

Myoglobin (Blood)



Does this test have other names?

Serum myoglobins, myoglobin-serum

What is this test?

This test measures the amount of a protein called myoglobin in your blood. It's done to help diagnose conditions caused by muscle damage.

Myoglobin is found in your heart and skeletal muscles. There it captures oxygen that muscle cells use for energy. When you have a heart attack or severe muscle damage, myoglobin is released into your blood.

Myoglobin increases in your blood 2 to 3 hours after the first symptoms of muscle damage. It usually peaks about 8 to 12 hours later.

Your kidneys filter your blood for myoglobin so that it can be passed out of your body in your urine. But too much myoglobin can overwhelm your kidneys and lead to kidney failure. In some cases, healthcare providers will use a urine test for myoglobin to help find the problem and protect your kidney health.

Why do I need this test?

You may need this test if you have a severe muscle injury, such as with trauma or a condition that damages muscle. Symptoms of muscle injury or damage include:

- Muscle pain
- Dark-colored urine
- Fever
- Fatigue
- Nausea and vomiting
- Belly pain

You may also have this test if your healthcare provider suspects you have had a heart attack, which causes damage to the heart muscle. This test may be done every 2 or 3 hours if you go to the emergency room with chest pain or other symptoms of a heart attack.

This test will help your healthcare provider find out whether your injuries need treatment right away. If your myoglobin level rises too high, you may have to get intravenous fluids or other treatments to help flush the extra myoglobin out of your body.

What other tests might I have along with this test?

Higher myoglobin levels can mean that your muscles have been damaged. If your healthcare provider suspects muscle damage, they may order other tests to check the following:

- Complete blood count, including a differential and platelet count
- Blood urea nitrogen, creatinine, and routine electrolytes, including potassium
- Calcium, phosphate, albumin, and uric acid

- Creatine phosphokinase

A myoglobin test is not considered the most specific for diagnosing a heart attack. But if your provider thinks your heart has been damaged from a heart attack, they may order tests to confirm it. These include:

- **Blood tests for other heart attack markers.** These tests will look at troponin and other substances that may be released when your heart is damaged.
- **Electrocardiogram.** This test is done to watch your heart's electrical impulses.
- **Imaging tests.** Various scans can check your heart for damage, clots, and other problems that may affect its ability to pump your blood.

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.

Results are given in micrograms per liter (mcg/L). Normal results are 5 to 70 mcg/L.

Higher myoglobin levels mean that you may have muscle damage, but they don't show where the damage took place. Your healthcare provider will likely order other tests to confirm where the damage is.

Muscles can be injured in many ways, including:

- Coma or another situation in which you don't move for a long period of time
- Surgery
- Certain infections
- Poisons and certain medicines
- Conditions, such as muscular dystrophy
- Unusually strenuous exercise

Higher results may also be caused by:

- Kidney failure
- Shock
- Electrical shock
- Malignant hyperthermia, an inherited condition in which your body temperature rises rapidly and your muscles contract when you have general anesthesia

Lower results may mean you have:

- Rheumatoid arthritis
- Myasthenia gravis
- Antibodies to myoglobin in your blood

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?

Cocaine and heavy alcohol use can affect your results. So, too, can certain medicines.

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.

© 2000-2027 The StayWell Company, LLC. All rights reserved. This information is not intended as a substitute for professional medical care. Always follow your healthcare professional's instructions
This information is not intended as a substitute for professional medical care. Always follow your Healthcare professional's instructions. Copyright Krames LLC.