Hypoglycemia

Hypoglycemia (low blood sugar) is a sign of a problem; it is not a disease itself.

The brain and other tissues in the body use glucose, or sugar, as fuel. You get most of the glucose your body needs from your diet. The liver and kidneys are able to make glucose when necessary. Excess glucose is stored as glycogen (many glucose molecules linked together) in the liver and in muscle.

Tell your doctor if you have frequent or recurring episodes of hypoglycemia because this may indicate an underlying health problem.

How the Body Controls Blood Sugar
A normal blood sugar level is between 70 and 110 mg/dL. Between meals, the blood sugar level gradually decreases. The body has several ways to keep blood sugar within the normal range.

- First, the amount of insulin released by the pancreas decreases. Insulin is a hormone that helps the tissues of the body absorb glucose from the blood. When the amount of insulin in the blood decreases, glucose stays in the blood instead of entering tissues to be used as fuel.
- If blood sugar continues to decrease, the amount of glucagon released by the pancreas increases. Glucagon is a hormone that signals the liver to break down glycogen. Glucose enters the bloodstream, raising the blood sugar level.
- Another hormone, epinephrine, also signals the liver to break down glycogen. Epinephrine also signals the liver and kidneys to increase the amount of glucose they make.
- If blood sugar decreases further, other signaling molecules make you feel hungry. Sugars and carbohydrates from the foods you eat help to raise your blood sugar level.

Symptoms of Hypoglycemia
When people have low blood sugar, they may feel anxious, irritable, confused, tired, shaky, or hungry. They may also have palpitations (rapid, pounding, and/or irregular heartbeat) or tremors. Sweating is common during periods of hypoglycemia. Seizures and loss of consciousness are rare. If hypoglycemia is severe and prolonged, it can result in death.

Causes
Medications used to treat diabetes are the most common cause of hypoglycemia. These medications include insulin and drugs that stimulate the pancreas to make insulin for patients with diabetes. Hypoglycemia can also be caused by certain other medications and by heavy alcohol drinking.

Other causes of hypoglycemia are rare. They include kidney, liver, or heart failure, infection, low levels of certain hormones (such as cortisol or growth hormone), certain tumors, some types of stomach surgery, and starvation.

Treatment
Taking glucose tablets, drinking juice, or eating food can raise the blood sugar level. Your doctor might prescribe glucagon, which can be given as an injection. If you take a medication that can cause hypoglycemia, your doctor might adjust your medication dose.

For more rare causes of hypoglycemia, treatment might involve eating frequently or taking hormones. Surgery or chemotherapy may help if a tumor is causing hypoglycemia.

FOR MORE INFORMATION
- American Diabetes Association
  /blood-glucose-control/hypoglycemia-low-blood.html
- National Library of Medicine

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