

Is My Treatment Regimen Working?

How will I know if my HIV treatment regimen is working?

Your health care provider will use two important tests to monitor your treatment **regimen**: **CD4 count** and **viral load** test. Both tests are done using a sample of blood. The results of the tests will help your health care provider determine if the anti-HIV medications in your regimen are working.

What is a CD4 count?

HIV attacks the immune system, destroying the system's infection-fighting CD4 cells. Keeping the immune system healthy is an important goal of HIV treatment.

The CD4 count measures the number of CD4 cells in a sample of blood. Because a falling CD4 count is a sign that HIV is damaging the immune system, the test is a key factor in deciding when to start treatment. The CD4 count is also used to monitor how well treatment is working.

The CD4 count of a healthy person ranges from 500 to 1,200 cells/mm³. HIV-infected people with a CD4 count less than 500 cells/mm³ should begin taking anti-HIV medications. An HIV-infected person with a CD4 count less than 200 cells/mm³ has AIDS.

Once you start treatment, you should have a CD4 count once every 3 to 4 months. An increasing CD4 count is a sign that your treatment regimen is working. If your regimen is working well, you need a CD4 count only once every 6 to 12 months.

What is a viral load test?

Preventing HIV from multiplying is another important goal of HIV treatment. The viral load test measures the amount of HIV in your blood. It's the best measure of how well your treatment regimen is controlling the virus.

The best sign that treatment is working is achieving and maintaining an **undetectable viral load**. An undetectable viral load doesn't mean that you're cured. It means that the amount of HIV in your blood is too low to be detected by the viral load test.

Once you start treatment, you should have a viral load test within 2 to 8 weeks, and then once every 4 to 8 weeks until your viral load is undetectable. You need the test done only every 3 to 4 months once your viral load is undetectable. If you have an undetectable viral load for more than 2 or 3

years, your health care provider may recommend viral load testing once every 6 months.

What causes treatment to fail?

HIV treatment can fail if anti-HIV medications are unable to control the virus or protect the health of the immune system. Sometimes treatment fails because of things you can't control, such as unmanageable side effects from anti-HIV medications, interactions between anti-HIV medications and other medications you take, or the body's poor absorption of anti-HIV medications. It may be necessary to change medications to deal with these problems.

Poor **treatment adherence** is another reason HIV treatment can fail. Skipping medications allows HIV to multiply, increasing your viral load. To achieve and maintain an undetectable viral load, it's important to closely follow your treatment regimen.

Poor treatment adherence can also lead to **drug resistance**, which can cause treatment to fail, too. Skipping medications gives HIV a chance to change form and become resistant to (not affected by) the medications in your regimen.

Sometimes working with your health care provider to improve adherence can prevent treatment failure. For example, your health care provider can give you tips on how to manage medication side effects that make adherence difficult. Or your health care provider can simplify your regimen to make

Terms Used in This Fact Sheet:

CD4 count: The number of CD4 cells in a sample of blood. A CD4 count measures how well the immune system is working.

Drug resistance: When HIV mutates (changes form), causing one or more anti-HIV medications to be ineffective.

Regimen: A combination of three or more anti-HIV medications from at least two different drug classes.

Treatment adherence: Closely following an HIV treatment regimen—taking the correct dose of each anti-HIV medication at the correct time and exactly as prescribed.

Undetectable viral load: The amount of HIV in a person's blood is too low to be detected with a viral load test.

Viral load: The amount of HIV in the blood. One of the goals of antiretroviral therapy is to reduce viral load.

your medication schedule fit your busy lifestyle. (To learn more about treatment adherence, see the [Treatment Adherence](#) and [Following an HIV Treatment Regimen](#) fact sheets.)

What happens if my treatment fails?

If your treatment is failing, it may be time to adjust or change your regimen. However, before making any changes, your health care provider will consider:

- How closely you followed your treatment regimen
- Any side effects you had from your anti-HIV medications

- How well your body absorbed the medications in your regimen
- Your drug-resistance testing results

All of this information will help you and your health care provider select a new, more effective regimen. (See the [Changing an HIV Treatment Regimen](#) fact sheet.)

For more information:

Contact an *AIDSinfo* health information specialist at 1-800-448-0440 or visit <http://aidsinfo.nih.gov>. See your health care provider for medical advice.