

Fasting Blood Sugar Levels

Fasting, as the name suggests, means refraining from eating or drinking any liquids other than water for eight hours. It is used as a test for diabetes.

After fasting, a carbohydrate metabolism test is conducted which measures blood glucose levels.

Glucagon during fasting

When fasting the hormone glucagon is stimulated and this increases plasma glucose levels in the body.

If a patient doesn't have diabetes, their body will produce insulin to rebalance the increased glucose levels.

However people with diabetes either don't produce enough insulin to rebalance their blood sugar (typically in [type 1 diabetes](#)) or their body is not able to use the insulin effectively enough (typical of type 2 diabetes).

Consequently when [blood glucose levels](#) are tested, people with diabetes will have blood sugar levels significantly higher than people who do not have diabetes.

What is the fasting blood sugar test used for?

The fasting blood sugar test is also used to test the effectiveness of different medication or dietary changes on people already [diagnosed as diabetic](#).

Fasting tests

The fasting test should be conducted on two separate occasions to ensure consistent results and in order to avoid a false diagnosis.

This is the case as increased blood glucose levels may be as a result of Cushing's syndrome liver or [kidney disease](#), eclampsia and pancreatitis.

However many of these conditions are often picked up in lab diagnostic tests.

Fasting test results

The results of a fasting test with respect to glucose levels in the body are as follows:

- **Normal:** 3.9 to 5.5 mmols/l (70 to 100 mg/dl)
- **Prediabetes or Impaired Glucose Tolerance:** 5.6 to 7.0 mmol/l (101 to 126 mg/dl)
- **Diagnosis of diabetes:** more than 7.0 mmol/l (126 mg/dl)

The [American Diabetes Association](#) reduced the level of diagnosis in this test from 140 to 126 mg/dl in 1997.

© DR. SHAHJADA SELIM