
AIDS

- Acquired immunodeficiency syndrome (AIDS) is a chronic, potentially life-threatening condition caused by the human immunodeficiency virus (HIV).
- By damaging our immune system, HIV interferes with our body's ability to fight infection and disease.
- HIV is a sexually transmitted infection (STI).
- It can also be spread by contact with infected blood or from mother to child during pregnancy, childbirth or breast-feeding. Without medication, it may take years before HIV weakens the immune system to the point that you have AIDS.

There's no cure for HIV/AIDS, but medications can dramatically slow the progression of the disease. These drugs have reduced AIDS deaths in many developed nations.

Causes

HIV is caused by a virus. It can spread through sexual contact or blood, or from mother to child during pregnancy, childbirth or breast-feeding.

How does HIV become AIDS?

HIV destroys CD4 T cells — white blood cells that play a large role in helping our body fight disease. The fewer CD4 T cells we have, the weaker our immune system becomes.

How HIV spreads

To become infected with HIV, infected blood, semen or vaginal secretions must enter the body. This can happen in several ways:

- **By having sex.** people may become infected if they have vaginal, anal or oral sex with an infected partner whose blood, semen or vaginal secretions enter their body. The virus can enter into the body through mouth sores or small tears that sometimes develop in the rectum or vagina during sexual activity.

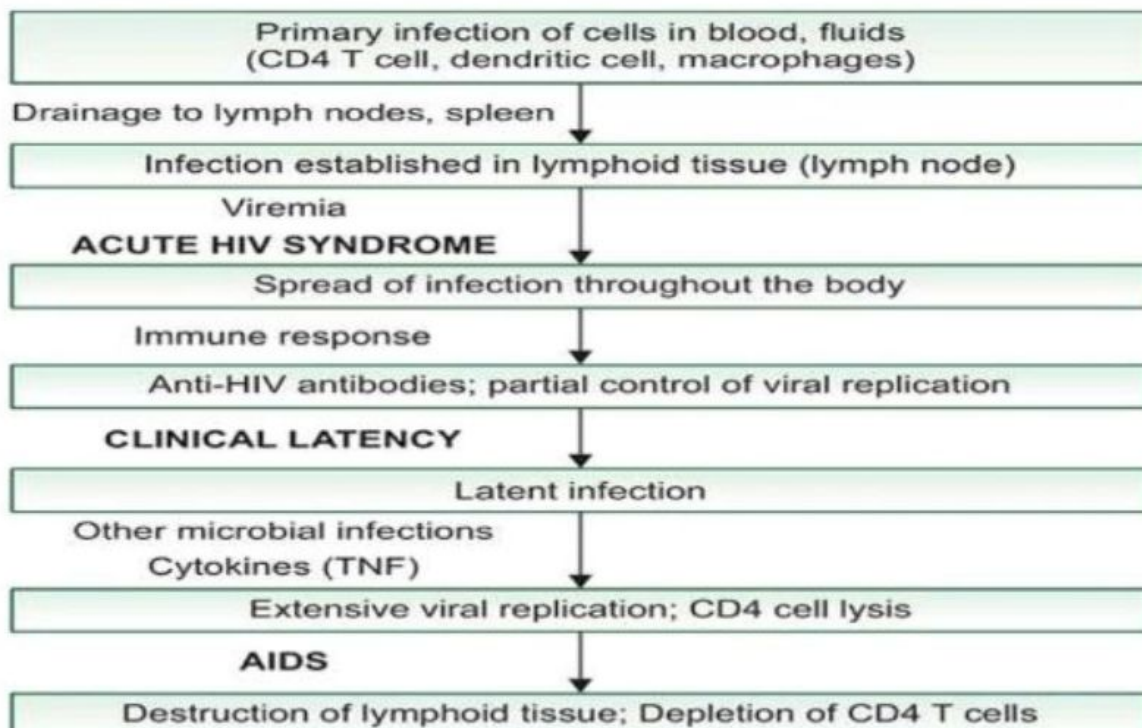
- **By sharing needles.** Sharing contaminated IV drug paraphernalia (needles and syringes) puts at high risk of HIV and other infectious diseases, such as hepatitis.
- **From blood transfusions.** In some cases, the virus may be transmitted through blood transfusions.
- **During pregnancy or delivery or through breast-feeding.** Infected mothers can pass the virus on to their babies. Mothers who are HIV-positive and get treatment for the infection during pregnancy can significantly lower the risk to their babies.

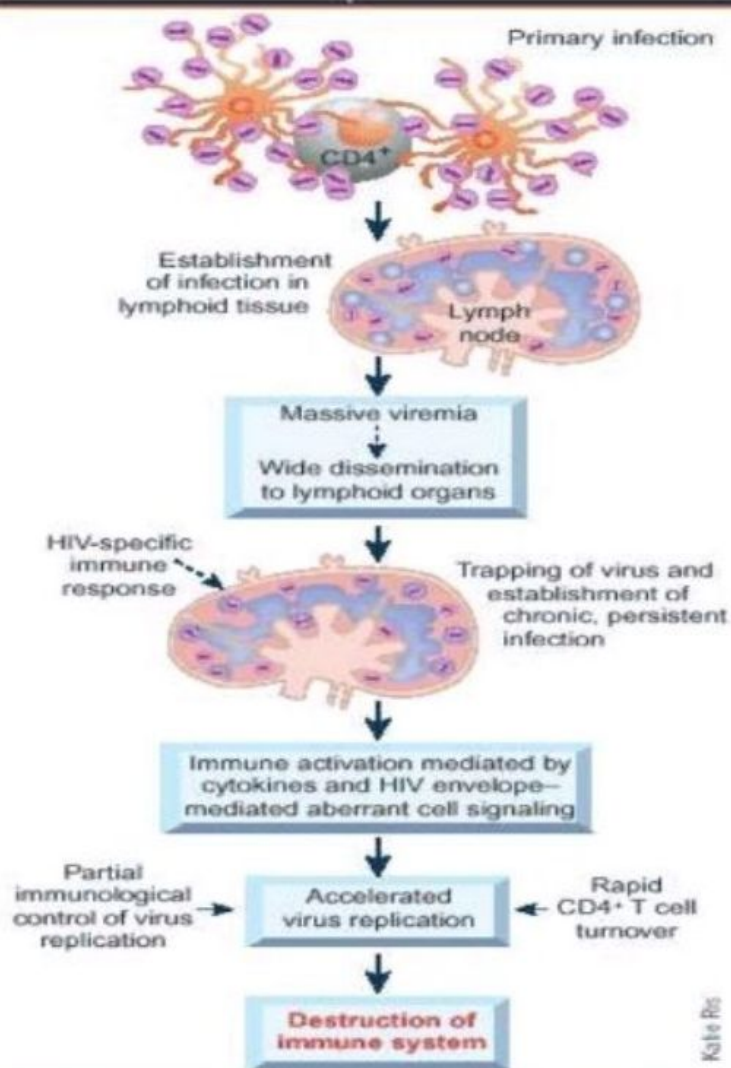
How HIV doesn't spread

You can't become infected with HIV through ordinary contact. That means you can't catch HIV or AIDS by hugging, kissing, dancing or shaking hands with someone who has the infection.

HIV isn't spread through the air, water or insect bites.

Pathogenesis





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Symptoms

The symptoms of HIV and AIDS vary, depending on the phase of infection.

Primary infection (Acute HIV)

Some people infected by HIV develop a flu-like illness within two to four weeks after the virus enters the body. This illness, known as primary (acute) HIV infection, may last for a few weeks. Possible signs and symptoms include:

- Fever
- Headache
- Muscle aches and joint pain
- Rash
- Sore throat and painful mouth sores
- Swollen lymph glands, mainly on the neck
- Diarrhea
- Weight loss
- Cough
- Night sweats

These symptoms can be so mild that might not even notice them. However, the amount of virus in bloodstream (viral load) is quite high at this time. As a result, the infection spreads more easily during primary infection than during the next stage.

Symptomatic HIV infection

As the virus continues to multiply and destroy the immune cells — the cells in body that help fight off germs —:

- Fever
- Fatigue
- Swollen lymph nodes — often one of the first signs of HIV infection
- Diarrhea
- Weight loss
- Oral yeast infection (thrush)

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- Shingles (herpes zoster)
 - Pneumonia

The signs and symptoms of some of these infections may include:

- Sweats
- Chills
- Recurring fever
- Chronic diarrhea
- Swollen lymph glands
- Persistent white spots or unusual lesions on your tongue or in your mouth
- Persistent, unexplained fatigue
- Weakness
- Weight loss
- Skin rashes or bumps

When to see a doctor

If you think you may have been infected with HIV or are at risk of contracting the virus, see a doctor as soon as possible.

Risk factors

Anyone of any age, race, sex or sexual orientation can be infected with HIV/AIDS. However, you're at greatest risk of HIV/AIDS if you:

- **Have unprotected sex.**
- **Have an STI.** Many STIs produce open sores on genitals. These sores act as doorways for HIV to enter into the body.
- **Use IV drugs.** People who use IV drugs often share needles and syringes. This exposes them to droplets of other people's blood.

Complications

HIV infection weakens the immune system, making much more likely to develop many infections and certain types of cancers.

Infections common to HIV/AIDS

- **Pneumocystis pneumonia (PCP).** This fungal infection can cause severe illness. Although it's declined significantly with current treatments for HIV/AIDS
- **Candidiasis (thrush).** Candidiasis is a common HIV-related infection. It causes inflammation and a thick, white coating on mouth, tongue, esophagus or vagina.
- **Tuberculosis (TB).** In resource-limited nations, TB is the most common opportunistic infection associated with HIV. It's a leading cause of death among people with AIDS.
- **Cytomegalovirus.** This common herpes virus is transmitted through body fluids such as saliva, blood, urine, semen and breast milk. A healthy immune system inactivates the virus, and it remains dormant in the body. If your immune system weakens, the virus resurfaces — causing damage to your eyes, digestive tract, lungs or other organs.
- **Cryptococcal meningitis.** Meningitis is an inflammation of the membranes and fluid surrounding the brain and spinal cord (meninges). Cryptococcal meningitis is a common central nervous system infection associated with HIV, caused by a fungus found in soil.
- **Toxoplasmosis.** This potentially deadly infection is caused by *Toxoplasma gondii*, a parasite spread primarily by cats. Infected cats pass the parasites in their stools, which may then spread to other animals and humans. Toxoplasmosis can cause heart disease, and seizures occur when it spreads to the brain.

Cancers common to HIV/AIDS

- **Lymphoma.** This cancer starts in the white blood cells. The most common early sign is painless swelling of the lymph nodes in neck, armpit or groin.
- **Kaposi's sarcoma.** A tumor of the blood vessel walls, Kaposi's sarcoma usually appears as pink, red or purple lesions on the skin and mouth. In people with darker skin, the lesions may