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# Understanding CD4 Cells and CD4 Cell Tests

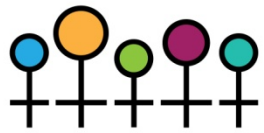
*Last updated: September 10, 2020*

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

#onewomanatatime

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

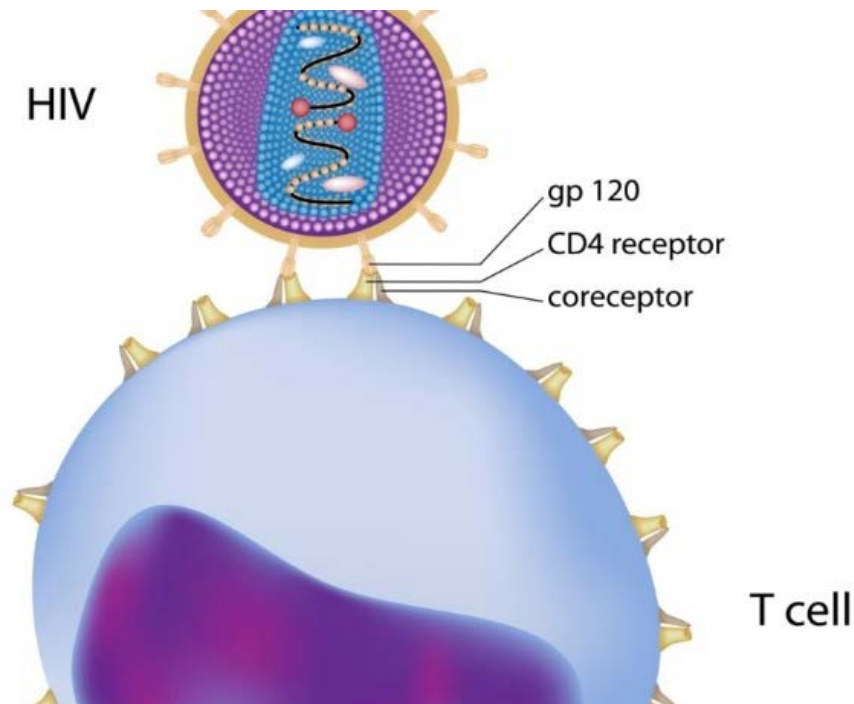
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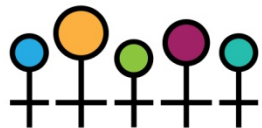


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# Understanding CD4 Cells and CD4 Cell Tests

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

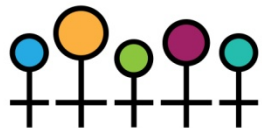




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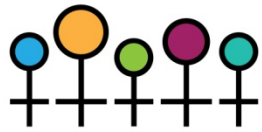
# The Basics

- 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 cancers and opportunistic infections (OIs) – which can cause serious illness or death



# The Basics

- The number of CD4 cells a person has (their **CD4 count**):
  - Gives a picture of the health of their immune system
  - Usually decreases as HIV disease gets worse
  - Can help your health care provider tell if your HIV is getting worse, and if the treatment you're taking is working well
- 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



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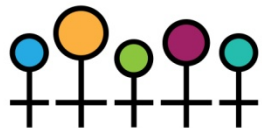
# CD4 Count and HIV

## **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:**

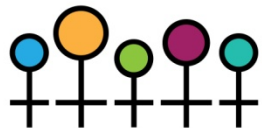
- People with CD4 counts below 200 cells
  - Are diagnosed with AIDS
  - Are at risk for developing serious OIs



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# CD4 Count and HIV Treatment

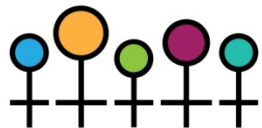
- Treatment guidelines of the US Department of Health and Human Services (DHHS) and the World Health Organization (WHO) now recommend treatment for everyone living with HIV, no matter their CD4 count
- Many people see CD4 counts increase when they start effective HIV treatment, as the drugs slow or stop HIV



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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 a **valuable tool for monitoring your HIV** and how well your HIV drugs are working

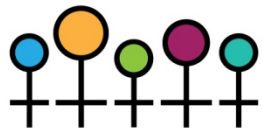


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# CD4 Cell Test

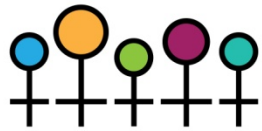
- Simple blood test ordered by your health care provider
- When you first start HIV care, get a "baseline" CD4 cell test
  - Gives a picture of your immune system when you first enter into care
- Get CD4 count checked every 3-6 months – or as often as your health care provider recommends
  - **More frequent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





# CD4 Cell Test

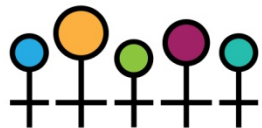
- Many factors can affect your CD4 count, including
  - Time of day
  - Level of stress
  - Your menstrual cycle
  - Infections such as the flu
- If CD4 cell test result surprises you or your health care provider, (s)he will probably a second test
- Try not to worry too much about a single abnormal test result
  - Trends (and percentages) 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 percentage

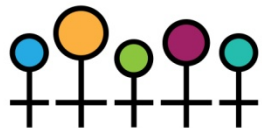


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# The Bottom Line

- 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, you can be encouraged that HIV is not growing or spreading
- Watching CD4 cells and percentage increase can take time and patience
- Keeping track of trends in CD4 count can help you and your provider make decisions about starting/changing treatment

*Getting regular CD4 cell tests is 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](#)