rise, then the body tries to restore the balance, both by increasing insulin production and by excreting glucose in the urine.

What if my levels are too high or too low?

Severe, acute hyperglycemia or hypoglycemia can be life-threatening. Chronically high blood glucose levels can cause progressive damage to body organs such as the kidneys, eyes, heart and blood vessels, and nerves. Chronic hypoglycemia can lead to brain and nerve damage.

* Source: Lab Tests Online

Signs and tests

The following are blood glucose tests:

- **Fasting blood glucose level**
  Diabetes is diagnosed if higher than 126 mg/dL on two occasions. Levels between 100 and 126 mg/dl are referred to as impaired fasting glucose or pre-diabetes. These levels are considered to be risk factors for type 2 diabetes and its complications.
- **Random (non-fasting) blood glucose level**
  Diabetes is suspected if higher than 200 mg/dL and accompanied by the classic symptoms of increased thirst, urination, and fatigue. (This test must be confirmed with a fasting blood glucose test.)
- **Oral glucose tolerance test**
  diabetes is diagnosed if glucose level is higher than 200 mg/dL after 2 hours (This test is used more for type 2 diabetes.

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Understanding Glucose Levels

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Also known as:

Blood sugar, Fasting blood sugar, FBS, blood glucose, Oral Glucose Tolerance Test (OGTT or GTT), Urine glucose

Formal name:

Blood Glucose and Urine Glucose

What is glucose?

Glucose is a simple sugar that serves as the main source of energy for the body. The carbohydrates we eat are broken down into glucose (and a few other simple sugars), absorbed by the small intestine, and circulated throughout the body. Most of the body's cells require glucose for energy production; brain and nervous system cells not only rely on glucose for energy, they can only function when glucose levels in the blood remain above a certain level.

The body's use of glucose hinges on the availability of insulin, a hormone produced by the pancreas. Insulin acts as a traffic director, transporting glucose into the body's cells, directing the body to store excess glucose as glycogen (for short-term storage) and/or as triglycerides in adipose (fat) cells. We cannot live without glucose or insulin, and they must be in balance.

Why are glucose levels important?

Normally, blood glucose levels rise slightly after a meal, and insulin is secreted to lower them, with the amount of insulin released matched up with the size and content of the meal. If blood glucose levels drop too low, such as might occur in between meals or after a strenuous workout, glucagon (another pancreatic hormone) is secreted to tell the liver to turn some glycogen back into glucose, raising the blood glucose levels. If the glucose/insulin feedback mechanism is working properly, the amount of glucose in the blood remains fairly stable. If the balance is disrupted and glucose levels in the blood