What you should know about HIV, AIDS

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It is estimated over a million people in the United States, and almost 40 million people worldwide are currently living with HIV. These alarming statistics and how quickly the virus continues to spread worldwide have pushed HIV and AIDS to the top of the list of healthcare priorities in the United States.

HIV is a viral infection that affects a person's immune system by destroying certain white blood cells called CD4+ (helper) T cells. These are the cells that help to defend the body against certain infections and cancers. When HIV weakens the immune system, a person is unable to fight off these infections, which include viruses, bacteria, parasites, and some types of cancer.

AIDS is the final and most serious stage of HIV disease, which causes severe damage to the immune system. A person with HIV is diagnosed with AIDS (Acquired Immunodeficiency Syndrome) when:

- Laboratory tests show his or her immune system is severely weakened by the virus
- The person infected develops an opportunistic infection (diseases that might not affect a person with a normal immune system but take advantage of damaged immune systems), a cancer or some other serious medical condition that is known to be associated with AIDS

Transmission: Are you at risk?

The good news about AIDS and HIV is that we now understand how it is passed between people. Arming yourself with this knowledge can help to keep you and your loved ones safe from the disease. HIV transmission occurs when blood, semen, vaginal fluids or breast milk from an HIV-positive person enters the body of an HIV-negative person. HIV can enter the body through a vein, the lining of the anus or rectum, the lining of the vagina and/or cervix, the opening of the penis, the mouth, or cuts and sores.

High-risk activities include:

- Having unprotected sex of any kind, (vaginal, oral, anal) with an HIV-positive person
- Sharing needles and/or other drug-related paraphernalia with people infected with HIV
- Giving birth and/or breastfeeding a child by an HIV-positive mother

How HIV is NOT spread

HIV cannot be spread through casual or everyday contact, such as shaking hands or hugging. The virus does not survive well outside the body, and therefore cannot be transmitted by touching things that HIV-positive people have touched. Sweat, saliva, tears, vomit, feces, and urine do contain small amounts of HIV, but it is very unlikely that HIV can be transmitted as a result of direct contact with these fluids.
Avoiding HIV infection

Knowing how to protect yourself from an HIV infection is essential to your health. Here's how:

- Have a low number of sex partners
- Practice safer sex by always using a condom
- Know your HIV status and any partner's HIV status by getting tested for HIV
- Know the risk factors for contracting HIV and protect yourself

Minimize your drug-related risks

HIV can be spread through drug-related activities, such as sharing needles. 1 out of 10 cases of new HIV worldwide result from needle sharing. Even more cases occur in the context of drugs including non-injection drug use.

Drug use increases your risks in several ways, including:

- Sharing needles and drug paraphernalia contaminated by HIV
- The sale or trade of sex for drugs of any sort
- Increased chance of high risk behavior, such as unprotected sex under the influence of drugs and alcohol

Here are some steps to reduce your risk:

- Do not share intravenous (IV) needles, syringes, cookers, cotton, cocaine spoons, or eyedroppers with others
- Find a needle exchange program in your area

Minimizing risks for health-care workers

HIV infection can also be spread through needlestick exposure. If you are a healthcare worker, use bloodborne pathogen precautions. There is always a risk of infection for healthcare workers involved with handling blood products and sharps. The HIV status of the patient is often unknown and universal precautions are necessary. Use of appropriate post-exposure prophylaxis with antiretroviral medications is often necessary in case of exposure.

Knowledge is power

Billions of dollars are currently being spent to try to help develop more successful treatments for those living with the disease, discover better methods of testing, and, hopefully, to eventually find a cure.

To date this research has lead to important new knowledge about HIV disease and immunity and has resulted in the development of effective medications which have dramatically improved the health of persons living with HIV. Much remains unknown, however, and new HIV infections continue at an alarming rate (approximately 4 million people are infected with HIV each year, 40,000 of whom live in the US).

The best weapon against AIDS and HIV is education. The more people understand about how to protect themselves against the disease, the more it will be contained.

Tags: AIDS, Case Western Reserve University, Dr. Robert C Kalayjian, sex, sexually transmitted disease