

CD4-CD8 Ratio



Does this test have other names?

CD4/CD8 ratio T-cell test

What is this test?

This test looks at the ratio of 2 important types of white blood cells in your blood.

Lymphocytes are a type of white blood cell in your immune system. This test looks at 2 of them, CD4 and CD8. CD4 cells lead the fight against infections. CD8 cells can kill cancer cells and other invaders.

If you have HIV, your CD4 cell count may be low. Without HIV treatment, your number of CD4 cells will likely keep falling. A lack of CD4 cells usually leads to more frequent infections.

This test looks at the ratio of CD4 cells to CD8 cells. The ratio tells your healthcare provider how strong your immune system is and helps predict how likely you are to develop an infection.

In addition to HIV/AIDS, conditions that can be kept track of with this test include infectious mononucleosis and other viral infections, chronic lymphocytic leukemia, Hodgkin disease, aplastic anemia, and neurological disorders like multiple sclerosis and myasthenia gravis.

Why do I need this test?

You may need this test if your healthcare provider thinks you have HIV. Some people infected with HIV may develop flu-like symptoms within a few weeks of getting the virus. But other people have no symptoms at all.

Although the test looks at the ratio of CD4 cells to CD8 cells, your healthcare provider may focus on the results of the CD4 count.

You may also have this test to see how well HIV treatment is working.

What other tests might I have along with this test?

Your healthcare provider may also order other tests to help diagnose HIV. These include:

- HIV test
- Complete blood count

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 for the ratio are given as a number. The results for each cell count are given as a number per cubic millimeter (/mm³) or a number per microliter.

A normal CD4/CD8 ratio is greater than 1.0, with CD4 lymphocytes ranging from 500 to 1200/mm³ and CD8 lymphocytes ranging from 150 to 1000/mm³.

If your ratio is higher than 1, it means your immune system is strong and you may not have HIV.

If your ratio is less than 1, you may have:

- HIV
- AIDS if your CD4 count is less than 200/mm³
- Bone marrow problems related to chemotherapy
- Anemia
- Multiple sclerosis, myasthenia gravis, or another nervous system condition
- Chronic infection

Higher than normal results may mean you have:

- Major infection
- Viral infection
- Type of blood 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?

Pregnancy can affect your results. Women with HIV may have higher levels of white blood cells, which affects the proportion of CD4 cells. Drinking too much alcohol can also affect your results. Certain medicines, such as corticosteroids, can affect your results.

How do I get ready for this test?

You don't need to prepare for this test. But tell your healthcare provider if you are pregnant, are a heavy alcohol user, or are taking medicines that could affect your white blood cell count. Be sure your 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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