

# Blood test: Insulin



## What it is:

This test measures the amount of insulin, the hormone that lets cells take in glucose. Glucose, a sugar that comes from food, is the body's main source of energy. Our bodies break down food into glucose and other nutrients that are absorbed into the bloodstream from the gastrointestinal tract. Glucose levels in the blood rise after meals and trigger the pancreas to make insulin and release it into the blood. Insulin works like a key that opens the doors to cells and allows the glucose in. Without insulin, glucose can't get into the cells and stays in the bloodstream.

For good health, the body must be able to keep insulin and glucose levels in balance. With too little insulin, blood sugar remains higher than normal (a condition known as hyperglycemia) and cells can't get the energy they need. With too much insulin, blood sugar decreases (hypoglycemia).

## Why it's done:

This test is often used to evaluate the cause of hypoglycemia (low blood sugar) or any other conditions related to abnormal insulin production.

## Preparation:

Your doctor will let you know if any special preparations are needed for this test. Sometimes a child will need to avoid eating and drinking for 8 hours prior to the test; other times, doctors want to check levels at specified times, such as shortly after a meal.

## The procedure:

A health professional will clean the skin surface with antiseptic, and then place an elastic band (tourniquet) around the upper arm to cause the veins to swell. A needle is inserted into a vein (usually inside of the elbow or on the back of the hand) and blood is withdrawn and collected in a vial or syringe.

The elastic band is removed and once the blood has been collected, the needle is removed and the area is covered with cotton or a bandage to stop the bleeding. Collecting blood for this test will only take a few minutes.

**What to expect:**

Collecting a blood sample is only temporarily uncomfortable and may feel like a quick pinprick. Afterward, there may be some mild bruising, which should go away in about a day.

**Getting the results:**

The blood sample will be processed by a machine. The results are usually available within a few days.

**Risks:**

The insulin test is considered a safe procedure. However, as with many medical tests, some problems can occur with having blood drawn. These include:

- Fainting or feeling lightheaded
- Hematoma (blood accumulating under the skin, causing a lump or bruise)
- Pain associated with multiple punctures to locate a vein

**Helping your child:**

A blood test is relatively painless. Still, many children are afraid of needles. Explaining the test in terms your child understands can help ease fear.

Allow your child to ask the technician any questions he or she might have. Tell your child to try to relax and stay still during the procedure, as tensing muscles and moving can make it harder and more painful to draw blood. It also may help for your child to look away when the needle is being inserted into the skin.

**If you have questions:**

If you have questions about the insulin test, speak with your doctor. You also can talk to the technician before the procedure.