

Low Blood Glucose (Hypoglycemia)

Low blood glucose, or hypoglycemia [hi-poh-gly-SEE-mee-uh], is when your blood glucose level drops below your target range. It is most common in people being treated for diabetes, but it can happen in others as well. Low blood glucose is usually defined as **below 80 mg/dL (or as defined by your diabetes provider)** but you might feel symptoms at a different reading. Ask your diabetes provider what is too low for you. Low blood glucose can be dangerous. But, there's a lot you can do to prevent it from happening and treat it when it does happen.

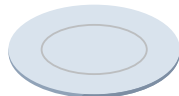
What causes low blood glucose?

There are several reasons why your blood glucose might drop too low:

Taking too much insulin or not taking your diabetes medication on a regular schedule



Skipping meals or eating late, especially after giving rapid-acting insulin



Injecting insulin into an arm or leg that is exercised right afterward (for example, you inject into your throwing arm right before playing softball)



Not finishing a meal after you've dosed for your meal, or not eating enough overall



Playing or exercising for a longer time than usual



What does low blood glucose feel like (or look like)?

Low blood glucose can cause these symptoms:

Shakiness, dizziness



Fainting or seizure



Hunger



Clumsy or jerky movements



Sweating



Difficulty paying attention



Confusion



Tingling around your mouth



Moodiness, irritability



Feeling like you want to cry for no reason



Fast heartbeat



Nervousness



Headache



Pale skin color



What can I do to treat low blood glucose?

If you think your blood glucose is low, check your blood glucose level and treat it with the **Rule of 15** following the 4 steps below.

Rule of 15

STEP
1

Eat or drink 15 grams of carbohydrate

If your blood glucose is below your target level, or you have symptoms of low blood glucose, **eat or drink something with 15 grams of rapid-acting carbohydrate**. See the list at right for some suggestions.



STEP
2

Wait 15 minutes

Wait at least 15 minutes. This is how long it usually takes for the treatment to work.



STEP
3

Check your blood glucose

See if your blood glucose is 80 mg/dL or above, or at your target level.



STEP
4

Still less than 80 mg/dL? Repeat steps 1 to 3

If your blood glucose is 80 mg/dL or above, or at your target level, but your next snack or meal isn't for at least 30 minutes, have another small snack with 15 grams of carbohydrate and some protein. Then, wait for 15 minutes and check your blood glucose again.



Rapid-acting carbohydrates

The following rapid-acting carbohydrates each contain about 15 grams of carbohydrate:

- ½ cup fruit juice or punch (NOT sugar-free)
- 3 to 4 glucose tablets, or 1 tube glucose gel
- 1 tablespoon brown sugar, honey, or corn syrup
- 4 teaspoons white sugar
- 1 fruit roll-up
- ½ cup regular soft drink (NOT diet)
- 8 Life Savers candies (NOT sugar-free)
- 2 tablespoons raisins
- 3 to 5 pieces of hard candy
- 11 jellybeans or Skittles candies
- 1 cup skim milk

Note: If these foods are not available, any carbohydrate source will work. However, candy bars, cookies, and other higher-fat options are poor sources of quick energy—the fat slows down the digestion of carbohydrates. High-fiber foods (such as many fresh fruits) also slow digestion.

Low before mealtime?

If your blood sugar is low right before mealtime, you can do either of these things:

- Have 15 grams of quick sugar as usual

OR

- Subtract 15 grams of carbohydrate from the total carb count for your meal

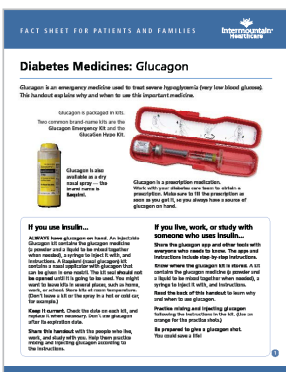


“What if my family member cannot eat or drink— or has passed out or is having seizures?”

Call 911 and give glucagon by injection or nasal spray. Severely low blood glucose is dangerous, so give glucagon immediately, without waiting to test blood glucose.



Glucagon
Emergency Kit



See the *Diabetes Medicines: Glucagon* fact sheet for more information.



Glucagon dry nasal spray (Baqsimi)

How do I prepare for low blood glucose?

Although you hope to avoid low blood glucose, you need to be prepared in case it happens to you. Here's how:

- **Make sure the people you spend the most time with know the signs** and how to help you if you're not able to help yourself. Teach them how to use emergency glucagon and tell them when to get emergency help.
- **Always carry a quick-acting carbohydrate snack.** And, always carry an emergency glucagon kit. If you don't have one, work with your insurance provider to get one.
- **Use a medical ID** explaining that you have diabetes, and how someone can help if you show signs of low blood glucose. Some examples include a bracelet, necklace, smartphone, or wallet card. **Keep it with you at all times.**



What is hypoglycemic unawareness?

Some people don't notice any symptoms when their blood glucose levels are low. This is called **hypoglycemic unawareness**. If you have hypoglycemic unawareness, monitoring your blood glucose regularly is even more important. It can alert you to low blood glucose before it becomes a problem.

Hypoglycemic unawareness can occur for several reasons:

- Over time, high blood glucose levels can cause damage to the hormonal system that signals low blood glucose.
- People who have had frequent episodes of low blood glucose may become used to the feelings that come with it. They may no longer recognize them as warning signs that their blood glucose is low.
- Some medications may mask the symptoms of low blood glucose (for example, sleeping pills, sedatives, or heart medicines called beta-blockers).

When should I call my doctor?

If you feel that you are about to pass out get emergency care right away. **Do not try to drive.**

Call for advice or an appointment if you have:

- Continued low blood glucose **in spite of taking actions to correct it**
- Levels less than 80 mg/dL (or your target level) 2 or 3 times in a row
- More than 2 unexplained periods of low blood glucose in 1 week
- Repeated low glucose readings **during a particular time of day**

Notes

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