

UNDERSTANDING SEVERE LOW BLOOD SUGAR (HYPOGLYCEMIA)

Low blood sugar occurs when the amount of sugar in your blood drops below what is healthy for you. For many people with diabetes, this means a blood sugar reading lower than 3.9 mmol/L or 70 mg/dL.

Severe low blood sugar is when your blood sugar drops so low that **you need help from someone else to treat it**. If left untreated, severe low blood sugar can lead to serious harm.

Understand common causes of severe low blood sugar



Medicine

Accidentally taking too much medicine or the wrong medicine (eg, insulin)



Meals

Missing a meal or not being able to eat enough



Physical activity

Exercising vigorously or for a long time

Recognize common signs and symptoms of severe low blood sugar

Common early warning signs



Trembling



Pounding heart



Sweating



Anxiety



Hunger

Common symptoms caused by lack of enough blood sugar in the brain



Difficulty concentrating



Changes in behavior, such as confusion or irritability



Weakness



Drowsiness or dizziness



Vision changes



Difficulty speaking

Severe low blood sugar can progress quickly, and may lead to seizures or passing out. Family, friends, and caregivers will need to act quickly to raise your blood sugar because, if left untreated, severe low blood sugar can be life-threatening.

Take Action

to prevent severe low blood sugar



When your daily routine changes:

- **Check** your blood sugar more often
- **Watch** out for early warning signs of low blood sugar

15/15

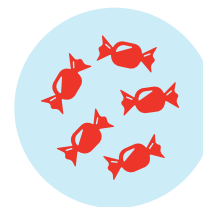
Keep fast-acting carbohydrate snacks with you and treat low blood sugar before it becomes severe by following the “15-15 rule”:

Eat or drink 15 grams of fast-acting carbohydrates. For example,

Half a cup of juice
(4 oz or 120 mL)



5–6 hard candies



4 glucose tablets



15 mins

If you still have symptoms after 15 minutes, eat or drink another 15 grams of fast-acting carbohydrates



When your blood sugar starts to return to a normal range, **eat a meal or snack** to prevent another low blood sugar event

Create an emergency plan, like the one below, and share it with your caregivers

EMERGENCY PLAN For Severe Low Blood Sugar	
PERSONAL INFORMATION Name: _____ Age: _____ Home address: _____ Phone: _____ Medical contact: Name: _____ Relationship: _____ Address: _____	COMMON SIGNS AND SYMPTOMS OF LOW BLOOD SUGAR
IF YOU NOTICE SIGNS OR SYMPTOMS OF LOW BLOOD SUGAR AND I AM UNABLE TO HELP MYSELF, GIVE ME GLUCAGON. NAME OF MY GLUCAGON: _____ HOW TO GIVE GLUCAGON: _____ MY GLUCAGON IS KEPT: _____	OTHER SIGNS AND SYMPTOMS I USUALLY HAVE: _____ CARE PROVIDER TIPS: • DO NOT repeat insulin. • Add glucose to help restore blood sugar with glucagon. • After giving glucagon, don't let the person on their side if they are unconscious. • Call for emergency medical help. • Monitor blood glucose until blood sugar returns.

Always keep your emergency pack with you, including:

- Your medical ID
- Fast-acting carbohydrates
- Your blood sugar monitor and supplies
- Glucagon

How to Treat

severe low blood sugar

To treat severe low blood sugar, family members, friends, and caregivers should:



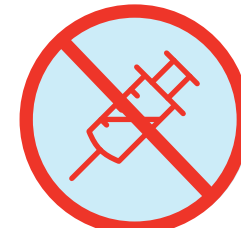
Give the person an injection or nasal spray of glucagon



Call for emergency medical help



Watch for improvement within 5 to 15 minutes



DO NOT inject insulin

1. American Diabetes Association. *Diabetes Care*. 2021;44(suppl 1):S73-S84. 2. American Diabetes Association. Hypoglycemia (low blood sugar). <https://www.diabetes.org/healthy-living/medication-treatments/blood-glucose-testing-and-control/hypoglycemia>. Accessed March 16, 2022. 3. Edridge CL, et al. *PLoS ONE*. 2015;10(6):e0126427. 4. Edelman SV. *Diabetes Educ*. 2014;40(3):269-279. 5. Frier BM. *Nat Rev Endocrinol*. 2014;10(12):711-722. 6. Hormone Health Network. Severe Hypoglycemia. <https://www.hormone.org/diseases-and-conditions/diabetes/severe-hypoglycemia>. Accessed March 16, 2022. 7. International Hypoglycaemia Study Group. *Diabetes Care*. 2017;40:155-157. 8. International Hypoglycaemia Study Group. What is hypoglycaemia? <https://www.ihsgonline.com/what-is-hypoglycaemia-2/>. Accessed March 16, 2022. 9. International Hypoglycaemia Study Group. Diagnosis of hypoglycaemia. <https://www.ihsgonline.com/diagnosis-2/>. Accessed March 16, 2022. 10. Kedia N. *Diabetes Metab Syndr Obes*. 2011;4:337-346. 11. Know before the low. Be prepared for low blood sugar. https://www.multivu.com/players/English/8688551-know-before-the-low/docs/TiPList_1589921095033-1140242936.pdf. Accessed March 16, 2022. 12. Lammert M, et al. *J Med Econ*. 2009;12(4):269-280.