blood sugar can drop too far and too fast.

Here is what happens:

1. You eat or drink something with carbohydrates.
2. Food moves quickly from your stomach into the intestine.
3. Blood sugar rises quickly.
4. Your body releases a lot of insulin.
5. Too much insulin causes blood sugar to drop too low.

How Low Blood Sugar Is Diagnosed

Low blood sugar is diagnosed when:

- You have symptoms
- Your blood sugar is lower than 55 mg/dL
- Symptoms get better quickly when you eat



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<p>Mild Low Blood Sugar</p>	<p>If your blood sugar is 55 to 69 mg/dL, you may notice:</p> <ul style="list-style-type: none"> • Sweating or overheating • Feeling cold and clammy • Headache • Shaking and trembling • Fast pounding heart (tachycardia) • Nausea • Craving sugar or carbs • Hunger • Sudden strong hunger 	<p>If your symptoms are mild or moderate:</p> <ul style="list-style-type: none"> • Eat a high-protein food. Most people feel better within about 15 minutes. • Choose 1: <ul style="list-style-type: none"> – Cheese – Eggs – Meat, fish, or seafood – Jerky – Nuts or nut butter – Protein shake – Tofu or edamame
<p>Moderate Low Blood Sugar</p>	<p>If your blood sugar is 40-54 mg/dL, you may notice:</p> <ul style="list-style-type: none"> • Vision changes like blurriness • Feeling lightheaded or dizzy • Feeling weak or having no energy • Being nervous or anxious • Feeling sleepy • Irritability or impatience • Angry or aggressive behavior 	
<p>Severe Low Blood Sugar</p>	<p>When blood sugar is lower than 39 mg/dL, you may have:</p> <ul style="list-style-type: none"> • Blurred or tunnel vision • Confusion • Trouble thinking clearly • Extreme tiredness or weakness • Clumsiness or loss of coordination • Jerking movements • Slurred speech • Fainting or loss of consciousness • Seizure 	<p>If your symptoms are severe:</p> <ul style="list-style-type: none"> • Use fast-acting sugar that dissolves quickly. • Avoid foods with fat, such as chocolate, because fat slows sugar absorption. • Limit treatment to 15 grams of carbohydrate from 1 option. <p>Examples:</p> <ul style="list-style-type: none"> – 3 glucose tablets – 3 Starburst candies – 4 ounces (½ cup) orange juice <p>After treating with sugar:</p> <ul style="list-style-type: none"> • Eat a dense (solid) protein food to help prevent blood sugar from dropping again. • Protein options include meat, fish, eggs, low-sugar dairy, nuts, nut butter, tofu, or edamame.

How to Prevent Low Blood Sugar Episodes

Low blood sugar after bariatric surgery is different from low blood sugar in *type 1 diabetes* or *type 2 diabetes*. Prevention focuses on **timing**, **portion size**, and **food choices**.

Timing Liquids and Food

- Do **not** drink liquids for 15 minutes before eating.
- Do **not** drink liquids for at least 30 minutes after eating.

Drinking too close to meals pushes food into the intestine too fast. This causes blood sugar to rise quickly and insulin to release too fast.

Eating Schedule and Portions

- Eat every 3–4 hours at planned times.
- Smaller, regular meals help keep blood sugar more stable.
- Limit meals to about 1 cup eaten over 30 minutes.
- Limit snacks to ½ cup or less.
- Take small bites and chew until food is smooth.
- Avoid grazing or eating small amounts all day.

Food Choices That Help

Start With Protein

Eat protein first at meals and snacks. Protein:

- Slows digestion
- Helps you feel full
- Has less effect on blood sugar

Choose:

- Chicken, beef, pork, fish, seafood
- Eggs
- Tofu or edamame
- Plain Greek yogurt
- Cottage cheese
- Hard cheese
- Milk or unsweetened soy milk

Avoid:

- Processed meats (pepperoni, bacon, salami, deli meats)
- Protein bars
- Protein shakes with more than 7 grams of carbohydrates
- Protein powders with added sugar or sugar alcohols
- Flavored milks and sweetened yogurts

Vegetables (Lower Carbohydrate Options)

These vegetables raise blood sugar less and can be eaten regularly:

- Leafy greens (spinach, lettuce, kale)
- Broccoli, cauliflower, cabbage
- Zucchini, spaghetti squash
- Peppers, cucumbers, green beans
- Mushrooms, tomatoes, onions

Fats (Small Amounts)

Some fat is needed, but too much can make symptoms worse. Use small amounts:

- Avocado or olives
- Oils (1 tablespoon)
- Nut butters (2 tablespoons)
- Seeds (1 tablespoon)
- Nuts (¼ cup)

Carbohydrates (Choose Carefully)

Choose foods that digest slowly and have fiber.

- Start with no more than 10 grams of carbohydrates per meal.
- Over time, meals may increase to 30 grams and snacks to 15 grams.
- Tracking food can help you learn your personal triggers.

Better choices include:

- Steel-cut oats or oat bran
- Fresh fruit (berries, apples, pears)
- Beans and lentils
- Soy-based pasta
- Quinoa, barley, bulgur
- Some whole-grain breads and crackers

Foods to Avoid

Processed and sugary foods move quickly through your stomach and cause rapid blood sugar changes:

- Foods with added sugar
- Most packaged or highly processed foods
- Sweet cereals and instant oatmeal
- White or brown rice and rice cakes
- Regular pasta made from refined flour
- Chips, crackers, pretzels, popcorn
- High-starch vegetables (potatoes, corn, winter squash)
- Sweet sauces, including many sugar-free sauces made with sugar alcohols
- Sweets such as candy, cake, cookies, syrup, honey
- Sugar alcohols: Check ingredient lists for words ending in “-ol.”

Liquids

Drink these:

- Water (plain, filtered, bottled, or alkaline)
- Sugar-free electrolyte drinks
- Unsweetened herbal tea
- Decaffeinated coffee or tea
- Water flavored lightly with fruit or herbs
- Water with sugar-free drops

If you do not like sweet drinks, try:

- Using part of a sugar-free flavor packet
- Using fewer drops of liquid flavoring

Avoid these drinks:

- Sweetened drinks and fruit juice
- Soda and sweet tea
- Coffee syrups and creamers
- Sugar-free coffee flavors and creamers
- Smoothies and milkshakes
- Caffeine (coffee, tea, energy drinks, chocolate)
- Alcohol, which increases the risk of low blood sugar

Track Food, Symptoms, and Activity

Tracking helps you find patterns and prevent symptoms.

- Use a free app such as Baritastic.
- Measure portions before logging food.
- Track foods, liquids, timing, activity, and symptoms.
- Review which foods cause symptoms and which do not.

You can share a PDF of your log with your care team before appointments.

Safety Tips

1. Read this handout carefully.
2. Mark in **red**: Foods you eat often and want to change.
3. Mark in **green**: Foods you would like to try.
4. Set alarms to eat a small amount of protein every 4 hours.
5. Always bring a quick acting sugar and protein when you leave home.
6. Train and inform family and friends.
7. Check your blood sugar before driving. You may need to buy a glucose meter.
8. Keep emergency information easy to find on your phone.
9. Call your provider if your symptoms get worse or happen more often.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

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