Ketone Bodies (Blood)

Does this test have other names?

Ketones, serum; ketones, blood

What is this test?

This blood test measures ketones, a byproduct of fat metabolism, in the blood. When you have type 1 diabetes with a high level of ketones in your blood, it's called diabetic ketoacidosis (DKA). DKA is a complication of diabetes that can be fatal if it's not treated.

DKA most often occurs in people with type 1 diabetes. When you have type 1 diabetes, your body doesn't make insulin, a hormone that regulates the breakdown of fat and carbohydrates. When you have type 2 diabetes, your body doesn't make enough insulin or it doesn't react to insulin normally. When your body doesn't have enough insulin. Or doesn't use it correctly, it breaks down fat for energy instead of glucose, or sugar. The breakdown of fat produces ketones. They can build up in your blood and spill over into your urine if your diabetes is not under control. If your ketone levels get too high, it could cause you to go into a diabetic coma.

Why do I need this test?

You may have this test if you have symptoms of DKA. These include:

- Extreme thirst

- Tiredness

- Vomiting

- Trouble breathing

- A fruity odor on your breath

- High blood sugar levels

- High levels of ketones in your urine. You can test for ketones in your urine with test strips.

What other tests might I have along with this test?

Your healthcare provider might order blood glucose levels to see if your diabetes is out of control. You might also have a urine test to check for ketones in your urine.

Your healthcare provider also might order an electrocardiogram to check your heart's electrical activity. DKA can affect the heart.

Your healthcare provider might also order an arterial blood gas test to check the acid-base and potassium levels of your blood. A buildup of acid in the bloodstream would cause these levels to be very abnormal.

What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

A normal test result is negative and means you have no ketone bodies in your blood. If you test positive for ketones, it could mean your diabetes is not under control. You could have DKA.

People who do not eat enough calories can also develop high levels of ketones. This includes people with alcoholism and those with an eating disorder or malnutrition from a severe illness, such as cancer.

How is this test done?

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand.

Does this test pose any risks?

Having a blood test with a needle carries some risks. These include bleeding, infection, bruising, and feeling lightheaded. When the needle pricks your arm or hand, you may feel a slight sting or pain. Afterward, the site may be sore.

What might affect my test results?

Certain diets, such as a high-protein diet or 1 that is high in fat and low in carbohydrates (ketogenic diet), also can cause increased ketones in your blood. Drinking large amounts of alcohol also can affect your test results.

You might also have a high level of ketones in your blood if you have diabetes and you're sick with a cold or the flu.

How do I get ready for this test?

You don't need to prepare for this test. Be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use. Some, such as diuretics and blood pressure medicines, can lead to a false-positive ketone test.