

Is My Treatment Regimen Working?

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

Your health care provider will use two important blood tests to monitor your HIV treatment: **CD4 count** and **viral load** test. The results of the tests will help your health care provider determine if the anti-HIV medications in your treatment **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. The CD4 count of a healthy person ranges from 500 to 1,200 cells/mm³. An HIV-infected person with a CD4 count of less than 200 cells/mm³ has AIDS.

Because a falling CD4 count is a sign that HIV is damaging the immune system, the test is used to monitor HIV infection. Once treatment is started, the CD4 count is also used to monitor the effectiveness of anti-HIV medications.

Once you start treatment, you should have a CD4 count once every 3 to 4 months. An increasing CD4 count is a sign that the immune system is recovering. 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 the blood. It's the best measure of how well anti-HIV medications are controlling the virus.

The best sign that treatment is working is reaching 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.

Treatment can also fail because of **drug resistance**. Sometimes HIV changes form and becomes resistant to (not affected by) the medications in a regimen.

It may be necessary to change medications to deal with these problems.

Can skipping medications cause treatment failure?

Poor **treatment adherence** is another reason HIV treatment can fail. Skipping medications allows HIV to multiply, increasing a person's viral load. To reach and maintain an undetectable viral load, it's important to closely follow your treatment regimen. Poor treatment adherence can also give HIV a chance to change form, leading to drug resistance.

Sometimes working with your health care provider to improve adherence can prevent treatment failure. For

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.

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 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. But before making any changes, your health care provider will consider:

- 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
- How closely you followed your treatment regimen

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.