

HIV viral load testing

Summary

As a person with HIV, having your viral load tested is an important part of your plan to stay healthy. You should have the test done regularly, and it will be one of several factors you and your doctor will look at when deciding how to manage your HIV infection. This fact sheet introduces you to the viral load test and answers basic questions about how it fits into your care and treatment plan.

What is the viral load test?

A viral load test measures the amount of HIV in your blood. A sample of blood is sent to a laboratory, where the number of copies of a specific part of the virus called RNA, or ribonucleic acid, is measured. A viral load test result is given as the number of copies/millilitre (ml) of blood. The lower the number, the less virus there is in the blood. Numbers can range from over 1,000,000 copies/ml to undetectable.

What does undetectable mean?

Undetectable means that there are fewer copies of the virus in your blood than the test can measure. In Canada, a viral load test is undetectable if there are less than 40 or 50 copies/ml. An undetectable viral load does not mean that you have been cured of HIV. The virus is still in your body.

Why is viral load important?

The viral load is a measure of how active HIV is in your blood. The virus kills white blood cells called CD4 cells, which are an important part of your immune system. When the viral load is high then the CD4 count goes down, the immune system weakens and you are more likely to become sick.

When you start anti-HIV treatment (commonly called ART), the viral load test is used to measure how well your treatment is working. One of the goals of ART is to have an undetectable viral load, so the immune system can begin to repair itself. You should have a viral load test every three to six months. The test results are used to monitor how well your HIV treatment is working and whether you may need to change the drugs you are taking.

We now know that even low levels of HIV in the body can cause inflammation which can damage your body. It is recommended that people start treatment

FACT SHEET

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as early as possible after they have been diagnosed. This helps reduce the damage that can be caused by HIV-related inflammation.

We also know that people who are engaged in care, taking ART and have an ongoing undetectable viral load are substantially less likely to transmit HIV to others. In fact studies show that people with an undetectable viral load do not pass HIV to their sexual partners.

What does it mean if my viral load rises?

Many different factors can affect your viral load, such as the progress of HIV infection, your overall health, if you are on treatment whether it is working, and even how the test was performed that day. You and your doctor will try to find the cause of the rise in viral load by looking at your past viral load tests and by searching for other clues.

If you see a rise in your viral load, your doctor may ask you to have another test right away. The second test helps to check whether the rise in viral load is temporary or a consistent trend. Temporary changes in viral load can have many causes. For example:

- Sometimes, your viral load may become detectable on a single test and then go back to undetectable on the next test. This is called a “blip” and it is normal.
- Your viral load may rise temporarily if you have a cold or other brief illness, or after a vaccination. You might want to wait a month after a vaccination (or an illness) before you have another viral load test.

The way a viral load test is done varies from laboratory to laboratory, and this may change test results. Be aware of this when comparing tests done by two different laboratories, especially if they are in different provinces or countries. If the rise in viral load cannot be explained any other way, it might be a sign that you and your doctor need to look at your treatment plan.

What does a consistent rise in viral load mean for my treatment plan?

A consistent rise in viral load when you are on treatment may be a sign that your anti-HIV drug combination is failing. Together, you and your doctor will discuss the possible reasons for this and what to do next.

Your viral load may rise if you are not taking all doses of your medication every day as prescribed. Most people on treatment take pills only once or twice a day and find they can fit taking anti-HIV drugs into their lives. However, missing doses can still happen, especially if you are depressed, anxious, frustrated or using alcohol or street drugs. If you are having difficulties taking your medications as prescribed and directed, you might want to think about getting help because sticking to your pill schedule (or “adhering” to it) is one of the most important aspects of your treatment. Missing even one dose can let drug levels in your blood drop so low that the virus can start to replicate again.

Sometimes the side effects of an anti-HIV drug make it difficult to take all the doses as prescribed. Nausea is an example. It is important to talk to your doctor about side effects, because they can be managed.

Sometimes even if all your doses are taken, there is something stopping the drug from working in the body. It may be that your body cannot absorb the drug, or that another drug you are taking is blocking the anti-HIV drug from working. Be sure to tell your doctor about all the prescription medications, over-the-counter products, herbal therapies, supplements and any street drugs you take.

Finally, a significant rise in viral load may be a sign that the virus is replicating even in the presence of HIV drugs. This means you have become resistant to at least one drug in your combination. Resistance to an anti-HIV drug is a problem because it means that you can no longer use that drug to keep your viral load low. Poor adherence can lead to drug resistance. If your virus does become resistant, you and your doctor will likely discuss changing the combination of drugs you are on.

Where can I get more information?

Your doctor and other members of your healthcare team are good sources of information. They should be able to answer your questions about viral load testing. You might want to use this fact sheet to start a discussion.

What you need to know

- A viral load test measures the number of copies of the virus in your blood. It is reported as copies/ml.
- Viral load is a sign of how active HIV is in your body. A lower number means the virus is less active.
- You will have your viral load tested regularly.
- Even low levels of HIV in the body can cause inflammation and cause damage. This is one reason why early treatment is now recommended.
- If you are taking ART and have an undetectable viral load you are significantly less likely to transmit HIV to others
- If you are taking HIV treatment, a consistent increase in your viral load may be a sign that the virus is developing resistance to one of your anti-HIV drugs. You and your doctor will discuss what to do next.

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Disclaimer

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

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