

# Severe Hypoglycemia

## THE MORE YOU KNOW

Hypoglycemia occurs when the amount of glucose (sugar) in the blood is lower than it should be. It becomes severe when levels are below 40 mg/dL and the patient isn't able to function. Severe hypoglycemia can occur in patients with diabetes who take insulin or certain medicines like sulfonylureas. Effective prevention and treatment require a collaboration between you, your family and friends, and your healthcare team. It is important to talk honestly, ask questions, and make sure you understand your care plan. Healthcare providers should provide training on blood glucose management to patients and caregivers and ensure that patients have all the necessary information for self-care.

**Studies show that just under 20%—or one-fifth—of all hospital admissions are due to severe hypoglycemia (less than 40 mg/dL).**

## Think

### As a patient, what do I need to KNOW?

When blood glucose levels begin to drop, quick action can help you avoid a trip to the emergency department. **Do you know what to do?**

- What is my blood glucose (sugar) target or goal?
- What are the symptoms of hypoglycemia?
- Do I understand my blood glucose (sugar) management plan? How does it affect my daily routine?
- What are my concerns? What am I confident about?
- Do I always have symptoms of hypoglycemia when my glucose is less than 70?
- Do I know how to treat it?

## Ask

### What should I ask my provider?

**Talk with your healthcare provider.** Get answers to any questions you have. Be sure to understand how to prevent and treat severe hypoglycemia.

- What is severe hypoglycemia? How can I prevent it?
- Am I at risk for severe hypoglycemia? Do I take medicines that might cause it?
- What are the symptoms of severe hypoglycemia? What steps should I take if I notice them?
- What should I have in my emergency kit? Where should I keep it?
- How can my friends, family, and caregivers help? What should they do if I am unable to communicate? How do they give me emergency glucagon?



## Inform

### What do I need to KNOW?

**Prevention, preparation, and action** are the keys to addressing severe hypoglycemia. Recognize hypoglycemia and act early enough to keep blood glucose (sugar) from dropping to dangerous levels.

- Following my treatment plan can help prevent hypoglycemia.
- Blood glucose (sugar) can drop quickly. It is essential to be prepared to treat hypoglycemia at all times.
- Fast-acting sugar (glucose tablets, orange juice, hard candy) can treat hypoglycemia symptoms early and help prevent blood glucose from dropping to severe levels.
- Glucagon is the only emergency rescue treatment for severe hypoglycemia. It should be kept nearby at all times.
- Treating severe hypoglycemia usually requires help from others to administer glucagon.

## What Is Glucagon?

In the body, the level of glucose (sugar) in the blood is controlled by hormones. One is insulin. Another is glucagon. Glucagon and insulin are closely related. They work together to help keep blood glucose levels stable. Put simply, insulin keeps glucose levels from going too high, and glucagon keeps them from going too low.

If you are at risk for severe low blood glucose, you will be given a prescription for rescue glucagon. This medicine will reverse a severe low blood glucose event. Because severe low blood glucose causes confusion and unconsciousness, it is unlikely you can give yourself the glucagon. Therefore, it must be administered by a trained caregiver or bystander.

Currently, rescue glucagon is available only in injectable form. It comes in a powdered form along with a syringe filled with fluid. The powder and liquid are mixed just before the injection is given.

Other methods to deliver emergency glucagon, including an injection pen and nasal spray, are on the horizon.

**Be sure to fill your glucagon prescription and carry it with you. It could save your life!**

### As a provider, what do I need to KNOW?

**Each person is different.** Focusing on an individual's unique lifestyle is key. What do you need to know about your patient to provide the best care?

- What is the patient's self-care plan?
- Is the patient at high risk for hypoglycemia? Is the patient at high risk for hypoglycemia unawareness?
- What is a safe target glucose or A1C for the patient?
- How much support do they have?
- What are their areas of concern?
- What do they know about hypoglycemia?
- Do they know how to treat it?
- Have they filled a prescription for glucagon? If not, what are the barriers?
- Do they know how emergency glucagon is administered?



### What should I ask my patient?

**Begin the conversation.** Learn the patient's past experiences with hypoglycemia and how they were handled. Focus on how you can help the patient better understand and manage hypoglycemia.

- Do you know what hypoglycemia is and how to prevent it?
- Do you know the symptoms of hypoglycemia? Have you had any of them? How often? Are you able to recognize or feel those symptoms?
- What do you do to treat hypoglycemia?
- Have you ever lost consciousness or gone to the hospital because of hypoglycemia?
- Do you test your blood glucose? Can you show me how you test it?
- Below what level do you start having symptoms of hypoglycemia? When do you notice your blood glucose is going low (after exercise, during the night, etc.)?
- Do you have a glucagon emergency kit? Where do you keep it?
- Is there someone who knows how to give you your emergency glucagon? Are they comfortable with doing it? Do they know what to do afterward?

### What does my patient need to KNOW?

As a provider, **you play a key role** in making sure the patient has the necessary information to help prevent, prepare for, and treat low blood glucose. The information you provide can help decrease hospital visits, increase savings, and improve patient well-being.

- Blood glucose levels can drop, but that does not have to lead to severe hypoglycemia.
- Checking blood glucose at the first sign of hypoglycemia can lead to action and prevent blood glucose from going too low.
- It is important to always be prepared for a severe hypoglycemia emergency.
- If not treated, severe hypoglycemia can lead to serious issues, such as seizures, coma, and even death.
- It is essential to fill your glucagon prescription and keep it with you.
- Educating family or friends on low blood glucose and its treatment is crucial.

**Patients Have Questions. We Have Answers.**

The Hormone Health Network is your trusted source for endocrine patient education. Our free, online resources are available at [hormone.org](http://hormone.org).

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Additional Editing By:

Leonor Corsino, MD, MHS, FACE  
Deena Adimoolam, MD