



Education

Low Blood Sugar (Hypoglycemia)

What is hypoglycemia?

Hypoglycemia means low blood sugar. It is usually a side effect of diabetes treatment. It can also result from other diseases or medicines, hormone or enzyme deficiencies, or tumors. A blood sugar lower than 70 that is not treated can be very dangerous. Sometimes hypoglycemia is called an insulin reaction or insulin shock.

How does it occur?

If you have diabetes and you have too much insulin or other diabetes medicine in your blood, your blood sugar level will become too low. Some other causes of abnormally low blood sugar levels are:

- exercising more than usual
- skipping or delaying meals or snacks
- having a meal or snack that is too small
- not taking medicines at the right time
- drinking too much alcohol
- diarrhea or vomiting.

Hypoglycemia is usually a side effect of diabetes treatment, but it can result from other medical conditions.

What are the symptoms?

The symptoms of low blood sugar range from mild to severe. Watch for the following symptoms that result from low blood sugar:

- mild symptoms
 - dizziness
 - irritability
 - hunger
 - clumsiness
 - shakiness
 - sweating
 - fast heartbeat
- moderate symptoms
 - confusion
 - headache
 - poor coordination
- severe symptoms
 - seizures
 - unconsciousness
 - coma
 - death.

You must watch your blood sugar level closely. If you test your blood sugar regularly, you will be able to treat

hypoglycemia before it causes serious symptoms.

Some high blood pressure medicines called beta blockers hide the symptoms of hypoglycemia. If you are taking medicine for high blood pressure, talk to your health care provider about this.

You should know the difference between the symptoms of low blood sugar (hypoglycemia) and high blood sugar (hyperglycemia). High blood sugar doesn't always cause symptoms, but when it does the symptoms may include blurry vision, extreme thirst, and a lot of urination.

How is it treated?

If you often have symptoms of hypoglycemia, you should see your health care provider. Your provider can help you determine the cause. Your provider will also give you guidelines for treating low blood sugar when you are having symptoms. Here are some examples of such recommendations.

Always carry some form of sugar you can eat as soon as you have any symptoms of hypoglycemia. If you have mild or moderate hypoglycemia:

- The following amounts and types of foods will bring your blood sugar level up:
 - 1/2 cup orange juice
 - 1/3 cup apple juice
 - 1/4 to 1/3 cup of raisins
 - several pieces of hard candy
 - 4 to 6 ounces of regular soda (about half a can)
 - a tube of glucose in gel form (such as InstaGel or MonGel) or cake icing
 - 1 tablespoon of molasses, corn syrup, or honey.
- If you still have symptoms 10 to 15 minutes after eating or drinking one of the foods listed above, you may need to eat or drink another portion.
- If you are about to eat a meal, eat the fruit or drink the juice first and then eat the rest of your meal.

Fifteen to 20 minutes after treating low blood sugar, test your blood sugar level again.

If you have severe hypoglycemia that is causing seizures or unconsciousness, someone should call 911 because you need emergency treatment. Your blood sugar level will be checked and you will be given a shot of glucose or a hormone called glucagon to raise your blood sugar. You may need to go to the hospital so your health care provider can watch your reaction to treatment, determine why you had severe hypoglycemia, and, if necessary, change your medicine dosages.

How long will the effects last?

The effects of low blood sugar will continue and may even get worse until treatment restores your blood sugar level to normal. It may take several minutes after you start treatment for the symptoms to go away. You will need to take special care the rest of your life to keep your blood sugar at the proper level.

How can I take care of myself?

- Keep your blood sugar in the normal range. Check your blood sugar level regularly and whenever you have any of the symptoms of hypoglycemia. Know when to check your blood sugar and when to call for help. Ask your health care provider for guidelines to help you know when to call for help.
 - Carry sugar or hard candy to eat if your blood sugar gets too low.
 - Carry an ID (such as a card or bracelet) that says you have diabetes, in case of an emergency.
 - Be careful not to drive when your blood sugar is low. Driving with a low blood sugar is very dangerous, both for you and for others. The effect of a low blood sugar on reflexes and your ability to react are similar to those of a person driving while under the influence of alcohol. Always keep a quick source of sugar with you. Pull over to the side of the road right away if you begin to feel symptoms of low blood sugar and take your emergency sugar. Do not try to treat low blood sugar while you are driving.
 - If you are taking insulin, discuss with your health care provider whether you should carry the medicine glucagon with you at all times. A family member or friend can be taught how to inject it into your muscle if you become unconscious. After they give you the shot, they should call 911. The glucagon should raise your blood sugar enough for you to become conscious in a few minutes. Then, when you are awake enough, you can eat or drink something sweet, such as orange juice. If you have an episode of unconsciousness from hypoglycemia, you may need to see your provider to determine why you developed hypoglycemia.
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How can I prevent insulin-reaction hypoglycemia?

- Check your blood sugar regularly.
- Know what causes low blood sugar.
- Eat a full meal at regular mealtimes. Do not delay or skip meals and do not eat partial meals.
- Take all medicines exactly as prescribed.
- Check your blood sugar more often when you are exercising more or eating less, or when you are sick, according to your health care provider's recommendations.

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