HIV Overview

HIV and AIDS: The Basics

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Key Points

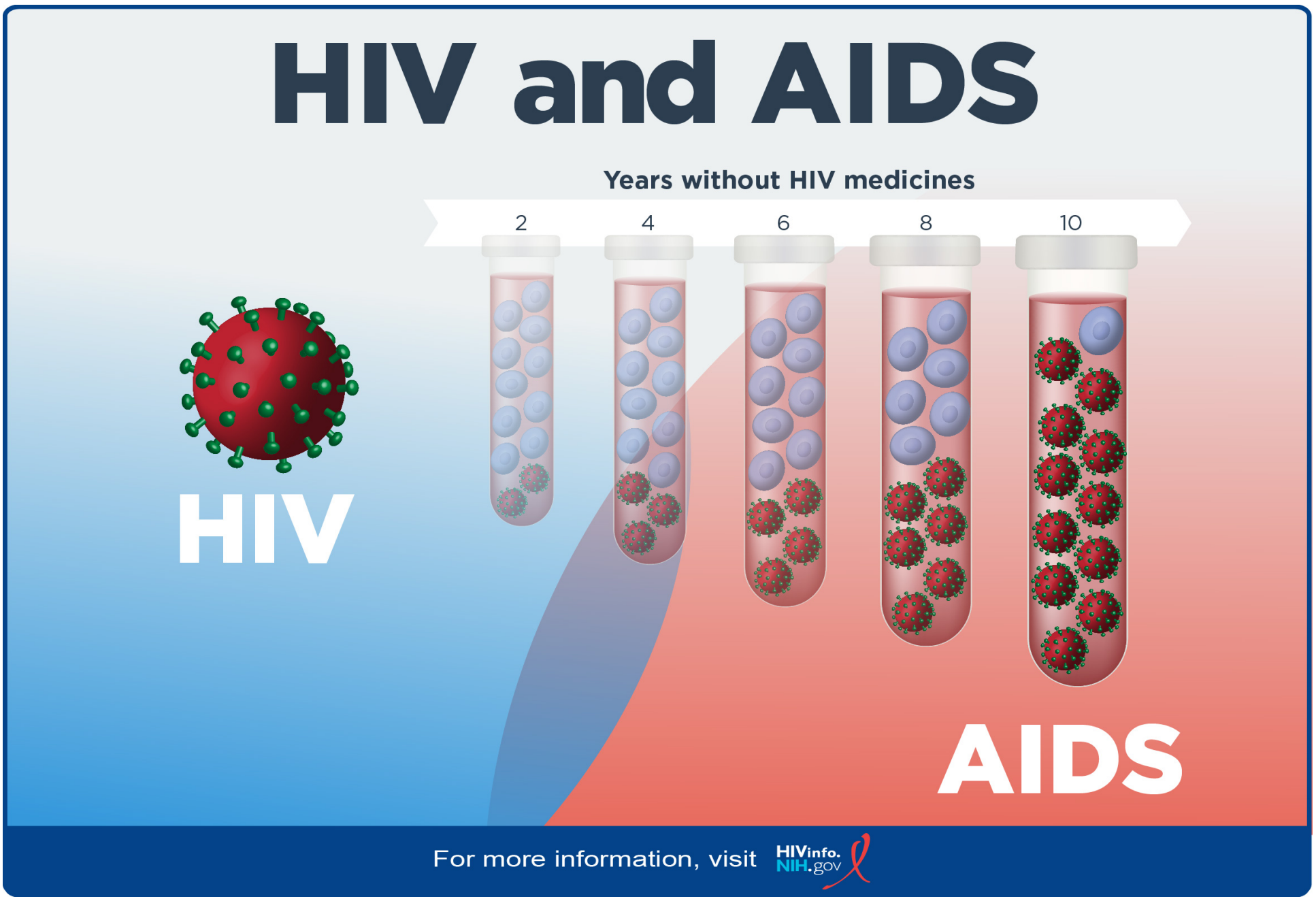
- The human immunodeficiency virus (HIV) is the virus that causes HIV infection. If untreated, HIV may cause acquired immunodeficiency syndrome (AIDS), the most advanced stage of HIV infection.
- People with HIV who are not on medication and do not have consistent control of their HIV can transmit HIV through vaginal or anal sex, sharing of needles, pregnancy, and/or breastfeeding. If HIV is controlled, the risk of transmission is close to zero.
- Antiretroviral therapy (ART) is the use of HIV medicines that reduce the level of HIV in the blood (called viral load). ART is recommended for everyone who has HIV. ART cannot cure HIV infection, but HIV medicines help people with HIV have about the same life expectancy as people without HIV.
- HIV medicines (ART) can eliminate the risk of HIV transmission. For parents with HIV that want to breastfeed, the risk of transmitting HIV through breast milk is less than 1% with the consistent use of HIV medicine (ART) and an undetectable viral load.
- People on ART take a combination of HIV medicines (called an HIV treatment regimen) every day (pills) or by schedule (injections). In many cases oral medicines may be combined into a single pill or capsule. There are newer long-acting medicines given by an injection every 2 months that may be used in some people.

What is HIV and AIDS?

HIV stands for human immunodeficiency virus, which is the virus that causes HIV infection. The abbreviation “HIV” can refer to the virus or to HIV infection.

AIDS stands for acquired immunodeficiency syndrome. AIDS is the most advanced stage of HIV infection.

HIV attacks and destroys the infection-fighting CD4 cells (CD4 T lymphocyte) of the immune system. The loss of CD4 cells makes it difficult for the body to fight off infections, illnesses, and certain cancers. Without treatment, HIV can gradually destroy the immune system, causing health decline and the onset of AIDS. With treatment, the immune system can recover.



How is HIV transmitted?

HIV can be transmitted from one person to another when certain bodily fluids are shared between people. Bodily fluids that can transmit HIV include blood, semen ("cum"), pre-seminal fluid ("pre-cum"), vaginal fluids, rectal fluids, and breastmilk. HIV can be transmitted during vaginal or anal sex, through sharing needles for injecting drugs or tattooing, by getting stuck with a needle that has the blood of someone with HIV on it, through pregnancy, and through breastfeeding.

The transmission of HIV from a birthing parent with HIV to their child during pregnancy, childbirth, or breastfeeding is called perinatal transmission of HIV. For more information on perinatal transmission, read the HIVinfo fact sheet on Preventing Perinatal Transmission of HIV.

You cannot get HIV by shaking hands or hugging a person who has HIV. You also cannot get HIV from contact with objects, such as dishes, toilet seats, or doorknobs, used by a person with HIV. HIV is not spread through the air or water or by mosquitoes, ticks, or other insects. Use the HIVinfo You Can Safely Share…With Someone With HIV infographic to spread this message.

What is the treatment for HIV?

Antiretroviral therapy (ART) is the use of HIV medicines to treat HIV infection. People on ART take a combination of HIV medicines (called an HIV treatment regimen) every day (pills) or by schedule (injections). In many cases oral medicines may be combined into a single pill or capsule. There are newer long-acting medicines given by an injection every 2 months that may be used in some people.

ART is recommended for everyone who has HIV. ART prevents HIV from multiplying, which reduces the amount of HIV in the body (called the viral load). Having less HIV in the body protects the immune system and prevents HIV infection from advancing to AIDS. ART cannot cure HIV, but HIV medicines can help people with HIV live long, healthy lives.

How can a person reduce the risk of transmitting HIV?

ART reduces the risk of HIV transmission. ART can reduce a person's viral load to an undetectable level. An undetectable viral load means that the level of HIV in the blood is too low to be detected by a viral load test. People with HIV who maintain an undetectable viral load have no risk of transmitting HIV to their HIV-negative partner through sex.

HIV medicines taken during pregnancy, childbirth, and breastfeeding can also reduce the risk of perinatal (parent to infant) transmission of HIV. Previously, replacement feeding (properly prepared formula or pasteurized donor human milk from a milk bank) was recommended instead of breastfeeding since the risk of HIV transmission was considered high. Now, there is evidence

that the risk of transmission through the breastmilk of someone consistently using ART and maintaining an undetectable viral load is low (less than 1%). Pregnant people with HIV can speak with their health care provider to determine what method of feeding their baby is right for them.

How can a person reduce the risk of getting HIV?

For people without HIV, there are several ways to reduce the risk of acquiring (getting) HIV infection. Using condoms correctly with every sexual encounter, particularly with partners that are HIV positive with a detectable viral load or with partners whose HIV status is unknown, can reduce the risk of acquiring HIV. Reducing HIV risk also involves limiting and reducing sexual partners, and avoiding sharing needles.

Persons who do not have HIV should talk to their health care provider about pre-exposure prophylaxis (PrEP). PrEP is an HIV prevention option for people who do not have HIV but who are at risk of becoming infected with HIV. PrEP involves taking a specific HIV medicine every day or a long-acting injection. For more information, read the HIVinfo fact sheet on Pre-exposure Prophylaxis (PrEP).

What are the symptoms of HIV and AIDS?

Within 2 to 4 weeks after infection with HIV, some people may have flu-like symptoms, such as fever, chills, or rash. The symptoms may last for a few days to several weeks. Other possible symptoms of HIV include night sweats, muscle aches, sore throat, fatigue, swollen lymph nodes, and mouth ulcers. Having these symptoms does not mean you have HIV. Other illnesses can cause the same symptoms. Some people may not feel sick during early HIV infection (called acute HIV). During this earliest stage of HIV infection, the virus multiplies rapidly. After the initial stage of infection, HIV continues to multiply but at lower levels.

More severe symptoms of HIV infection for persons not on ART may not appear for many years until HIV has developed into AIDS. People with AIDS have weakened immune systems that make them prone to opportunistic infections. Opportunistic infections are infections and infection-related cancers that occur more frequently or are more severe in people with weakened immune systems than in people with healthy immune systems.

Without treatment, HIV transmission is possible at any stage of HIV infection—even if a person with HIV has no symptoms of HIV.

How is AIDS diagnosed?

Symptoms such as fever, weakness, and weight loss may be a sign that a person's HIV has advanced to AIDS. However, a diagnosis of AIDS is based on the following criteria:

- A drop in CD4 count to less than 200 cells/mm^3. A CD4 count measures the number of CD4 cells (CD4 T lymphocyte) in a sample of blood.

  OR

- The presence of certain opportunistic infections.

Although an AIDS diagnosis indicates severe damage to the immune system, HIV medicines can still help people at this stage of HIV infection.

This fact sheet is based on information from the following sources:

From Centers for Disease Control and Prevention:

- About HIV
- AIDS and Opportunistic Infections
- HIV and Pregnancy

From the Department of Health and Human Services (HHS):

- Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection:
  - Introduction

- Recommendations for the Use of Antiretroviral Drugs During Pregnancy and Interventions to Reduce Perinatal HIV Transmission in the United States
    - Infant Feeding for Individuals with HIV in the United States

From the National Institute of Allergy and Infectious Diseases (NIAID):

- HIV/AIDS

Also see the HIV Source collection of HIV links and resources.