

# HIV Fact Sheet

Human Immunodeficiency Virus (HIV), the virus that causes Acquired Immunodeficiency Syndrome (AIDS) was first identified in 1981. Infection occurs through transfer of blood, semen, vaginal fluid and breast milk. HIV infection in humans is considered pandemic by the World Health Organization (WHO).

## General Information

### *Virology*

Human Immunodeficiency Virus (HIV) is a single-stranded enveloped RNA virus that causes Acquired Immunodeficiency Syndrome (AIDS). HIV is a lentivirus belonging to the retrovirus family. There are two types of HIV, HIV-1 and HIV-2. HIV-2 is largely confined to West Africa, whereas HIV-1 is the major form infecting people worldwide. HIV infects vital cells in the human body such as the Helper T cells (specifically CD4+), macrophages, and dendritic cells. With a damaged immune system, other opportunistic infections and viruses plague the body and are allowed to thrive, which can eventually eradicate the host.

### *Epidemiology of transmission*

HIV infection occurs in a variety of ways; through unprotected sexual intercourse, contact with an infected person's blood, use of infected blood products, injecting drugs, and from mother to child. For example, if an infected person's blood is transfused to another person or from an infected woman to her baby during pregnancy, delivery or breastfeeding.

Transmission of HIV from infected patients to health care workers (HCW) has been documented via contaminated needles or mucous membrane exposure to blood. The risk of transmission from an infected HCW to patients is very low; estimated to be less than 0.5%.

### *Clinical manifestations*

HIV has a variety of non-specific symptoms associated with initial infection. Some people experience a flu-like illness, develop a rash, or get swollen glands for a brief period soon after they become infected with HIV. Often people who are infected with HIV don't have any symptoms at all.

The HIV virus causes a chronic infection that leads to profound immuno-suppression. The course of the infection may vary with some individuals developing immunodeficiency within 2 to 3 years and others remaining AIDS free for 10-15 years. The manifestations of subsequent opportunistic infections in AIDS patients depends on the level of immunity and can include pneumonia, pulmonary tuberculosis, Herpes Zoster, candidiasis, Kaposi's sarcoma, cryptosporidiosis, Oral hairy leukoplakia and Toxoplasmosis.

### *Basic Prevention*

Testing for HIV is the only way to be certain of infection or not. Despite considerable investment and research, there is currently no HIV and AIDS vaccine, and microbicides (designed to prevent HIV being passed on during sex) are still undergoing trials. However, there are other ways that people can protect themselves from HIV infection, which are the basis of HIV prevention efforts around the world. Ensure practice of safe sex and do not re-use needles or injective devices. It is important to take anti-retroviral drugs if diagnosed with HIV, as it may reduce the risk that the host will spread the virus to others. Education is the most significant preventive measure to be taken against the spread of HIV.



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## Infection Prevention and Control Measures

### *Healthcare Prevention Measures*

Routine / Standard Precautions are sufficient preventative measures to follow when providing care to patients who are suspected or confirmed to have HIV.

- Use PPE barriers (such as gloves and/ or goggles) when anticipating contact with blood or body fluids
- Immediately wash hands and other skin surfaces after contact with blood or body fluids
- Care should be taken when handling and disposing of sharp instruments during and after use
- Gloves should be worn when handling potentially infectious specimens, cultures or tissues; laboratory coats, gowns or suitable protective clothing should be worn

### *Environmental control measures*

HIV is a fragile virus that cannot survive well outside the body. It cannot be passed on to others through casual, everyday contact. HIV is highly susceptible to routinely used hospital grade disinfectants. Outside of the host, drying of the virus in environment causes rapid (within several hours) reduction in HIV concentration (up to 90-99%).

Products used for disinfection of HIV must have an appropriate virucidal claim. Routine cleaning and disinfection should be performed on frequently touched environmental surfaces. There should be prompt removal of blood and body fluids followed by routine disinfection. All patient care equipment should be cleaned and disinfected as per Routine / Standard Practices before reuse with another patient or a single use device should be used and discarded in a waste receptacle after use.

## References:

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