

A Systematic Review on HIV/AIDS

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Abstract

HIV (human immunodeficiency virus) is a virus that attacks cells that help the body fight infection, making a person more vulnerable to other infections and diseases. It is spread by contact with certain bodily fluids of a person with HIV, most commonly during unprotected sex (sex without a condom or HIV medicine to prevent or treat HIV), or through sharing injection drug equipment. If left untreated, HIV can lead to the disease AIDS (acquired immunodeficiency syndrome). HIV is a lifelong condition, but treatments and certain strategies can prevent the virus from transmitting and the disease from progressing. HIV is found in body fluids such as: blood, semen, vaginal fluids and breast milk. It can be passed on through penetrative sex, oral sex and sharing contaminated needles when injecting street drugs or in hospitals. It can also be transmitted from a mother to her baby during pregnancy, childbirth or breastfeeding though many children escape infection. HIV cannot be passed on through kissing, coughing, mosquito bites or touching.

Keywords: Communicable disease; Infection; Immunity; HIV; AIDS.

INTRODUCTION

HIV stands for human immunodeficiency virus, and it attacks immune cells called CD4 cells.

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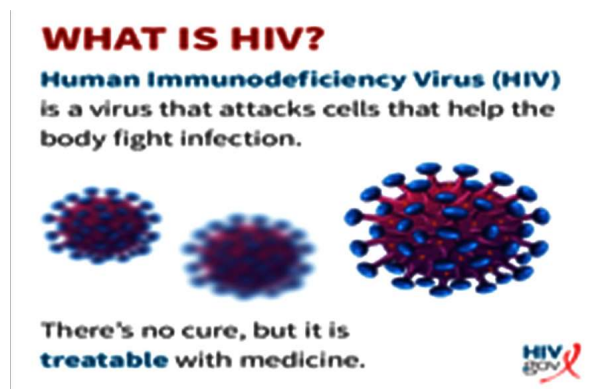
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These are types of T cells—white blood cells that circulate around the body, detecting infections and faults and anomalies in other cells. HIV targets and infiltrates CD4 cells, using them to create more copies of the virus. In doing so, it destroys the cells and reduces the body's ability to combat other infections and diseases. This increases the risk and impact of opportunistic infections and some types of cancer. Acquired immunodeficiency syndrome (AIDS) is a chronic, potentially life threatening condition caused by the human immunodeficiency virus (HIV). By damaging your immune system, HIV interferes with your body's ability to fight infection and disease.



Source: <https://www.hiv.gov/hiv-basics/overview/about-hiv-and-aids/what-are-hiv-and-aids>

HIV is a sexually transmitted infection (STI). It can also be spread by contact with infected blood and from illicit injection drug use or sharing needles. It can also be spread from mother to child during pregnancy, childbirth or breastfeeding. Without medication, it may take years before HIV weakens your immune system to the point that you have AIDS.

HIV is an infection that harms the insusceptible framework. The resistant structure enables the body to fend off diseases. Untreated HIV taints and slaughters CD4 cells, which are a kind of immune cell called T cells. The infection doesn't spread in air or water, or through easy going contact.

HIV TRANSMISSION FACTS

Anyone can contract HIV. The virus is transmitted in bodily fluids that include:

- Blood
- Semen
- Vaginal and rectal fluids
- Breast milk

Some of the ways HIV is transferred from person to person include:

- Through vaginal or anal sex the most common route of transmission.
- By sharing needles, syringes, and other items for injection drug use.
- By sharing tattoo equipment without sterilizing it between uses.
- During pregnancy, labor, or delivery from a pregnant person to their baby.
- During breastfeeding.

- Through "premastication," or chewing a baby's food before feeding it to them.
- through exposure to the blood, semen, vaginal and rectal fluids, and breast milk of someone living with HIV, such as through a needle stick.

The virus can also be transmitted through a blood transfusion or organ and tissue transplant.

It's theoretically possible, but considered extremely rare, for HIV to be transmitted through:

- Oral sex (only if there are bleeding gums or open sores in the person's mouth).
- Being bitten by a person with HIV (only if the saliva is bloody or there are open sores in the person's mouth).
- Contact between broken skin, wounds, or mucous membranes and the blood of someone living with HIV.

HIV does not transfer through:

- Skin-to-skin contact
- Hugging, shaking hands, or kissing
- Air or water
- Sharing food or drinks, including drinking fountains
- Saliva, tears, or sweat (unless mixed with the blood of a person with HIV)
- Sharing a toilet, towels, or bedding
- Mosquitoes or other insect

RISK FACTORS

Behaviours and conditions that put individuals at greater risk of contracting HIV include:

- Having condomless anal or vaginal sex.
- Having another sexually transmitted infection (sti) such as syphilis, herpes, chlamydia, gonorrhoea and bacterial vaginosis.
- Engaging in harmful use of alcohol and drugs in the context of sexual behaviour.
- Sharing contaminated needles, syringes and other injecting equipment and drug solutions when injecting drugs.
- Receiving unsafe injections, blood transfusions and tissue transplantation, and medical procedures that involve unsterile cutting or piercing.

- Experiencing accidental needle stick injuries, including among health workers.

PREVENTION OF HIV/AIDS

There's no cure for HIV/ AIDS, but medications can control the infection and prevent progression of the disease. Antiviral treatments for HIV have reduced AIDS deaths around the world, and international organizations are working to increase the availability of prevention measures and treatment in resource poor countries.

Individuals can reduce the risk of HIV infection by limiting exposure to risk factors. HIV is not transmitted if a person's sexual partner is virally suppressed on ART, so increasing access to testing and supporting linkage to ART is an important component of HIV prevention.

Protecting yourself from HIV begins with understanding how the virus is spread. The virus can be passed in only certain ways:

- During sex with a person infected with HIV
- By sharing a contaminated needle, such as through illicit drug use.
- From HIV mother to child either during pregnancy, labor or breastfeeding.
- Through a contaminated blood transfusion
- If a pregnant woman knows she is HIV positive, her medical team can now take special steps to help prevent her baby from becoming infected.

Condom Use

Consistent and correct use of the male latex condom reduces the risk of sexually transmitted disease (STI) and human immunodeficiency virus (HIV) transmission. However, condom use cannot provide absolute protection against any STI.

Epidemiologic studies that compare rates of HIV infection between condom users and non-users

who have HIV infected sex partners demonstrate that consistent condom use is highly effective in preventing transmission of HIV. Similarly, epidemiologic studies have shown that condom use reduces the risk of many other STIs. However, the exact magnitude of protection has been difficult to quantify because of numerous methodological challenges inherent in studying private behaviors that cannot be directly observed or measured.

CONCLUSION

HIV is a virus that targets and alters the immune system, increasing the risk and impact of other infections and diseases. Without treatment, the infection might progress to an advanced stage called stage 3 HIV, or AIDS. Due to medical advances, people with HIV who have access to quality healthcare and receive appropriate treatment rarely develop AIDS, or stage 3 HIV. The health agencies observe that many people with HIV manage the condition and live long healthy lives. The life expectancy of a person with HIV is now approaching that of someone who tests negative for the virus. However, this only applies if the person takes a combination of drugs called antiretroviral therapy regularly and exactly how their doctor prescribes it.

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