

Acetylcholine Receptor Antibody (Blood)



Does this test have other names?

Acetylcholine Receptor (AChR) Binding Antibody, AChR Antibody, Myasthenia Gravis Antibodies

What is this test?

This test measures the concentration of a substance called acetylcholine receptor (AChR) antibody in your blood.

Acetylcholine is a chemical that helps muscles contract. It acts as a messenger between nerves and muscles. People who have myasthenia gravis (MG) often make an abnormal protein called acetylcholine receptor antibody. This protein interferes with how acetylcholine works. At first, this causes muscle weakness in the eye. You may have double vision or drooping eyelids. MG is an autoimmune disease because your body makes the antibody that attacks the way acetylcholine normally works.

MG is rare, but it can affect people of any age. It's most common in women younger than 40 and men older than 60. It's not contagious, although sometimes the newborn baby of a mother with MG can show symptoms for a few weeks to several months that disappear with treatment.

Most people with the disorder have a normal life span but need treatment to control its debilitating symptoms. These often include:

- Shortness of breath
- Trouble using normal speech
- Drooping eyelids
- Unsteady walk
- Weakness in the arms, legs, neck, and fingers

Why do I need this test?

You might have this test if your healthcare provider suspects that you have MG. Symptoms of MG can range from problems with breathing muscles to weakness of muscles throughout your body. The most common symptoms are weakness in muscles that control:

- Eye and eyelid motion, found with ocular MG
- Facial expression
- Chewing and swallowing
- Talking
- Arm and leg motion

What other tests might I have along with this test?

Your healthcare provider may also order these tests to check for MG:

- **Muscle-specific receptor tyrosine kinase (MuSK).** The MuSK antibody may be found in 3 to 4 in 10 people with MG who don't have AChR antibody.

- **Repetitive nerve stimulation (RNS).** This is used to test the strength with which muscles respond to low-frequency nerve stimulation. People with MG are likely to have a progressively weaker response as the nerve stimulation continues.
- **Single fiber electromyography (SFEMG).** People with MG and certain other disorders respond to the electrical stimulation of this test with "muscle jitter." This is an unsteady, jittery contraction. If you have a normal SFEMG test in a weak muscle, it means that something other than MG is causing the weakness.
- **Imaging scans.** CT or MRI scans can be used to diagnose thymoma. This is a tumor of the thymus gland that sometimes develops with MG.
- **Lung function tests.** These measure the strength of the muscles involved in breathing.

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.

This test can confirm but not completely rule out MG.

If you have a higher concentration of AChR antibody, it means that you may have MG. Even with a normal level, it's still possible that you have MG. Most people with MG who have general muscle weakness have AChR antibody. In addition, about half of people with MG affecting the eyes will have the antibody.

How is this test done?

The test requires a blood sample, which is drawn through a needle from a vein in your arm.

Does this test pose any risks?

Taking a blood sample with a needle carries small risks that include bleeding, infection, bruising, or feeling dizzy. When the needle pricks your arm, you may feel a slight stinging sensation or pain. Afterward, the site may be slightly sore.

What might affect my test results?

Timing is important. Having anesthesia or muscle relaxants for surgery within 48 hours of the test may give a false-positive result.

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.

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