What is an undetectable viral load?

FAST FACTS

- Taking antiretroviral treatment (ART) reduces the amount of HIV in your body.
- With proper adherence, ART can reduce HIV to such low levels that the virus can no longer be detected in normal blood tests. This is called having an ‘undetectable’ viral load.
- People with undetectable viral loads can’t pass HIV on through sex.
- To know that you’re undetectable, you must have your viral load monitored regularly.
- Remember your viral load can change. If you stop taking your treatment properly your viral load will go up again.

What is an undetectable viral load?

An undetectable viral load is where antiretroviral treatment (ART) has reduced your HIV to such small quantities that it can no longer be detected by standard blood tests. People living with HIV who have an undetectable viral load cannot pass HIV on through sex.

Being undetectable does not mean your HIV is cured. There is still HIV in your body, although it has been reduced to very small amounts. This means that if you stop taking treatment, your viral load will increase – affecting your health and making HIV transmittable again.
How will I know if I am undetectable?

You can’t tell if you have an undetectable viral load simply by how healthy you look and feel. The only way to know that your viral load is undetectable is by regular viral load monitoring.

Viral load monitoring involves a simple blood test to measure how many particles of HIV there are in a small sample of your blood (otherwise stated as how many HIV copies per millilitre of blood). From this you and your healthcare worker can understand how well your ART is working.

A low viral load means that your ART is working well and controlling your HIV. If you have an undetectable viral load, it means that the amount of HIV in your body is so low that you can't pass it on to other people through sex.

The point at which a viral load is classified as being undetectable may vary across different countries depending on the tests available. But so long as your viral load is under 200 copies per millilitre, you’re considered virally suppressed and unable to pass HIV on.

The frequency with which you are offered viral load testing may vary depending on where you are and the services available to you. The World Health Organization recommends that when first starting ART, you should have your viral load measured after the first 6 months of treatment and again at 12 months. After becoming undetectable you should still receive viral load testing at least every 12 months. Depending on the resources available and your particular health status, your health worker may recommend that your viral load is monitored more often than this.

Some people may not have access to viral load tests, unfortunately this means that they cannot know if they’re undetectable. Your healthcare workers will still work with you to ensure that your HIV is managed and that you stay in good health. You will need to continue using condoms, PrEP or other forms of HIV protection to ensure that HIV is not passed on to your sexual partners.
What will being undetectable mean for me?

Having an undetectable viral load means that your ART is effectively controlling your HIV. This will protect your immune system and help you to stay in good health.

Being undetectable also means that you don’t have to worry about passing HIV onto your sexual partners. For many people this is just as important to them, giving them relief from the anxiety of passing HIV on. Some people find that knowing they’re undetectable makes it easier to share their HIV status with others, as it can be reassuring for others to know that your health is protected and you can’t pass it on too.

Do I still need to use condoms if I’m undetectable?

Some couples decide that they want to stop using condoms once they or their partner are undetectable. It’s important to remember that although there’s no HIV risk, being undetectable doesn’t prevent you from getting or passing on other sexually transmitted infections (STIs) or stop unwanted pregnancies, so you will have to use other measures to avoid these.

If you do stop using condoms, it’s important that both you and your partner are comfortable with the decision. It can help to talk it through with a healthcare worker first. It’s recommended that you have a least two viral load tests confirming that you’re undetectable before relying on this for HIV prevention. If your partner is HIV-negative they may consider using PrEP as an extra precaution.

In couples where both partners are living with HIV, it’s important that you are both undetectable before deciding not to use condoms. This is because if one partner has a different strain of HIV or has developed drug resistance this can be passed on if they have a detectable viral load.
Can my viral load continue to change?

Yes, your viral load can continue to change. This would usually be a result of factors to do with your adherence (whether you are taking your pills at the right times and in the right way), or other health issues. Regular viral load monitoring will help you stay on top of these changes, so you can manage your health accordingly.

Your viral load usually drops quickly after first starting treatment, however it may be a while before it reaches a point where it’s undetectable. Most people who adhere properly to their treatment become undetectable after about six months, but it’s important that you have a viral load test to confirm this.

While changes to viral load can occur, they should be relatively uncommon for people who adhere properly to their medication and are otherwise in good health. Your viral load monitoring appointments are there to help you to identify and respond to any changes in your viral load.

These appointments also give you time to discuss any difficulties you are having with your medication. Often big life changes, like starting a new relationship or moving to a new place, can make adherence more difficult. Your healthcare worker can help you with any new challenges and work with you to stay healthy and keep your viral load low.

Can everyone living with HIV achieve an undetectable viral load?

Although being virally suppressed and undetectable is the aim of HIV treatment for everyone, there are some reasons why a person may not be able to achieve an undetectable viral load. These can include factors outside of someone’s control, for example:

- Drug interactions
For some people, it might be tricky to find a treatment regime that agrees with them. While in some places, viral load testing may not always be readily available.

If this is the case for you, it's essential that you still take your medication exactly as prescribed and that you keep regular appointments with your healthcare team. While you may not be ‘undetectable’, you can still remain healthy and your healthcare workers will still work with you to help you have the best treatment outcomes possible.

**Does being undetectable mean you can’t pass HIV on through pregnancy, breastfeeding or sharing injecting equipment?**

At the moment we cannot say that there is zero risk of transmitting HIV through pregnancy, breastfeeding or sharing injecting equipment for people with undetectable viral loads. The evidence we have for U=U only applies to sexual transmission at this time.

Although we know that having an undetectable viral load will radically reduce the risk of passing HIV on by any route, it's likely that for injecting drugs and breastfeeding the risk will not be zero.

Nevertheless, many women without access to clean water and affordable formula feed are still advised to breastfeed. For their babies breastfeeding is still the safest option to avoid the more dangerous risks of diarrhoeal disease and malnutrition. So long as they adhere to their medication the risk of HIV transmission will be very low.

If you are unsure what the advice is for you or have any concerns about HIV transmission, you should speak to your healthcare worker.
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Sources:

NAM (2020) 'What does undetectable mean?'
Terrence Higgins Trust (2018) 'Viral load and being undetectable'
NAM (2019) 'Undetectable viral load and transmission – information for people with HIV'
NAM (2017) 'Viral load'
i-base (2019) 'Does ART always work?'
i-base (2018) 'Questions about U=U: what, when, who, why....?'
World Health Organisation (2017) 'What’s new in treatment monitoring: viral load and CD4 testing'
NAM (2019) 'Feeding your baby when you have HIV'