

BLOOD GLUCOSE TEST

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What is a blood glucose test?

How can one tell if I have diabetes by examining my blood?

How do I prepare for the test and how are the results interpreted?

Who is most at risk for developing diabetes?



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Blood Glucose Test

What is a blood glucose test?

A blood glucose test is a blood test that screens for diabetes by measuring the level of glucose (sugar) in a person's blood.

How can one tell if I have diabetes by examining my blood?

Your body converts sugar, also called glucose, into energy so your body can function. The sugar comes from the foods you eat and is released from storage from your body's own tissues.

Insulin is a hormone made by the pancreas. Its job is to move glucose from the bloodstream into the cells of tissues. After you eat, the level of glucose in the blood rises sharply. The pancreas responds by releasing enough insulin to handle the increased level of glucose - moving the glucose out of the blood and into cells. This helps return the blood glucose level to its former, lower level.

If a person has diabetes, two situations may cause the blood sugar to increase:

- The pancreas does not make enough insulin
- The insulin does not work properly

As a result of either of these situations, the blood sugar level remains high, a condition called hyperglycemia or diabetes mellitus. If left undiagnosed and untreated, the eyes, kidneys, nerves, heart, blood vessels and other organs can be damaged. Measuring your blood glucose levels allows you and your doctor to know if you have, or are at risk for, developing diabetes.

Much less commonly, the opposite can happen too. Too low a level of blood sugar, a condition called hypoglycemia, can be caused by the presence of too much insulin or by other hormone disorders or liver disease.

How do I prepare for the test and how are the results interpreted?

To get an accurate plasma glucose level, you must have fasted (not eaten) for at least 8 hours prior to the test. When you report to the clinic or laboratory, a small sample of blood will be taken from a vein in your arm. According to the practice recommendations of the American Diabetes Association, the results of the blood test are interpreted as follows:

Fasting Blood Glucose Level

If your blood glucose level is 70 to 99 mg/dL (3.9 to 5.5 mmol/L). Values between 3.9 to 5.5 mmol/L are often seen in healthy people.

If your blood glucose level is 100 to 125 mg/dL (5.6 to 6.9 mmol/L).

If your blood glucose level is 126 mg/dl (7.0 mmol/L) or higher on more than one testing occasion.

What It Means

- Your glucose level is within the normal range.
- You have an impaired fasting glucose level, in other words, pre-diabetes. The condition of “Prediabetes” puts you at risk for developing Type 2 diabetes, high blood pressure, and blood lipid disorders. You have diabetes.

Who is most at risk for developing diabetes?

The following categories of people are considered “high-risk” candidates for developing diabetes:

- Individuals who are obese
- Individuals with first-degree relatives with diabetes (such as parents, children, or siblings)
- Populations from the Middle East, the Arab Peninsula and North Africa among many others
- Women who developed diabetes while they were pregnant or gave birth to large babies (9 pounds or more)
- Populations from the Middle East, the Arab Peninsula and North Africa among many others
- Individuals with high blood pressure (140/90 or higher)
- Individuals with high-density lipoprotein (HDL, the “good cholesterol level”) below 10.8 mg/dl or triglyceride levels at or above 50.4 mg/dl
- Individuals who have impaired fasting glucose or impaired glucose tolerance
- Individuals who are physically inactive; engaging in exercise less than three times a week

In addition to testing the above individuals at high risk, the National Diabetes Committee of UAE recommends screening all individuals age 30 and older.

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