

HIV/AIDS and HIV transmission

What is HIV?

HIV is Human Immunodeficiency Virus, the organism that causes AIDS. HIV is found in blood and other body fluids (particularly semen, vaginal secretions and breast milk) of persons infected with the virus.

HIV infection affects the immune system. The immune system is the body's defence against infections by micro-organisms that cause disease. The immune system produces special cells called antibodies to fight off or kill these micro-organisms. A special weakness of the immune system is called an immunodeficiency. Human immunodeficiency virus (HIV) infects, and eventually destroys, the special cells in the immune system.

What is AIDS?

AIDS (Acquired Immunodeficiency Syndrome) is a condition caused by advanced HIV infection. It occurs when a person's immune system is weakened due to HIV infection, which limits the body's natural ability to fight other infections and diseases.

How is HIV transmitted?

The virus can be transmitted in three ways:

1. Sexual transmission

Through unprotected penetrative sexual intercourse (oral, vaginal or anal).

2. Through blood and blood products

- Blood transfusion with contaminated blood
- Injecting drug use through contaminated needles and equipment
- Other means such as tattooing, medical or other instruments that are contaminated

3. From mother to child

- During pregnancy
- During delivery
- During breastfeeding

How is HIV not transmitted?

HIV is not transmitted by:

- Shaking hands or hugging
- Tears, sweat or saliva
- Sneezing or coughing
- Using other people's cutlery, glasses, plates or bed linen
- Eating from the same plate
- Using a toilet
- Dogs, cats or insect bites
- Kissing or saliva

Phases of HIV infection and AIDS

Phase 1: After infection, there is a short period (after 2-6 weeks up to a few months) when a person is highly infectious and may have flu-like symptoms. This period is called seroconversion or window period and the body starts making antibodies.

Phase 2: Following this period of acute infection, there is an "asymptomatic" period in which there are no signs or symptoms of HIV infection and people can lead productive lives. The length of this period (up to 10 years or more), depends on factors such as nutrition, level of stress and anxiety, rest and healthy living. Repeated exposure to HIV (through sex or sharing needles), recurrent sexually transmitted infections (STIs) and drug use, are factors that shorten this period. When the immune system weakens, a person becomes more susceptible for so-called opportunistic infections (see fact sheet 8), including thrush, skin diseases, TB, diarrhoea and fever.

Phase 3: A person has AIDS when the number of antibodies in the blood has gone below a certain level and when opportunistic infections are occurring. Living with AIDS is like living with any other chronic disease, sometimes a person feels sick, at other times a person feels fine and can live a normal life.

FACT SHEET 1

How is HIV infection detected?

- HIV infection can only be established and confirmed by a HIV antibody test (see fact sheet 5).
- HIV infection can also be detected if a woman gives birth to a HIV infected baby (confirmed by a test).
- When a person has Opportunistic Infections that are HIV related, still only a test can confirm the infection as the symptoms can also occur without being HIV positive.

Can HIV and AIDS be treated?

There are at the moment no drugs that can cure HIV and AIDS. There are, however, drugs that can treat the infection and prolong life.

Anti-retroviral drugs (ARVs) are drugs that fight the HIV virus. The development of the ARVs is very rapid and at this moment, a combination of three different drugs is given to people on ARV treatment. This treatment is called Highly Active Antiretroviral Treatment (HAART). The combination of drugs needs to be changed regularly to avoid resistance. A person who has started this treatment has to continue taking the drugs for life. People can be on treatment when they have tested HIV positive and have a certain antibody count. ARVs are now available in Pakistan.

There are advantages to HAART which include:

- People on HAART remain productive
- The immune system recovers so there are less opportunistic infections
- Reduced risk of transmission of HIV from mother to child
- Possibly reduced infectivity
- Reduced illness and death in communities
- Reduced cost of hospitalization

Disadvantages of HAART include:

- It is not a cure: It only stops/reduces the multiplication of the virus in the human body
- Effective in many but not all patients
- The drugs have to be taken life-long
- Strict compliance of treatment is necessary, otherwise resistance is created
- The drugs are quite expensive and not everywhere available
- There are many tablets per day and they are often difficult to take
- Many people on treatment experience unpleasant or even severe side-effects

Finally, Opportunistic Infections are treated with the common drugs that are available for them (see fact sheet 8).

What prevents HIV infection

HIV transmission can be prevented by:

- **A:** not having sex (abstinence),
- **B:** being faithful to one uninfected lifelong partner
- **C:** consistent condom use (fact sheet 3)
- **N:** negotiation skills (empowering men and women to be able to insist on safe sexual behaviour and/or injecting practices)
- **N:** needle exchange programmes (fact sheet 6)
- Blood safety (fact sheet 14)
- Reduction of Sexually Transmitted Infections (fact sheet 2)
- An environment that enables safe sexual and injecting behaviour
- Information and knowledge on HIV and AIDS, how it is transmitted and how it is prevented.
- An approach that stimulates responses that are societal/communal rather than individual.