

AIDS Acquired Immuno Deficiency Syndrome, Causes, Prevention

March 2, 2026 • vajiramandravi.com



AIDS (Acquired Immuno Deficiency Syndrome) is a serious health condition caused by long-term infection with the Human Immunodeficiency Virus (HIV). It weakens the immune system, making the body unable to fight common infections and diseases. If HIV is not treated in time, it can progress to AIDS, which is the most advanced stage of the infection.

HIV/AIDS remains a global public health challenge. According to the World Health Organization, millions of people worldwide are living with HIV, but improved treatment and awareness have significantly reduced AIDS-related deaths. In India, the National AIDS Control Organisation (NACO) leads national efforts to prevent, treat, and control HIV/AIDS.

AIDS Causes

AIDS is caused by long-term infection with the Human Immunodeficiency Virus (HIV), which gradually weakens the immune system. When HIV is not treated properly, it destroys CD4 cells, leading to severe immune damage and the development of AIDS.

- **Infection with HIV (Primary Cause):** AIDS develops only after a person becomes infected with HIV. The virus attacks and destroys CD4 (T-helper) cells that protect the body from infections.
- **Untreated or Late Diagnosis of HIV:** If HIV is not detected early, the virus continues to multiply and damage the immune system over several years, eventually progressing to AIDS.
- **Lack of Antiretroviral Therapy (ART):** Without proper ART treatment, the viral load increases rapidly, and the immune system becomes severely weakened.
- **High Viral Load in the Body:** When HIV replicates actively in the blood, it reduces CD4 cell count significantly, accelerating progression toward AIDS.
- **Co-infections (e.g., Tuberculosis, Hepatitis):** Existing infections weaken the immune system further and speed up the progression from HIV to AIDS.
- **Poor Nutrition and Weak Immunity:** Malnutrition and poor health conditions make it harder for the body to fight infections, increasing the risk of developing AIDS.
- **Social Stigma and Lack of Awareness:** Fear, discrimination, and misinformation often prevent people from seeking timely testing and treatment, leading to advanced disease stages.

Also Read: **World AIDS Day 2025**

AIDS Transmission

AIDS itself is not directly transmitted; it develops from long-term infection with HIV (Human Immunodeficiency Virus). HIV spreads from one person to another through specific body fluids such as blood, semen, vaginal fluids, rectal fluids, and breast milk.

Unprotected Sexual Contact

- The most common mode of transmission worldwide.
- Sexual contact without using condoms increases risk.
- Risk is higher if one partner has a high viral load or untreated HIV.

Blood Transfusion with Infected Blood

- Receiving unscreened or contaminated blood can transmit HIV.
- Strict blood screening in hospitals has greatly reduced this risk.

Sharing Needles and Syringes

- Common among injecting drug users.
- Even a tiny amount of infected blood in a needle can transmit HIV.

Mother-to-Child Transmission (MTCT)

- Can occur during pregnancy, childbirth, or breastfeeding.
- With proper medical treatment, the risk can be reduced to very low levels.

Organ or Tissue Transplant from an Infected Donor

- Rare, but possible if proper screening is not done.

Note: HIV is not transmitted through casual social contact or everyday interactions. Activities like hugging, sharing food, using public toilets, coughing, sneezing, or mosquito bites do not spread the virus, as HIV cannot survive or reproduce outside the human body in such conditions.

AIDS Prevention

AIDS can be prevented by stopping the transmission of HIV and by starting early treatment in people who are already infected. Awareness, safe practices, regular testing, and proper medical care are the most effective ways to control the spread of HIV.

- **Safe Sexual Practices:** Using condoms correctly during every sexual act significantly reduces the risk of HIV transmission. Limiting the number of sexual partners and maintaining mutual monogamy also lowers risk.
- **Regular HIV Testing:** Early testing helps in early detection and timely treatment. People who know their HIV status can take necessary precautions to prevent spreading the **virus** to others.
- **Antiretroviral Therapy (ART):** HIV-positive individuals should start ART as soon as possible. ART reduces the viral load in the body to very low levels, helping people live healthy lives and greatly reducing the chance of transmission.
- **Pre-Exposure Prophylaxis (PrEP):** PrEP is a preventive medicine taken by people at high risk of HIV infection. When taken regularly, it significantly lowers the risk of getting HIV through sexual contact.
- **Post-Exposure Prophylaxis (PEP):** PEP is an emergency medication that must be started within 72 hours after possible exposure to HIV. It reduces the chance of infection if taken properly.
- **Safe Blood Transfusion:** Ensuring that all donated blood is properly screened for HIV prevents transmission through blood transfusion.
- **Avoid Sharing Needles or Syringes:** Injecting drug users should never share needles. Use of sterile, single-use syringes is essential to prevent infection.
- **Prevention of Mother-to-Child Transmission:** HIV-positive pregnant women should take ART during pregnancy and breastfeeding. Proper medical care can reduce transmission risk to the baby to very low levels.
- **Health Education and Awareness Programs:** Community education helps remove myths, reduce stigma, and encourage responsible behavior.
- **Reducing Stigma and Discrimination:** Creating a supportive environment encourages people to get tested and treated without fear

Major Government Initiatives

- **Free Antiretroviral Therapy (ART) Centres:** The government provides free ART medicines through thousands of centres across India to ensure long and healthy lives for HIV-positive individuals.
- **HIV Testing and Counseling Centres (HTCs/ICTCs):** These centres offer free and confidential HIV testing services along with counseling support.
- **Prevention of Parent-to-Child Transmission (PPTCT) Programme:** Provides HIV testing and ART to pregnant women to prevent transmission to newborns.

- **Blood Safety Programme:** Strict screening of donated blood in blood banks to prevent HIV transmission through transfusion.
- **Targeted Intervention (TI) Programme:** Focuses on high-risk groups such as sex workers, injecting drug users, and migrant workers through awareness and preventive services.
- **Red Ribbon Clubs:** Established in colleges and educational institutions to spread awareness among youth.
- **HIV and AIDS (Prevention and Control) Act, 2017:** This law prohibits discrimination against people living with HIV/AIDS and ensures confidentiality, equal rights, and access to treatment.

National AIDS Control Programme (NACP)

The Government of India has taken several strong steps to control and prevent HIV/AIDS through awareness, free testing, and treatment services. The main body responsible for implementing these programmes is the National AIDS Control Organisation (NACO), which functions under the Ministry of Health and Family Welfare.

The **National AIDS Control Programme (NACP)** was launched in 1992 to prevent the spread of HIV and reduce AIDS-related deaths in a phased and systematic manner.

- **NACP Phase I (1992-1999):** Focused on creating awareness about HIV/AIDS, ensuring safe blood transfusion, and establishing surveillance systems to monitor the spread of HIV.
- **NACP Phase II (1999-2006):** Strengthened preventive interventions among high-risk groups, expanded HIV testing facilities, and improved blood safety measures.
- **NACP Phase III (2007-2012):** Aimed at reducing new HIV infections and scaling up Antiretroviral Therapy (ART) centres across the country.
- **NACP Phase IV (2012-2017):** Focused on consolidating prevention efforts, expanding treatment coverage, and integrating HIV services with the general healthcare system.
- **Current Focus (NACP Phase V):** Aligns with global targets to eliminate AIDS as a public health threat by 2030, increase treatment coverage, and achieve the 95-95-95 goals (95% diagnosed, 95% on treatment, 95% virally suppressed).

Source: <https://vajiramandravi.com/current-affairs/aids/>

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