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Hypoglycemia

Insulin shock; Low blood sugar

Last reviewed: June 27, 2012.

Hypoglycemia is a condition that occurs when your blood sugar (glucose) is too low.

Blood sugar below 70 mg/dL is considered low. Blood sugar at or below this level can harm you.

Causes, incidence, and risk factors

Hypoglycemia occurs when:

- Your body's sugar (glucose) is used up too quickly
- Glucose is released into the bloodstream too slowly
- Too much insulin is released into the bloodstream

Insulin is a hormone that reduces blood sugar. It is produced by the pancreas in response to increased glucose levels in the blood.

Low blood sugar is most commonly seen in people with diabetes who are taking insulin or other medicines to control their diabetes.

Babies who are born to mothers with diabetes may have severe drops in blood sugar.

Hypoglycemia in people who do not have diabetes may be caused by:

- Drinking alcohol
- **Insulinoma** - a rare tumor in the pancreas that produces too much insulin
- Lack (deficiency) of a hormone, such as cortisol or thyroid hormone
- Severe heart, kidney, or liver failure or a body-wide infection
- Some types of weight-loss surgery

Symptoms

Symptoms you may have when your blood sugar gets too low include:

- **Double vision** or blurry vision
- Fast or pounding heartbeat
- Feeling cranky or acting aggressive
- Feeling nervous
- Headache
- **Hunger**
- Shaking or **trembling**
- Sleeping trouble
- Sweating
- Tingling or numbness of the skin

- Tiredness or weakness
- Trouble sleeping
- Unclear thinking

Sometimes your blood sugar may be too low, even if you do not have symptoms. If your blood sugar gets too low, you may:

- Faint
- Have a [seizure](#)
- Go into a coma

Signs and tests

Home monitoring of blood sugar with a fingerstick sample will show readings lower than 70 mg/dL on your glucose monitor.

A blood glucose test in a blood sample taken from your veins will be low.

Treatment

Treatment depends on the cause. People with diabetes will need to learn how to treat and prevent low blood sugar levels.

If hypoglycemia is caused by an insulinoma (insulin-releasing tumor), surgery to remove the tumor is the best treatment.

Complications

Severe hypoglycemia is a medical emergency that may cause [seizures](#) and permanent brain damage. Severe hypoglycemia in which you become unconscious is also called insulin shock.

Calling your health care provider

If signs of low blood sugar do not improve after you have eaten a snack that contains sugar:

- GET A RIDE to the emergency room, or
- Call a local emergency number (such as 911)

DO NOT drive when your blood sugar is low.

Get medical help right away for a person with diabetes or low blood sugar who:

- Becomes less alert
- Cannot be woken up

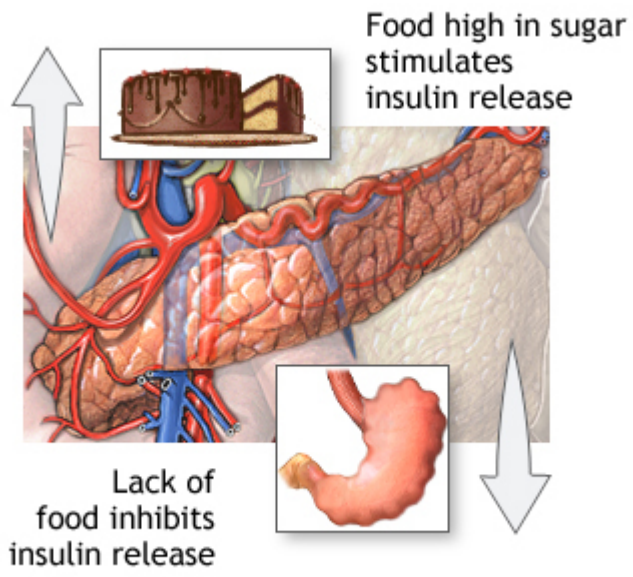
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1. Cryer PE. Hypoglycemia. In: Melmed S, Polonsky KS, Larsen PR, Kronenberg HM, eds. *Kronenberg: Williams Textbook of Endocrinology*. 12th ed. Philadelphia, Pa: Saunders Elsevier; 2011:chap 34.

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Reviewed by: Shehzad Topiwala, MD, Chief Consultant Endocrinologist, Premier Medical Associates, The Villages, FL. Review provided by VeriMed Healthcare Network. Also reviewed by David Zieve, MD, MHA, Medical Director, A.D.A.M. Health Solutions, Ebix, Inc.

Figures



Food and insulin release

Insulin is a hormone secreted by the pancreas in response to increased glucose levels in the blood.

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