

Gram Stain



Does this test have other names?

Gram's stain

What is this test?

This test is done to look at samples to find out if you have a bacterial infection—and if so, what kind. Samples for gram staining may be collected from different areas of the body. They include:

- Lining of the chest, belly (abdomen), and joints
- Fluid around the brain and spinal cord
- Throat
- Mucus from the lungs
- Wound drainage
- Drainage from genitals

If you have a bacterial infection, your fluid sample will have bacteria in it. Some germs are either gram-positive or gram-negative. The difference in these bacteria is because of a special substance in the membrane of the organism. They can all cause illness. A gram stain may also help to diagnose a fungal infection.

Why do I need this test?

You may need this test if your healthcare provider thinks that you have a bacterial infection. Your provider will also need to find out what type of bacteria is causing it.

What other tests might I have along with this test?

Depending on your symptoms, health history, and physical exam, you may have more tests. For example, if you have a lung infection, you may need a chest X-ray or CT scan. Or you may need lung function tests to see how well your lungs are working. You may also have blood tests.

What do my test results mean?

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

Results will show:

- The color of your gram stain
- If the bacteria are gram-positive or gram-negative
- The shape of the bacteria

A gram stain can't always show the exact type of bacteria causing an illness. But it can often help your healthcare provider make a diagnosis.

How is the test done?

This test requires a sample of a body fluid. Some samples may be collected with sterile swabs. Others may be collected with a syringe or needle. The area where fluid is collected depends on where your infection is.

For example, if you have a sore throat, your healthcare provider will take a swab of your throat. If you are being tested for bacterial pneumonia, you will likely have to give a sample by coughing up mucus. Or if your healthcare provider wants to check your knee joint, a needle is used to get a sample of joint fluid.

Does this test pose any risks?

Samples collected with swabs do not have 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.

Talk with your healthcare provider about the risks of taking a sample. For example, you may need the fluid around your brain and spinal cord checked. The procedure to do this is more complex.

What might affect my test results?

Taking prescription antibiotics may result in a false-negative. This means the test may not correctly show an infection that you have.

How do I get ready for this test?

Ask your healthcare provider how you should prepare for tests that are done with a needle or syringe.

If you have to cough up mucus from your lungs, your provider may suggest that you stop eating 1 to 2 hours before the test. You may also be asked to rinse your mouth before coughing.

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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