



# SHARP FACTS

## HIV Infection and AIDS



### What is HIV? What is AIDS?

HIV (human immunodeficiency virus) is the virus that causes AIDS. HIV is not transmitted through the air or by eating food. It does not live long outside the body. HIV can be found in the blood, semen, or vaginal fluid of an infected person. In addition, infected pregnant women can pass HIV to their baby during pregnancy or delivery, as well as through breast-feeding.

AIDS stands for acquired immunodeficiency syndrome. A positive HIV test result does not mean that a person has AIDS. A diagnosis of AIDS is made by a physician using certain clinical criteria (e.g., AIDS indicator illnesses).

Infection with HIV can weaken the immune system to the point that it has difficulty fighting off certain infections. These types of infections are known as "opportunistic" infections because they take the opportunity a weakened immune system gives to cause illness. Many of the infections that cause problems or may be life-threatening for people with AIDS are usually controlled by a healthy immune system. The immune system of a person with AIDS is weakened to the point that medical intervention may be necessary to prevent or treat serious illness.

### Where did HIV come from?

We do not know. Scientists have different theories about the origin of HIV, but none have been proven. The earliest known case of HIV was from a blood sample collected in 1959 from a man in Kinshasha, Democratic Republic of Congo. (How he became infected is not known.) Genetic analysis of this blood sample suggests that HIV-1 may have stemmed from a single virus in the late 1940s or early 1950s. We do know that the virus has existed in the United States since at least the mid- to late 1970s. From 1979-1981 rare types of pneumonia, cancer, and other illnesses were being reported by doctors in Los Angeles and New York among a number of gay male patients. These were conditions not usually found in people with healthy immune systems.

### How many people have HIV & AIDS?

United States: Nearly 5000 active duty American Sailors and Marines have become infected with HIV. As of December 2002, 859,000 Americans had been diagnosed with AIDS, and 501,669 had died of AIDS. An estimated 800,000-900,000 Americans are living with HIV infection.

Worldwide: According to the World Health Organization-UNAIDS, an estimated 40 million people were living with HIV at the end of 2003. During 2003, an estimated 5 million people became infected, including 800,000 children, most of whom were infected through mother-to-child transmission.

### How is HIV passed from one person to another?

HIV transmission can occur when blood, semen (including pre-seminal fluid), vaginal fluid, or breast milk from an infected person enters the body of an uninfected person. HIV can enter the body through a vein (e.g., injection drug use), the anus or rectum, the vagina, the penis, the mouth, other mucous membranes (e.g., eyes or inside of the nose), or cuts and sores. Intact, healthy skin is an excellent barrier against HIV and other viruses and bacteria.

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These are the most common ways that HIV is transmitted from one person to another:

- by having sexual intercourse (anal, vaginal, or oral sex) with an HIV-infected person
- by sharing needles or injection equipment with an injection drug user who is infected with HIV
- from HIV-infected women to babies before or during birth, or through breast-feeding after birth

### Is there a cure or vaccine for HIV Infection?

There is no cure to rid the body of HIV infection.

There is no vaccine which can protect a person from becoming infected with HIV.

Today there are medical treatments that can slow down the rate at which HIV weakens the immune system. There are other treatments that can prevent or cure some of the illnesses associated with AIDS, though these treatments do not eliminate the HIV infection itself. As with other diseases, early detection offers more options for treatment and preventive health care.

### How can I tell if I'm infected with HIV?

The only way to determine for sure whether you are infected is to be tested for HIV infection. You cannot rely on symptoms to know whether or not you are infected with HIV. Many people who are infected with HIV do not have any symptoms at all for many years. Similarly, you cannot tell that a person has HIV or AIDS simply by looking at them.

### How can I avoid infection with HIV?

Two people who know they are not infected and who have no other sex partners besides each other cannot contract HIV. When a person has sex with a person whose STD status is unknown, a latex condom put on before beginning sex and worn until the penis is withdrawn can greatly reduce the risk of infection. Only lab tests can confirm someone has HIV. It is not obvious by looking to determine whether a partner has HIV or any other STD. Washing the genitals, urinating, or douching after sex does not prevent STDs.

For more detailed information on strategies to reduce your risk of acquiring STD/HIV see *SHARP Fact "Choosing Safer Options Reduces Risk"* at <http://www-nehc.med.navy.mil/hp/sharp/shrpfact.htm>.

### Where can I get more information?

Your medical care provider should be consulted if you think you may have been exposed to any sexually transmitted disease. CDC provides information through their National AIDS Hotline at (800) 342-AIDS (2437). For further information regarding your sexual health, visit the Sexual Health and Responsibility Program (SHARP) Home Page at <http://www-nehc.med.navy.mil/hp/sharp>.

This information was adapted by the Sexual Health and Responsibility Program (SHARP), Navy Environmental Health Center from materials developed by the Centers for Disease Control and Prevention (including [HIV/AIDS Surveillance Report](#) Vol 15; Mar 2004), and from materials developed by the Joint United Nations Programme on HIV/AIDS (UNAIDS) (including [UNAIDS questions & answers II : basic facts about the HIV/AIDS epidemic and its impact](#) ; Nov 2003).