

1 - What is HIV? HIV vs. AIDS

HIV is the Human Immunodeficiency Virus. It is the virus that can lead to Acquired Immune Deficiency Syndrome, or AIDS. According to the CDC, approximately 50,000 people are infected each year. At the end of 2012 it is estimated that 1.2 million people in the U.S. are living with HIV and roughly 12.8 percent are unaware of their infection.

There are two types of HIV, HIV-1 and HIV-2. In the United States, unless otherwise noted, the term “HIV” primarily refers to HIV-1. Both types of HIV damage a person’s body by destroying specific blood cells, called CD4+ T cells, which are crucial to helping the body fight diseases.

AIDS is the late clinical stage of HIV infection, when a person’s immune system is severely compromised and has difficulty fighting infections, diseases and certain cancers. Before the development of certain medications, people with HIV could progress to AIDS in just a few years. Because of the release of highly aggressive medications in the 1990’s, individuals can live much longer - even decades - with HIV before they develop AIDS.

2 - Origin of HIV

Scientists have identified a chimpanzee in West Africa as the source of HIV infection in humans. Scientists believe that the chimpanzee version of the immunodeficiency virus (called simian immunodeficiency virus or SIV) most likely was transmitted to humans because humans hunted these chimpanzees for meat and came into contact with their infected blood. The virus mutated into what we know as HIV. Over

decades, the virus slowly spread across Africa and later traveled into other parts of the world.

3 - Symptoms of HIV

Some individuals show no symptoms of HIV for many years. According to aidshealth.org, when someone does show signs of HIV infection the symptoms include:

- Dry, flaky skin
- Persistent tiredness
- Fever that comes and goes
- Diarrhea that last more than a week
- Night Sweats
- Swollen lymph nodes in armpits, groin or neck
- White Spots on Tongue
- Headache

4 - Transmission of HIV

HIV is spread primarily by:

- Not using a condom when having sex with a person who has HIV. All unprotected sex with someone who has HIV contains some risk. Anal sex presents the highest risk.
- Having multiple sex partners or the presence of other sexually transmitted diseases (STDs) can increase the risk of infection during sex. Unprotected oral sex can also be a risk for HIV transmission, but it is a much lower risk than anal or vaginal sex.
- Sharing needles, syringes, rinse water, or other equipment used to prepare illicit drugs for injection.
- Being born to an infected mother—HIV can be passed from mother to child during pregnancy, birth, or breast-feeding.

Less common modes of transmission include:

- Being “stuck” with an HIV-contaminated needle or other sharp object. This risk pertains mainly to healthcare workers.
- Receiving blood transfusions, blood products, or organ/tissue transplants that are contaminated with HIV. This risk is extremely remote due to the rigorous testing of the U.S. blood supply and donated organs/tissue.
- Being bitten by a person with HIV. Each of the very small number of cases has included severe trauma with extensive tissue damage and the presence of blood.
- There is an extremely remote chance that HIV could be transmitted during “French” or deep, open-mouth kissing with an HIV-infected person if the HIV-infected person’s mouth or gums are bleeding.
- Tattooing or body piercing present a potential risk of HIV transmission, but no cases of HIV transmission from these activities have been documented. Only sterile equipment should be used for tattooing or body piercing.

HIV Transmission Myths, HIV can NOT be spread by:

- Air or water.
- Insects, including mosquitoes. Studies conducted by CDC researchers and others have shown no evidence of HIV transmission from insects.
- Saliva, tears, or sweat. There is no documented case of HIV being transmitted by spitting.
- Casual contact like shaking hands or sharing dishes.
- Closed-mouth or “social kissing”

5 - HIV Testing

The most commonly used HIV tests detect HIV antibodies. Antibodies are the substances the body creates in response to becoming infected with HIV. There are tests that look for HIV’s genetic material or proteins directly; these may also be used to find out if someone has been infected with HIV. Most people will develop detectable antibodies that can be detected by the most commonly used tests in the United States within 2 to 8 weeks (the average is 25 days) of their infection. Ninety-seven percent (97%) of persons will develop detectable antibodies in the first 3 months. Even so, there is a small chance that some individuals will take longer to develop detectable antibodies. Therefore, a person should consider a follow-up test more than three months after their last potential exposure to HIV. Recently, rapid HIV tests became available that can give results in as little as 20 minutes.

6 - Preventing HIV

As mentioned previously, the most common ways HIV is transmitted is through anal or vaginal sex or sharing drug injection equipment with a person infected with HIV. It is important to take steps to reduce the risks associated with these. They include:

- Know your HIV status. Everyone between the ages of 13 and 64 should be tested for HIV at least once. If you are at increased risk for HIV, you should be tested for HIV at least once a year.
- If you have HIV, you can get medical care, treatment, and supportive services to help you stay healthy and reduce your ability to transmit the virus to others.
- If you are pregnant and find that you have HIV, treatments are available to reduce the chance that your baby will have HIV.

7 - Treatment of HIV / AIDS

Currently, there is no cure for HIV/AIDS, but a variety of drugs do exist which can be used in combination to control the virus. According to the Mayo clinic, each of the classes of anti-HIV drugs blocks the virus in different ways. It's best to combine at least three drugs from two different classes to avoid creating strains of HIV that are immune to single drugs. The classes of anti-HIV drugs include:

- Non-nucleoside reverse transcriptase inhibitors (NNRTIs). NNRTIs disable a protein needed by HIV to make copies of itself. Examples include efavirenz (Sustiva), etravirine (Intelence) and nevirapine (Viramune).
- Nucleoside reverse transcriptase inhibitors (NRTIs). NRTIs are faulty versions of building blocks that HIV needs to make copies of itself. Examples include Abacavir (Ziagen), and the combination drugs emtricitabine and tenofovir (Truvada), and lamivudine and zidovudine (Combivir).
- Protease inhibitors (PIs). PIs disable protease, another protein that HIV needs to make copies of itself. Examples include atazanavir (Reyataz), darunavir (Prezista), fosamprenavir (Lexiva) and ritonavir (Norvir).

II - HEPATITIS B

Hepatitis B is irritation and inflammation of the liver due to infection with the hepatitis B virus (HBV).

Other types of viral hepatitis include:

Hepatitis A

Hepatitis C

Hepatitis D

Transmission

- Hepatitis B infection can be spread through having contact with the blood, semen, vaginal fluids, and other body fluids of someone who already has a hepatitis B infection.
- Blood transfusions (not common in the United States)
- Direct contact with blood in health care settings
- Sexual contact with an infected person
- Tattoo or acupuncture with unclean needles or instruments
- Shared needles during drug use
- Shared personal items (such as toothbrushes, razors, and nail clippers) with an infected person
- The hepatitis B virus can be passed to an infant during childbirth if the mother is infected.

Symptoms

- Appetite loss
- Fatigue
- Fever, low-grade

Muscle and joint aches

- Nausea and vomiting
- Yellow skin and dark urine due to jaundice

Prevention

Vaccination is available. Salon workers are strongly encouraged to receive Hepatitis B Vaccination due to the fact that they experience frequent exposure to body fluids.

Summary

HIV/AIDS is a devastating disease that attacks the immune system and infecting approximately 50,000 U.S. citizens each year. Through research, knowledge of its transmission and progression has been obtained. By ways of medical advancements, means have been established to hinder and prevent HIV transmission and manage infections. As service providers we must do our due diligence to ensure the safety of our clients and ourselves by taking stern precautions in the spread of disease. Perhaps a good place to start would be following recommendations for hepatitis vaccination.

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