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Understanding CD4 Cells and CD4 Cell Tests

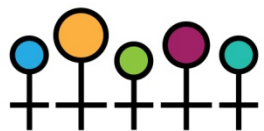
Last updated: January 20, 2025

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

#onewomanatatime

www.thewellproject.org

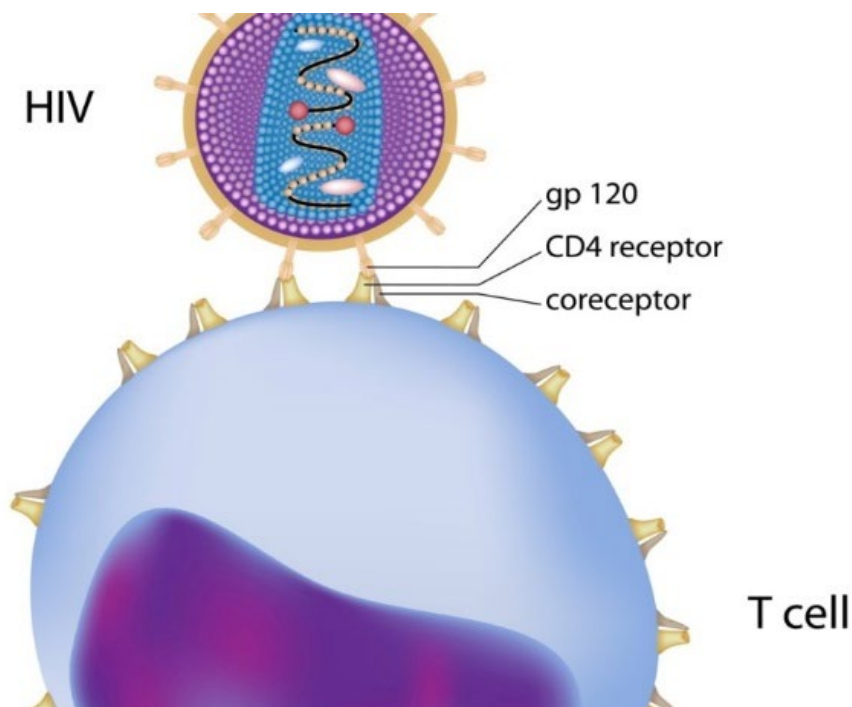
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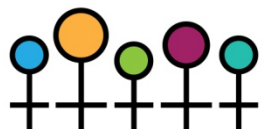


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Understanding CD4 Cells and CD4 Cell Tests

CD4 Cell (or “T Cell”): A type of white blood cell that HIV infects and destroys, weakening the immune system.

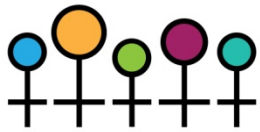




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The Basics

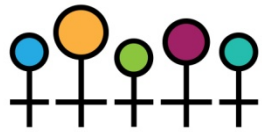
- White blood cells like CD4 cells are an important part of your immune system
- Your immune system protects your body by fighting germs and infections
- As the immune system loses CD4 cells, it becomes less able to fight off germs
 - When people living with HIV lose a lot of CD4 cells, they are at risk of developing AIDS-related opportunistic infections (OIs) – which can cause serious illness or death



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The Basics

- The number of CD4 cells a person has (their **CD4 count**):
 - Gives a picture of the health of your immune system
 - Usually decreases as HIV disease gets worse
 - Can help your health care provider tell whether your current treatment and plan of care are working for you
- A normal CD4 count is about 500 to 1,500
- Without HIV treatment, HIV infects and destroys more and more CD4 cells, and the CD4 count goes down
- Lower CD4 count: more likely to develop OIs



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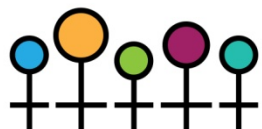
CD4 Count and HIV

CD4 count > 500:

- People with CD4 counts above 500 cells
 - Usually have a fairly normal immune system
 - Are at low risk for OIs

CD4 count < 200:

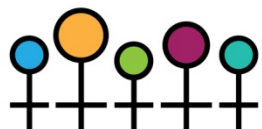
- People with CD4 counts below 200 cells
 - Are diagnosed with AIDS
 - Are at risk for developing serious OIs
 - May need to take medications to prevent OIs



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CD4 Count and HIV Treatment

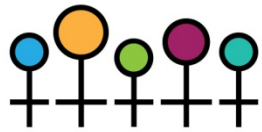
- HIV treatment is recommended for everyone living with HIV, no matter their CD4 count
 - Also strongly recommended for people in certain situations
 - Should be offered to people at risk of transmitting HIV to their sexual partners
- CD4 counts often increase when effective HIV treatment is started because the drugs slow or stop HIV from making copies of itself



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CD4 Count and HIV Treatment

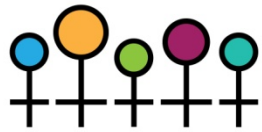
- CD4 counts can go down again if you are unable to take your HIV drugs correctly or if your HIV becomes resistant to the drugs
- Along with your viral load, your CD4 count is an **important tool for monitoring your HIV** and how well your HIV drugs are working



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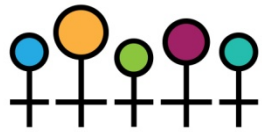
CD4 Cell Test

- Simple blood test ordered by your health care provider
- When you first start HIV care, get a "baseline" CD4 cell test
 - Gives a picture of your immune system when you first enter into care
- When starting care, CD4 count is usually checked every 3-6 months
 - **More frequent CD4 cell tests** may be needed if your count is low/falling, or if you are starting or changing treatment
 - If you've been on HIV drugs for more than 2 years, are virally suppressed, and have a CD4 count over 300, you may only need to have your CD4 count checked once a year



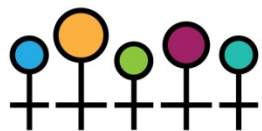
CD4 Cell Test

- Many factors can affect your CD4 count, including
 - Time of day
 - Level of stress
 - Your menstrual cycle
 - Infections such as the flu
- If CD4 cell test result is surprising, your provider will probably order a second test
- Don't worry too much about a single test result
 - Trends over time are more important



CD4 Percentage

- Tells what percent of total white blood cells are CD4 cells
 - Normal CD4 cell percentage is about 30 to 60 percent
 - Your health care provider will want to check this number in addition to your CD4 count
- CD4 percentage may be more reliable than CD4 count
 - Tends to change less between measurements
 - Think of it this way: 50 pennies and 2 quarters are both 50% of a dollar, even though 50 is more than 2
- Treatment guidelines are based on CD4 counts, not CD4 percentages

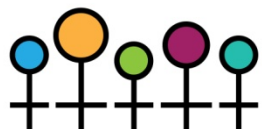


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The Bottom Line

- If you begin treatment when CD4 count and percentage are low (<200), it may take longer for CD4 numbers to increase
- If viral load is undetectable, HIV is not growing or spreading
- May take time and patience to see CD4 counts increase
- Keeping track of trends in CD4 count can help you and your provider make decisions about starting/changing treatment

Regular visits with your healthcare provider and regular CD4 cell, viral load and other tests are an important part of taking charge of your health!



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Learn More!

- To learn more about this topic, please read the full fact sheet on this topic:
 - Fact sheet: [Understanding CD4 Cells and CD4 Cell Tests](#)
- For more fact sheets and to connect to our community of women living with HIV, visit:
 - www.thewellproject.org
 - [@thewellprojecthiv.bsky.social](https://bsky.app/@thewellprojecthiv)
 - www.facebook.com/thewellproject
 - www.instagram.com/thewellprojecthiv
 - www.threads.net/@thewellprojecthiv
 - www.youtube.com/thewellprojecthiv