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# Understanding CD4 Cells and CD4 Cell Tests

*Last updated: March 2, 2022*

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

#onewomanatatime

[www.thewellproject.org](http://www.thewellproject.org)

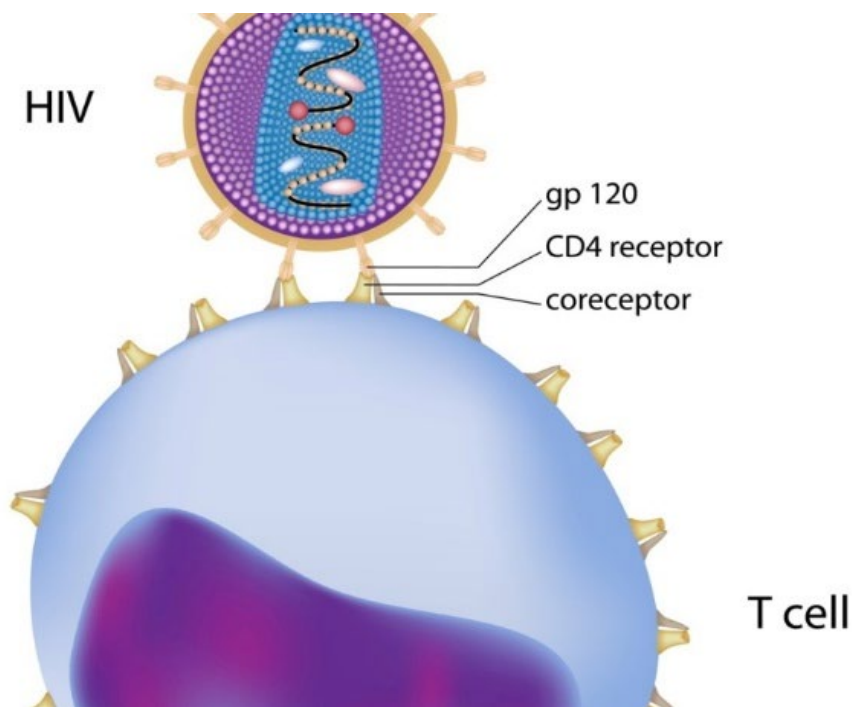
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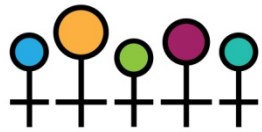


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# Understanding CD4 Cells and CD4 Cell Tests

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

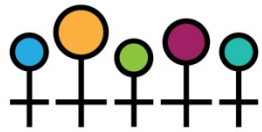




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# The Basics

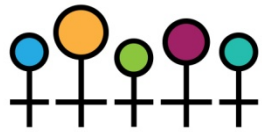
- White blood cells like CD4 cells are an important part of your immune system
- Your immune system protects your body by fighting germs and infections
- As the immune system loses CD4 cells, it becomes less able to fight off germs
  - When people living with HIV lose a lot of CD4 cells, they are at risk of getting 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 is 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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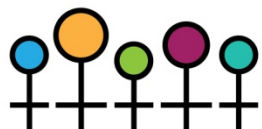
# CD4 Count and HIV

## **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:**

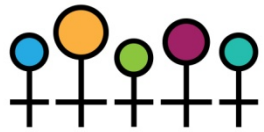
- People with CD4 counts below 200 cells
  - Are diagnosed with AIDS
  - Are at risk for developing serious OIs
  - May need to take medications to prevent OIs



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# CD4 Count and HIV Treatment

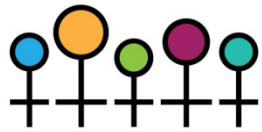
- HIV treatment is recommended for everyone living with HIV, no matter their CD4 count
  - Also strongly recommended for people in certain situations
  - Should be offered to people at risk of transmitting HIV to their sexual partners
- CD4 counts often increase when effective HIV treatment is started 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

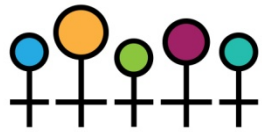


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# CD4 Cell Test

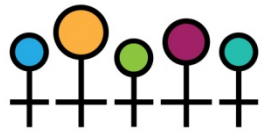
- Simple blood test ordered by your health care provider
- When you first start HIV care, get a "baseline" CD4 cell test
  - Gives a picture of your immune system when you first enter into care
- When starting care, CD4 count is usually checked every 3-6 months
  - **More frequent CD4 cell tests** may 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

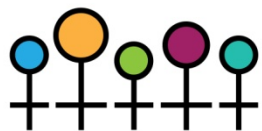
- Many factors can affect your CD4 count, including
  - Time of day
  - Level of stress
  - Your menstrual cycle
  - Infections such as the flu
- If CD4 cell test result is surprising, your provider will probably order a second test
- Don't worry too much about a single test result
  - Trends over time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



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# 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 measurement than CD4 count
  - Tends to change less between measurements
- 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](#)
  - [www.facebook.com/thewellproject](#)
  - [www.twitter.com/thewellproject](#)