PATIENT & CAREGIVER EDUCATION

About Hypoglycemia (Low Blood Sugar)

This information explains what hypoglycemia (HY-poh-gly-SEE-mee-uh) is and what signs to look for. It explains how to treat it and how to prevent it from happening.

What is hypoglycemia?

Hypoglycemia is when your blood glucose (blood sugar) level goes too low. This usually happens when your blood glucose goes below 70 milligrams per deciliter (mg/dL).

Your body uses glucose as its main source of energy. If there isn't enough glucose in your bloodstream, you may have trouble thinking clearly and doing your usual tasks safely. This can happen if you have not eaten enough or are more active than usual.

It is important to treat hypoglycemia right away. If you take medication for diabetes, your healthcare provider may need to change the dosage. Contact the provider who prescribes your diabetes medication any time you have hypoglycemia.

Signs of hypoglycemia and what to look for

Some people show different warning signs when their blood glucose is low. Others may show no signs at all.

Warning signs of hypoglycemia include:



Signs of low blood sugar

Check for hypoglycemia by measuring your blood glucose at home. Read *How to Check Your Blood Sugar Using a Blood Glucose Meter* (www.mskcc.org/pe/check_blood_sugar) for more information. You can also watch *How to Check Your Blood Sugar Using a Blood Glucose Meter* (www.mskcc.org/pe/check_blood_sugar_video).

How to treat hypoglycemia

If your blood sugar is below 70 mg/dL and you're awake and alert, follow the rule of 15/15.

Rule of 15/15

1. **Have 15 grams of sugar.** If your blood sugar is below 70 mg/dL, have a simple, rapid-acting sugar. These are foods and drinks that have glucose, dextrose, or sugar listed as the main ingredient. They have little to no (zero) fat or protein. Your body can absorb these items faster. This helps to bring your blood sugar up quickly.

Choose one of these rapid-acting sugars in these amounts:

- Chew 4 large glucose tabs. You can buy these at your local pharmacy without a prescription.
- Drink 4 ounces of fruit juice or soda (not diet soda).
- Chew 5 to 6 gummy candies or hard candies, such as LifeSavers®.
- Have 1 tablespoon of honey or syrup (not sugar-free syrup).

Do not eat chocolate, cookies, or a regular meal or snack to treat low blood glucose. Your body does not absorb these items very quickly. These foods may make your blood glucose even lower at first, then too high 1 to 2 hours later.

1. **Wait 15 minutes, then re-test your blood sugar.** Re-test your blood sugar after 15 minutes. If your blood glucose is still less than 70 mg/dL, have another 15 grams of sugar. Re-test again 15 minutes later. Keep doing this until your blood glucose level is 70 mg/dL or higher.

Once your blood sugar is 70 mg/dL or higher, have your next meal or small snack within 1 hour. For example, a small snack may include one of the following:

- Peanut butter or cheese with 4 to 5 crackers.
- Half of a sandwich and 4 ounces of milk.
- A single-serve container of Greek yogurt.

What is severe hypoglycemia?

Hypoglycemia can get worse if you do not treat it quickly. Severe hypoglycemia happens when your blood glucose level goes below 54 mg/dL, or when you cannot take care of yourself.

Symptoms of severe hypoglycemia can include:

- Feeling very confused.
- Having trouble following directions or doing simple, routine tasks.
- Trouble speaking or slurred speech.
- Blurry vision or seeing double.
- Loss of balance or trouble walking.
- Suddenly feeling very weak or sleepy.

Talk with your family and friends about the signs of low blood sugar. Teach them what to do if you feel faint or become confused. **If you become unconscious (pass out), someone must call 911 for an ambulance.**

How to treat severe hypoglycemia

If your blood sugar is below 54 mg/dL, have 24 grams of simple, rapid-acting sugar instead of 15 grams. Choose one of these:

- Chew 6 large glucose tabs. You can buy these at your local pharmacy without a prescription.
- Drink 6 ounces of fruit juice or soda (not diet soda).
- Chew 8 to 9 gummy candies or hard candies, such as LifeSavers®.
- Take 1 ½ tablespoons of honey or syrup (not sugar-free syrup).

Wait 15 minutes, then re-test your blood glucose. Keep doing this until your blood glucose level is 70 mg/dL or higher.

Once your blood sugar is 70 mg/dL or higher, have your next meal or small snack within 1 hour. For example, you can choose to eat one of the following:

- Peanut butter or cheese with 4 to 5 crackers.
- Half of a sandwich and 4 ounces of milk.
- A single-serve container of Greek yogurt.

Emergency glucagon treatments

An emergency glucagon treatment is a prescription medication used to treat severe hypoglycemia. Your healthcare provider may prescribe this if you are at a very high risk for severe hypoglycemia.

If your healthcare provider prescribed an emergency glucagon treatment, read *About Emergency Glucagon Treatments* (www.mskcc.org/pe/about_emergency_glucagon_treatments) for more information.

How to prevent hypoglycemia

It is always best to prevent hypoglycemia before it happens. You can usually do this by balancing your medications, what you eat, and your level of activity. Keeping this balance isn’t always easy. Your provider, diabetes educator, and dietitian can work with you to lower your risk of hypoglycemia.

Follow these steps to lower your risk of hypoglycemia:

- Check your blood sugar more often, especially if you have had hypoglycemia before.
- If you take diabetes medications, be sure to eat enough. Do not skip meals.
- Talk with your provider before:
  - Changing your medications.
  - Starting a new exercise routine. Exercise causes your body to use extra glucose.
  - Changing how much you eat.
- If you drink alcohol, talk with your healthcare provider about how to do so safely.

When To Call Your Healthcare Provider

Call your healthcare provider any time you have hypoglycemia. They may need to change your medication.

> If you have any questions, contact a member of your care team directly. If you're a patient at MSK and you need to reach a provider after 5 p.m., during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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