



Canada's source for  
HIV and hepatitis C  
information

La source canadienne  
de renseignements sur  
le VIH et l'hépatite C

# Undetectable viral load and HIV sexual transmission

Studies have shown that HIV-positive people who are engaged in regular healthcare, are on treatment and have an ongoing undetectable viral load do not pass HIV to their sexual partners.

This is great news!

## If I am HIV-positive how can I make this work for me?

Talk to your doctor about treatment and an undetectable viral load as a prevention strategy. Before depending on this strategy, your viral load should be undetectable for at least six months.

It is important that you take your HIV treatment exactly as prescribed and have regular follow-up care, including regular viral load tests to ensure your viral load stays undetectable. Talk to your doctor about any difficulties you have taking your HIV medications as prescribed because this could affect your ability to maintain an undetectable viral load.

If your viral load does not become undetectable or it becomes detectable again after previously being undetectable, discuss your options with your doctor. Until your viral load becomes undetectable, you may need to use additional strategies to prevent HIV transmission, such as condoms.

Maintaining an undetectable viral load can prevent the sexual transmission of HIV but it does not prevent other sexually transmitted infections (STIs). Using condoms reduces the risk of transmission of STIs. Regular testing and treatment of STIs is good for your sexual health. Talk to your doctor about the kinds of sex you are having so you can decide the frequency and types of STI tests that are right for you.

*Read on for more information about undetectable viral load.*

## What does undetectable viral load mean?

The viral load is said to be “undetectable” when the level of virus in the blood of a person living with HIV is so low it can't be measured.

HIV viral load is the amount of HIV in the blood of a person living with HIV. HIV treatment reduces the ability of HIV to make copies of itself (this is called replication). When a person with HIV takes their HIV treatment every day exactly as prescribed by their doctor, then in most people the amount of HIV in the blood eventually becomes so low that it can't be detected by viral load tests.

When someone has an undetectable viral load, it does not mean they are cured of HIV. The virus is still present in their body. If a person stops taking HIV treatment or has low adherence (doesn't take their pills every day as prescribed by their doctor), then HIV will start replicating again and the viral load will once again become detectable.

## Why is it important to have an undetectable viral load?

We now know that reaching and maintaining an undetectable viral load is good for people's health. Starting treatment as soon as possible after becoming HIV positive means that people can live long, healthy lives.

Having an undetectable viral load also prevents sexual transmission of HIV. Studies show that people living with HIV who are engaged in regular healthcare, are on treatment and have an undetectable viral load do not transmit HIV to their HIV-negative sex partners.

## **How do I know if I have an ongoing undetectable viral load?**

The only way to know if your viral load is undetectable over the long term is to have regular viral load tests. You should have an undetectable viral load for at least six months before you can rely on undetectable viral load as an HIV prevention strategy.

When starting HIV treatment it usually takes three to six months before the viral load becomes undetectable. Most people will eventually have an undetectable viral load if they take their HIV treatment exactly as prescribed by their doctor and have a drug combination that is effective against their strain of HIV.

Once your viral load has become undetectable, it is important to regularly monitor the viral load to ensure that it remains undetectable. If your viral load becomes detectable again, there may be a risk of HIV transmission. An ongoing detectable viral load may also indicate that your HIV treatment is no longer working properly. If your viral load does become detectable, then you should discuss your options with your doctor.

It is important to take HIV treatment every day as prescribed to achieve and maintain an undetectable viral load. If for any reason you have difficulties adhering to your treatment, the HIV treatment may stop working and your viral load may become detectable. This can increase the risk of HIV transmission. Talk to your doctor if you have any difficulties adhering to treatment. Counselling and support may be helpful to you.

## **What about other sexually transmitted infections?**

HIV treatment and undetectable viral load prevent HIV transmission but does not prevent transmission of other sexually transmitted infections (STIs), such as chlamydia, gonorrhoea and syphilis.

Condoms can reduce the risk of transmission of STIs. There are also vaccines that prevent the transmission of some STIs, such as hepatitis B or human papillomavirus (HPV). Ask your doctor if these vaccines may be right for you.

Regular testing and treatment of STIs is important for your sexual health. Talk to your doctor about the kinds of sex you are having to help decide the frequency and types of STI tests that are right for you.

## **How do we know that undetectable viral load prevents sexual transmission of HIV?**

Two major studies looking at undetectable viral load and sexual transmission of HIV published their final findings in 2016.

The HPTN 052 study looked at 1,700 heterosexual serodiscordant couples, meaning one partner was HIV positive and the other was HIV negative. These couples were having mainly vaginal sex. No HIV transmissions occurred between partners when the HIV-positive partner was on treatment and had an undetectable viral load.

The second study was the PARTNER study, which followed 548 heterosexual and 340 gay male serodiscordant couples who regularly had unprotected sex while the HIV-positive partner had an undetectable viral load. That is, no condoms, pre-exposure prophylaxis (PrEP) or post-exposure prophylaxis (PEP) were used by the couples. Despite over 58,000 anal and vaginal sex acts, no HIV transmissions occurred between the partners.

In both studies, a small number of HIV-negative partners were infected with HIV. These infections either came from outside sex partners or occurred when the HIV-positive partner did not have an undetectable viral load.

All participants in the studies were engaged in regular healthcare appointments to check viral load, test for STIs (and if necessary receive treatment), and receive HIV treatment adherence support and prevention counselling.

## **Resources**

[HIV viral load testing](#) - CATIE fact sheet

[HIV treatment and an undetectable viral load to prevent HIV transmission](#) - CATIE fact sheet

[Three reasons why CATIE supports U=U for sexual transmission](#)



## Produced By:



Canada's source for  
HIV and hepatitis C  
information

555 Richmond Street West, Suite 505, Box 1104  
Toronto, Ontario M5V 3B1 Canada  
Phone: 416.203.7122  
Toll-free: 1.800.263.1638  
Fax: 416.203.8284  
www.catie.ca  
Charitable registration number: 13225 8740 RR

## 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.

CATIE provides information resources to help people living with HIV and/or hepatitis C who wish to manage their own health care in partnership with their care providers. Information accessed through or published or provided by CATIE, however, is not to be considered medical advice. We do not recommend or advocate particular treatments and we urge users to consult as broad a range of sources as possible. We strongly urge users to consult with a qualified medical practitioner prior to undertaking any decision, use or action of a medical nature.

CATIE endeavours to provide the most up-to-date and accurate information at the time of publication. However, information changes and users are encouraged to ensure they have the most current information. Users relying solely on this information do so entirely at their own risk. Neither CATIE nor any of its partners or funders, nor any of their employees, directors, officers or volunteers may be held liable for damages of any kind that may result from the use or misuse of any such information. Any opinions expressed herein or in any article or publication accessed or published or provided by CATIE may not reflect the policies or opinions of CATIE or any partners or funders.

Information on safer drug use is presented as a public health service to help people make healthier choices to reduce the spread of HIV, viral hepatitis and other infections. It is not intended to encourage or promote the use or possession of illegal drugs.

## Permission to Reproduce

This document is copyrighted. It may be reprinted and distributed in its entirety for non-commercial purposes without prior permission, but permission must be obtained to edit its content. The following credit must appear on any reprint: *This information was provided by CATIE (the Canadian AIDS Treatment Information Exchange). For more information, contact CATIE at 1.800.263.1638.*

© CATIE

Production of this content has been made possible through a financial contribution from the Public Health Agency of Canada.

Available online at:  
<http://www.catie.ca/en/healthy-living/undetected-viral-load>