



# Mission Possible

## BLOOD GLUCOSE TEST WHAT'S YOUR SCORE?

A blood glucose test measures the amount of a type of sugar, called glucose, in your blood. Glucose comes from carbohydrate foods. It is the main source of energy used by the body. Insulin is a hormone that helps your body use and control the amount of glucose in your blood. Insulin is produced in the pancreas and released into the blood when the amount of glucose in the blood rises.

Normally, your blood glucose levels increase slightly after you eat. This increase causes your pancreas to release insulin so that your blood glucose levels do not get too high. Blood glucose levels that remain high over time can damage your eyes, kidneys, nerves, and blood vessels.

Several different types of blood glucose tests are used.

- **Fasting blood sugar (FBS)** measures blood glucose after you have not eaten for at least 8 hours. It often is the first test done to check for diabetes.
- **2-hour postprandial blood sugar (2-hour PC)** measures blood glucose exactly 2 hours after you eat a meal.
- **Random blood sugar (RBS)** measures blood glucose regardless of when you last ate. Several random measurements may be taken throughout the day. Random testing is useful because glucose levels in healthy people do not vary widely throughout the day. Blood glucose levels that vary widely may indicate a problem. This test is also called a casual blood glucose test.
- **Oral glucose tolerance test** is used to diagnose diabetes that occurs during pregnancy (gestational diabetes). An oral glucose tolerance test is a series of blood glucose measurements taken after you drink a sweet liquid that contains glucose. This test is not recommended for diagnosing diabetes in a person who is not pregnant. For more information, see the medical test Gestational Diabetes.

### Why It Is Done

Blood glucose tests are done to:

- Check for diabetes.
- Monitor treatment of diabetes.
- Check for diabetes that occurs during pregnancy (gestational diabetes).
- Determine if an abnormally low blood sugar level (hypoglycemia) is present.

### Results

Fasting blood glucose	70–99 milligrams per deciliter
2 Hours after eating	70–145 mg/dL
Random (casual)	70–125 mg/dL

## High Values

The American Diabetes Association (ADA) criteria for diagnosing diabetes are met when any of the following results have been repeated on at least two different days:

- A fasting blood glucose level is 126 mg/dL (7.0 mmol/L) or higher.
- A 2-hour oral glucose tolerance test result is 200 mg/dL (11.1 mmol/L) or higher.
- Symptoms of diabetes are present and a random blood glucose test is 200 mg/dL (11.1 mmol/L) or higher. Symptoms of diabetes include increased thirst and frequent urination (especially at night), unexplained increase in appetite, unexplained weight loss, fatigue, blurred vision, and tingling or numbness in the hands or feet.

If your fasting blood glucose level is between 100 mg/dL (5.5 mmol/L) and 126 mg/dL (7.0 mmol/L), you are considered to have prediabetes (impaired fasting glucose), and you have an increased chance of getting diabetes.

Other conditions that can cause high blood glucose levels include severe stress, heart attack, stroke, Cushing's syndrome, medications such as corticosteroids, cancers, or excess production of growth hormone (acromegaly).

## What To Think About

- Other tests are needed to accurately diagnose diabetes. A blood glucose test may not identify some people with prediabetes or early diabetes. Many experts recommend using a glucose tolerance test if the result of a fasting blood glucose test is between 100 mg/dL (5.5 mmol/L) and 126 mg/dL (7.0 mmol/L). This range is above the normal range but below the range that indicates diabetes. For more information, see the medical test Oral Glucose Tolerance Test.
- Glucose levels in urine also can be measured. Many people with diabetes have glucose in their urine. However, the level in the blood must be very high before glucose can be detected in the urine. For this reason, tests for glucose in urine are not used to diagnose or monitor diabetes.

## Make the Link!

Did you know that 2 out of 3 people with diabetes die from heart disease and stroke? **Make the Link! Diabetes, Heart Disease and Stroke** is an initiative of the American Diabetes Association and the American College of Cardiology, aimed at increasing awareness of the link between diabetes and heart disease.

**Make the Link!** stresses that diabetes management is more than control of blood glucose. People with diabetes must also manage blood pressure and cholesterol and talk to their health provider to learn about other ways to reduce their chance for heart attacks and stroke.

Go to the following interactive link on the American Diabetes Association website to learn more about Make the Link!

**<http://www.diabetes.org/heart-disease-stroke.jsp>**

## How Can I Learn More?

1. Sign up for **APPLEGRAM**, Blanchard Valley Regional Health Association's new e-health newsletter. Go to [www.bvha.org](http://www.bvha.org), click **APPLEGRAM**.
2. This information was taken from WebMD, [www.webmd.com](http://www.webmd.com) and the American Diabetes Association, [www.diabetes.org](http://www.diabetes.org), websites. Please visit their websites for additional information.
3. Addition websites: National Institutes of Health, [www.nih.gov](http://www.nih.gov); National Diabetes Information Clearinghouse, <http://diabetes.niddk.nih.gov>; and National Diabetes Education Program, [www.ndep.nih.gov](http://www.ndep.nih.gov)

Source: WebMD and American Diabetes Association