

Hypoglycemia in Diabetes: Blood Sugar Below 70 mg/dL

Hypoglycemia, or low blood sugar, is any blood sugar below 70 mg/dL. Our goal is for you to have less than 2 low blood sugars in a week during the daytime, never have a low blood sugar while you are asleep and to avoid severe hypoglycemia needing assistance from others at all times.

Check blood sugars before each meal, at bedtime, before driving a car, before exercise, and whenever you feel low blood sugar symptoms.

Reasons your blood sugar might be low include taking more insulin than your body needs, not eating enough food after taking insulin, getting more exercise or activity than usual, drinking alcoholic drinks (low blood sugar will occur several hours later), illness with decreased food and drink intake.

Common Symptoms of Low Blood Sugar

- Shaking, sweating, dizzy, anxious, hungry, heart racing, weakness, headache, irritability
- Nightmares, sleep walking or talking, restless sleep can be additional signs of low blood sugar at night.
- Severe hypoglycemia is defined as low blood sugar symptoms that you cannot treat alone
 - May result in seizure, unconsciousness and permanent brain damage or death.

Treatment for Low Blood Sugar (blood sugar <70 mg/dL)

- If you feel low, test your blood sugar first before treating
- If your continuous glucose monitor says you are low, but you do not feel low,

confirm with your glucometer before treating

- Rule of 15: Eat 15 grams of fast-acting carbs and repeat blood sugar in 15 minutes (you may need less grams of carbs if directed by your diabetes care team)
 - Examples of foods that are 15 grams of carbs
 - 4 oz clear juice or regular soda (small juice box or 1/3 of a can of soda)
 - 4 glucose tabs
 - 1 fruit pouch or apple sauce
 - 1 tablespoon honey
 - 1 fun pack of Skittles® or 2 rolls of Smarties® (1 Skittle or 1 Jelly Belly jelly bean = 1 gram of carb)

After the blood sugar is above 70 mg/dL, give a snack or meal as below:

- If your next meal is more than an hour away, eat 15 grams of complex carbs with protein
 - Examples:
 - Cup of milk
 - Cheese and crackers
 - Half an apple with peanut butter
 - Half a granola bar
- If it is a mealtime, you should eat your meal and dose for carbs

Safety tips for Preventing Low Blood Sugar

- Avoid taking rapid-acting insulin within 2 hours of going to bed. If you do, you need to recheck blood sugar in 2-3 hours.
- Call the diabetes team if: you have more than 2 unexplained blood sugars below 70 mg/dL in 1 week during the day, or any blood sugars below 70 mg/dL overnight. Do not wait to call!

- Contact your diabetes doctor if you are having lows that you do not feel or recognize. You may have hypoglycemia unawareness, which increases your risk of severe hypoglycemia.
- Always carry 15 grams of fast-acting sugar in case you need to treat a low.
- Make sure you have a current glucagon (premixed, mixable, or nasal forms are available) in your diabetes bag and that those around you know how to use it
- Wear some sort of medical identification (like a bracelet or necklace) or have it on your medical alert on your smartphone.

Problems with Insulin Absorption

- Rotate your injection sites. Injecting in areas of lipohypertrophy may lead to uneven and unpredictable absorption of insulin and unexpected changes in blood sugars.
- Avoid hot showers or baths or hot tubs right after taking insulin; this can cause the insulin to be absorbed too quickly and may cause a low blood sugar.

Exercise

- Check blood sugars before, during, and after strenuous exercise. If blood sugar is below your exercise target (as determined by your diabetes team) before exercise, eat a snack.
 - By checking blood sugars, you will find out if you need to start your activity at a higher blood sugar and/or how much you need to eat during exercise. Start with 15 grams of carbohydrate for every 30 to 60 minutes of *strenuous* activity/exercise. Adjust as needed with your diabetes team.
- Avoid injecting into sites most involved in exercise because it can cause the insulin to absorb too quickly and can result in a low blood sugar (e.g., if you are right-handed and going to play tennis, avoid injecting

insulin into your right arm prior to playing).

- Consider timing your exercise to avoid giving short acting insulin for meals in the 2 hours before exercising.

Drive Safely

- When you drive or operate heavy machinery, check your blood sugar before starting.
- **If blood sugar is less than 70 mg/dL, even if you do not feel low, do not drive until you eat or drink something to raise it.**

For severe hypoglycemia where the individual is unable to swallow or not waking up, GIVE GLUCAGON (several forms available) THEN CALL 911

- If you feel low while driving, pull off the road as soon as safely possible and treat the low. Resume driving only after confirming that your blood sugar is above 70 mg/dL.

References

1. American Diabetes Association Professional Practice Committee; 6. Glycemic Targets: *Standards of Medical Care in Diabetes—2022. Diabetes Care* 1 January 2022; 45 (Supplement_1): S83-S96.



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