

Overview

The Human Immunodeficiency Virus (HIV) is an infection that attacks the immune system. Once HIV has reduced the function of the immune system to a particular level, a person living with HIV is considered to have developed AIDS.

HIV (Human Immunodeficiency Virus)

The immune system is critical to maintaining health and enabling the body to combat infection and disease. If HIV has reduced the immune system function, an individual is at increased risk of acquiring other infections and diseases such as pneumonia and cancer.

Today, HIV is considered to be a chronic but manageable condition, and people living with HIV (which is referred to as being 'HIV positive') can lead long and healthy lives, with a similar life expectancy to a person who does not have HIV (i.e. 'HIV negative')

AIDS (Acquired Immunodeficiency Syndrome)

Once HIV has reduced the immune system function to a very low functioning level, and the body is unable to fight off infection and disease, a person living with HIV is considered to have developed AIDS (Acquired Immunodeficiency Syndrome). Note: a person with AIDS can transmit HIV infection to others.

Transmission of HIV

How is HIV spread?

HIV can be transmitted through blood-to-blood contact and sexual activity (including the exchange of sexual fluids and blood) as well as from an infected mother to her child during pregnancy or childbirth, or from breastfeeding.

At risk bodily fluids include:

- semen
- vaginal fluids
- menstrual fluids
- blood
- breast milk

HIV and AIDS

Background Note

HIV is spread when body fluids, which contain the virus, enter the bloodstream of a person who does not have HIV. This can happen by:

- having unprotected anal or vaginal sex
- sharing injecting equipment, particularly needles and syringes
- the natural exchange of fluids from a woman who is HIV-positive to her baby during pregnancy, birth or during breastfeeding
- receiving infected blood via transfusion
- unsafe medical or dental procedures (this can be a consideration when travelling to foreign countries).

How you can't get HIV

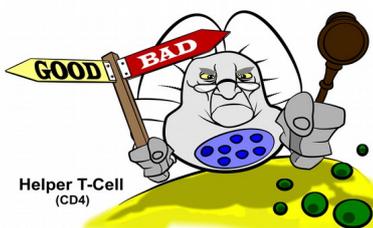
HIV cannot be spread through everyday social contact, such as shaking hands or sharing a glass. Activities where a person cannot get HIV include:

- kissing
- mosquito or insect bites
- an HIV positive person coughing or sneezing on someone
- living, working and/or going to school with an HIV positive person
- hugging
- French/tongue kissing, 'love bites'
- sharing eating and drinking utensils
- sharing the same toilet seats
- swimming in public swimming pools or spas

Effects of HIV on the immune system

The immune system is the body's main defense against bacterial and viral invaders.

Fighter T and B white blood cells – Lymphocytes or white blood cells patrol the body as bacteria and virus—'killing police'. The body produces different types of white blood cells called T and B cells which work together to combat infection.



HIV and AIDS

Background Note

Helper T-cells (or CD4 cells) – operate as the judge that identifies infections and ‘orders’ their destruction by supporting/helping B cells to make antibodies. Antibodies then roam through the bloodstream ready to combat invading bacteria, viruses and other organisms. T cells also produce chemicals which help in other immune responses.

Fighter/Killer T-cells – or suppressor cells cause helper T cells to stop making their chemicals once the infection is under control.



A healthy person has twice as many helper T cells as suppressor cells. However, a person with AIDS has many more suppressor cells than helper T cells which further weakens the entire immune system making it vulnerable to common everyday infections.

The CD4 cell count indicates how well an immune system is functioning and how capable it is to fight off infection. A person with a normal healthy immune system has a CD4 cell count of approximately 1200 while a person with AIDS would typically have a CD4 cell count of 200 or less.

Signs and symptoms of HIV infection

Soon after HIV infection, some people feel as if they have the flu, with symptoms such as:

- fever
- headache
- tiredness

Some people may not have any symptoms. You can have HIV and feel and be healthy. Many people do not realise they have HIV because they do not see or feel anything wrong.

As the virus continues to attack the immune system, a person will start to develop symptoms. These can include:

- constant tiredness
- swollen glands
- rapid weight loss
- night sweats
- memory loss

HIV and AIDS

Background Note

The only way to establish if a person has HIV is through a blood test. However for a short period (known as the 'window period') of a couple weeks just after HIV first enters the body it cannot be picked up with a test. This means that if a person's results are negative at first and there has been risk behaviour they will need a further test in a couple of months.

Preventing the transmission of HIV

- Always use condoms with water-based lubricant when you have sex.
- People who inject drugs, never share needles, syringes, filters, water or spoons. Always use new, sterile needles and syringes
- People in a relationship should ensure that both partners have been tested and are aware of each other's HIV status.
- People having casual sex (sex with different people on a regular basis) need to schedule regular STI checks
- Avoid sharing personal items such as razors and toothbrushes because- they could contain traces of other people's blood.
- Before considering body art (such as tattooing or piercing) ensure the body artist uses only sterilised equipment, and new razors, inks and needles each time.

Treatment for HIV infection

Although there is currently no cure for HIV, the condition can be managed with daily treatment. Treatment is generally in the form of one or more tablets which need to be taken daily to keep the HIV under control.

HIV treatment, taken correctly can lead to an HIV positive person having an undetectable viral load. This does not mean that the HIV infection is cured, but that the level of viral infection in the blood is too small for tests to detect. This also means a reduced likelihood that HIV is transmitted to others on occasions of risk behaviour.

Relevant resources

Guest speakers

[Talking HIV Sex Education Series](#), WA AIDS Council

HIV and AIDS

Background Note

Short, free or low-cost presentations for older students about safer sex and healthy relationships.

Websites

[WA AIDS Council](#)

[UNESCO HIV & AIDS Education Clearinghouse](#)

Fact sheets, booklets and videos

[HIV and AIDS](#), Get the Facts

[Safer sex](#), Get the Facts

[HIV and AIDS](#), WA Department of Health

[HIV](#) animated slide show, Queensland Health

A short animated slide show explaining how HIV can be passed on from person to person and how it affects the immune system and eventually leads to AIDS.

[Blood to blood transmission](#) animated slide show, Queensland Health

A short animated slideshow explaining how blood can transmit diseases and infections from one person to another and how you can come into contact with someone else's blood.

Postscript

This Background Note relates to the following Learning Activities:

- [Blood-borne virus safety](#)
- [How common is HIV?](#)
- [Are there any STIs that cannot be cured/treated?](#)

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HIV and AIDS

Background Note
