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Women and Viral Load

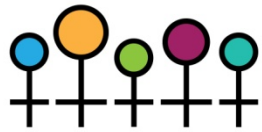
Last updated: March 30, 2021

Together, we can change the course of the HIV epidemic...one woman at a time.

#onewomanatatime

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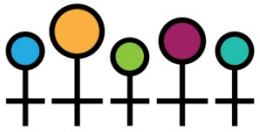


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What Is Viral Load?

Viral load is the amount of HIV (number of viruses or copies) in your bloodstream

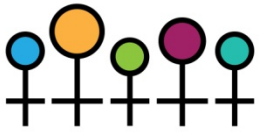
- HIV enters immune system cells called **CD4 cells** (also called T cells) and turns them into “virus factories” that produce thousands of copies of HIV
- As the virus grows, it damages or kills CD4 cells, weakening your immune system
- The higher the amount of HIV, the more your immune system becomes damaged



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How Is Viral Load Measured?

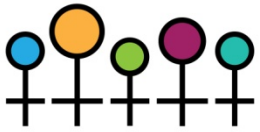
- Viral load can be measured by different lab tests:
 - **Polymerase chain reaction (PCR)** test
 - **Branched DNA (bDNA)** test
 - **Nucleic acid sequence-based assay (NASBA)**
- Each lab test measures the amount of virus differently
 - It is best to stick with the same kind of test to compare results over time
- Viral load results are reported as the **number of copies of HIV in one milliliter (ml) of blood**
 - The lower the number, the less virus there is in your blood
 - Numbers can range from several million copies to as few as 20 copies



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What Does “Undetectable” Mean?

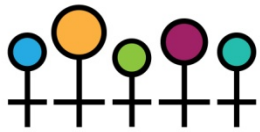
- If you have fewer than 50 copies of HIV per ml in your blood, your viral load is considered "undetectable"
 - Being undetectable is a great result; it means your virus is under control
 - Undetectable means that there is not enough HIV in your bloodstream to be measured by the test
 - It does **not** mean that you have been cured of HIV; HIV is still in your body
 - If you stop taking your HIV drugs, the virus usually starts reproducing and your viral load will increase
- With effective HIV treatment regimens, viral load can be reduced to undetectable in many people



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What Does “Undetectable” Mean?

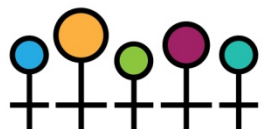
- Labs that test viral load may have different cut-offs below which they cannot detect HIV
- For example, you could have 35 copies of HIV in your blood, and:
 - At Lab #1, which cannot detect any HIV below 50 copies, your viral load would be considered undetectable
 - At Lab #2, which cannot detect any HIV below 20 copies, your viral load would be considered detectable
- Practically speaking, if you stay at or below 50 copies, the virus is considered well-controlled and your HIV treatment regimen is working well



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Undetectable Equals Untransmittable (U=U)

- **Having an undetectable viral load reduces your chance of passing HIV to sexual partners to effectively zero**
- In recent large studies looking at couples in which one partner is HIV-negative and the other is living with HIV and has an undetectable viral load while on HIV treatment over time, **no HIV-negative partner acquired HIV through sexual relations with their partner**
 - Studies did not look at undetectable viral load and risk of passing HIV through use of shared injection drug equipment
 - More research needed on HIV transmission through breast milk – though risk is very low when parent taking HIV drugs

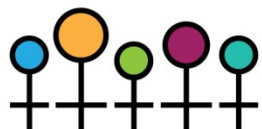


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How Are Viral Load Results Used?

To Check HIV Progression:

- A viral load test tells you how active HIV is in your body
- When compared over time, viral load results show whether the amount of HIV in your bloodstream is higher or lower than it was before
- The higher your viral load, the more actively HIV is reproducing and the more likely you are to lose CD4 cells in the future

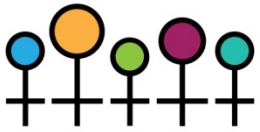


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How Are Viral Load Results Used?

To Measure How Well HIV Drugs Are Working:

- Your viral load will usually go down within a weeks of starting your drug regimen
- If your viral load goes up while taking HIV drugs, your drugs may not be working as well as they should
 - Possible reasons may include problems with drug absorption, adherence, drug resistance, or interactions with other drugs
 - Talk to your healthcare provider about next steps
- Viral load can be reduced to undetectable in many people
- If you stop taking your HIV drugs, viral load will usually go up again

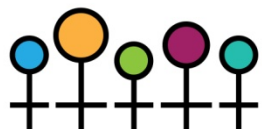


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How Are Viral Load Results Used?

To Enhance Motivation and Promote Treatment Adherence:

- Finding out that you have an undetectable viral load can be both reassuring and motivating
- Shows that your efforts to control the virus by taking your HIV drugs as prescribed are working well

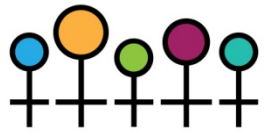


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When Should You Be Tested?

In the US:

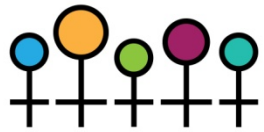
- **If you are not on HIV treatment**, have a viral load test:
 - When you start receiving HIV care
- **When you start treatment**, have a viral load test
 - When starting and 2-8 weeks after starting treatment; repeat test every 1-2 months until viral load becomes undetectable
- **Once you are on a stable treatment regimen and your viral load is undetectable**, have a viral load test
 - Every 3-6 months
- **When you change HIV drugs**, have a viral load test
 - 2-8 weeks after treatment change; repeat test every 1-2 months until viral load becomes undetectable



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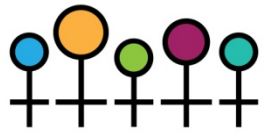
- Some studies comparing viral load levels between men and women have found sex differences in viral load
 - At similar CD4 cell counts, women tend to have lower viral load levels than men
 - Differences seem greatest during the early course of HIV acquisition
 - These early differences do not result in any overall sex-based difference in the speed at which HIV advances



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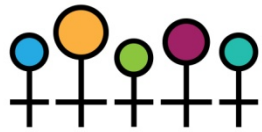
- Studies have shown that when taking HIV drugs, men and women are equally likely to achieve **viral suppression** (viral load below 200 copies)
 - Studies **have not** found that pregnancy causes HIV to become more advanced
- **The strongest single factor that predicts the health of people living with HIV – women or men – is taking HIV drugs**



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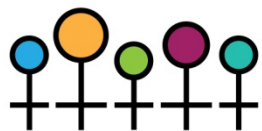
- One study: HIV lives and multiplies more often in female genital fluids than in semen (cum), even at an undetectable viral load
- Later studies: female genital tract serves as a **reservoir** (place where HIV continues to live and reproduce despite effective HIV therapy)
- Viral load and the level of certain HIV drugs go up and down during the course of a single menstrual cycle
 - Could affect drug dosing and the timing of viral load tests in women



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Future Research

- Understanding more about sex differences in viral load may lead to better care for women living with HIV
- Following guidelines for viral load testing is important for monitoring your HIV
- Viral load testing helps your health care provider work with you to keep you healthy



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Learn More!

- To learn more about this topic, please read the full fact sheet on this topic:
 - Fact sheet: [Women and Viral Load](#)
- For more fact sheets and to connect to our community of women living with HIV, visit:
 - www.thewellproject.org
 - www.facebook.com/thewellproject
 - www.twitter.com/thewellproject