

What Everyone Needs to Know About HIV/AIDS:

Education is the Key to Prevention

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Thirty some years ago, if you weren't of Haitian descent, a hemophiliac, a homosexual or an IV drug abuser, you generally didn't need to worry about a certain human immunodeficiency virus (HIV) which is the virus that causes Acquired Immune Deficiency Syndrome (AIDS). At this point in time, however, everyone needs to know the important facts if not for themselves, then for their loved ones so that they do not become a statistic of this global pandemic. The number of children and adults living with AIDS better than doubled from 20 million to more than 40 million between 1995 and 2005! That says nothing for the 25 million¹ plus who have already died. Human existence has been completely wiped out from entire geographic regions because of HIV/AIDS. Just in the United States alone, approximately one million people have the virus. Even scarier is that about one quarter of them (250,000) don't even know it, and an estimated 40,000 new cases annually have been steadily reported since the early 1990s. Because anyone who is infected with HIV can pass the virus to someone else through a variety of ways, that necessitates everyone else using extreme care. There is no better time than **now** to become informed.

Dispelling Myths. Thankfully, HIV is **not** an airborne or food-borne virus, and it does not live long outside the body. Since HIV is transmitted by direct contact with infected blood, semen, vaginal secretions and breast milk, you will not become infected with HIV through a sneeze or cough. The only time when other body fluids such as urine, saliva, vomit, et cetera pose a risk is when visible blood is present. You also will not contract HIV when making a blood donation or from a mosquito.

Common Methods of Transmission. Here are the more common ways of becoming infected:

Sexual intercourse. This includes vaginal, anal,² and oral sexual involvement. For both men and women, engaging in anal sex with someone who either is HIV positive or has an unknown HIV status is the riskiest sexual activity. Although a latex condom is the best defense for vaginal and anal intercourse (which protects both participants),³ make sure to be educated on proper storage and usage to avoid breakage which could subject someone to transmission. Proper condom storage does not mean using a wallet in one's back pocket or glove compartment for condom storage (where temperatures far exceed the recommended guidelines). Furthermore, it is essential that condom users clearly understand that condoms need to be used correctly and consistently since infection can occur with just one mishap. Hopefully, for young adults this would involve parents discussing condom usage with their child and making sure that their daughters and sons possess the most up-to-date knowledge. This should also include discussions regarding correctly and consistently using condoms. Note that natural lambskin condoms do not provide protection against HIV. When lubricants are combined with a latex condom, make sure to use a water-based lubricant such as KY jelly but do not use oil-based lubricants such as petroleum jelly or lotions because oil-based products weaken the latex fibers and the condom breaks easier. Because condom failure is unfortunately a common experience for many, these points cannot be underscored enough.

Another option is the female condom. Although they are more expensive than the male condom, they are not cost prohibitive. If the male partner is unwilling or unable to use the traditional condom, at least females are afforded another option which provides a similar dual barrier for both participants. Also, since it has been done before, be forewarned that using two condoms decreases their effectiveness. Consequently, use only one male or female condom.

To briefly cover oral sex, a person who engages in oral sex with a person who is HIV infected or whose HIV status is unknown could result in infection.⁴ The website www.aids.about.com provides much reliable and helpful information on these topics.

Regardless of whether the sexual intercourse is heterosexual or homosexual, the object is to practice safe sex. Realizing that a person can switch between these types of involvement, everyone needs to be protected. Women especially need to be vigilant because they have been particularly hard hit with HIV/AIDS. Specifically, the proportion of females affected by this pandemic has stunningly better than tripled between 1985 and 2003 (from 8% to 27%).⁵

Injection drug use. Sharing injection drug needles or "works" with a person who has HIV can cause infection. Used needles and "works" can be packaged as if new and sold on the street. For those unable or unwilling to curtail taking illegal drugs through the veins, at the very least, gain access to and utilize sterile needles, syringes and other related items. Better yet, learn ways to replace this life-altering practice with a more healthy habit.

Mother to child. In 1990, approximately 2,000 babies were born in the United States infected with HIV. Now, because of comprehensive prevention programs in developed countries wherein pregnant women receive proper treatment, mother-to-child HIV transmission is virtually nonexistent. Unfortunately, similar prevention efforts in resource-poor environments have posed a challenge with only 10% of pregnant HIV-infected mothers receiving these services.⁶ As good as breastfeeding is for both baby and mother, this is one of the methods of transmission. Therefore, HIV/AIDS-infected mothers should not breastfeed.

Uncommon Methods of Transmission. Although it would be impossible to describe all of the many unusual ways of becoming infected, here are a few:

Body fluids. Anytime an exchange of blood, semen, vaginal secretions or breast milk occurs, HIV can be transmitted. Many methods of transmission are covered within this article; however, there is no way to include all possibilities. Although extremely rare, it is possible for the virus to be transmitted through a handshake if both parties have open hand sores, rashes and/or cuts and one person is HIV positive. Put thought into how you and loved ones might be exposed and remember to cover all open sores, rashes and cuts with bandages.

Accidental needle sticks. Although the risk is less than one percent,⁷ universal health precautions should be used each and every time by all healthcare providers. This includes even in the most benevolent settings such as home-health care. Healthcare workers should also use extra extreme caution around other sharp objects besides needles that could expose them to a contamination.

Kissing. Cheek kissing will not pose a danger of contracting HIV; however, tongue kissing could present a very small but ever-present risk. This could occur if an HIV infected person has blood present in their mouth which comes in contact with a break in the skin of an uninfected person's mouth. Thus, until you know a person's reliable HIV negative status, forego intense kissing.

Foot coverage. Wear appropriate foot coverage and ensure that children in your care do the same to eliminate puncture wounds to the feet by a carelessly disposed of needle as well as other unwelcome things that could enter the body through bare feet. Simply put, limit bare footedness to your home and the beach (where the sand is continually "washed").

Mucous membrane. Contact with an infected person's blood or certain other body fluids to a mucous membrane (e.g., eyes, nose, mouth, et cetera) can cause an exposure. Wearing protective barriers (i.e., eye protection, mask, gloves, et cetera) prevents such exposures.

Personal items. Do not share personal items which might contain blood. This includes, at the least, razors and toothbrushes.

Knowledge and Honesty. Certainly not everyone knows their true HIV status. At first, most people are unaware that they are HIV positive because they either have no symptoms or are not sick. Of course, those who know they are HIV positive might not be honest about their condition. Be aware that a HIV positive patient with a low or even undetectable viral load can transmit the virus. If something doesn't feel right, trust yourself to know better. If you're not sure what you should do, erring on the side of caution cannot be the wrong way to go. Be safe! Read the Window Period section below to learn the importance of waiting for accurate test results.

Prevention Through a Vaccine. Although vaccine development is still in the infancy stage, clinical trials are underway in 24 countries involving all continents.⁸ In 2006, 13 new preventive vaccines were initiated in eight countries across the globe. Because of the importance of helping both infected as well as uninfected people, many vaccine researchers are working to make progress for both groups.⁹ Hope is kept alive that a safe, efficient and cost-effective vaccine will be found so that HIV will be prevented once and for all.

AIDS vaccine researchers have a tall order to accomplish. For example, one challenge involves whether a vaccine which prevents one strain of HIV also being able to prevent a different strain of HIV.¹⁰ Another dilemma involves the danger of trial volunteers testing positive on standard HIV antibody tests even though they are not infected with HIV. The implications could be enormous. Researchers have the responsibility to protect trial volunteers with not only standard protocols such as informed consent but also to advise participants about all risks and benefits. One thing is certain – no matter how effective any vaccine will be, there is no substitute for effective behavioral prevention programs.⁸

Sex Education. A commonly-held belief by most young people is that they're going to live forever, with little if any regard to consequences of their behavior. Typically, it is not until a person gets older when this connection becomes clear. Therefore, parents or guardians must make sure that their children receive the most up-to-date and accurate information about HIV and AIDS. Parents who are uncomfortable with the topic of sex education must educate themselves about how best to prepare their young adults for the world as it is today (however difficult this may be for them). Simply advising a teen to say "No" or "Don't do it," is one of the surest ways of having the opposite effect (i.e., a teenager engaging in unprotected sex).

Some parents believe that if you don't talk about sex, it won't happen. This could not be farther from the truth. Many of these parents feel strongly against sex education in the schools. Resistance to discussions about sex and sexuality benefits no one. Children who are not informed at home will gain knowledge from other sources, some of which will not be the most reliable information. Since HIV/AIDS has been on the horizon, the world is a much different place. It is imperative to not only stay informed, but also to ensure that discussions with children translate into appropriate action. Most if not all parents want their children to wait until their child has either at least reached the age of majority or married to engage in a sexual relationship (if not 30 or 40 years old!). What parents need to do, at a minimum, is make certain that their children will practice safe sex if they don't wait. This can best be accomplished by doing what it takes to keep the lines of communication open. When there is a breakdown, parents need to work to reestablish harmony.

Protect Yourself and Your Loved Ones. Ideally, when someone is ready to take their relationship to the level of sexual involvement, both parties would have tested negative twice over a six-month period of time for at least HIV, but hopefully as many other sexually-transmitted diseases as possible. These tests can be performed at your doctor's office or at a not-

for-profit local agency that specializes in this service. Conduct an internet or phone directory search if you are unfamiliar with these resources in your area.

Recognizing this is not an ideal world however, if the decision is made to engage in a sexual relationship before the six-month testing results return, that person should at least practice safe sex and invest in a home HIV test kit. At the present time, there is only one FDA-approved home HIV test kit. A home test kit involves taking a blood sample at home and mailing the lab work for evaluation. There are also six rapid tests available for use in a clinical setting. Rapid tests provide results immediately. Any preliminary "reactive rapid test result" needs to be confirmed using another testing method. While awaiting reliable results, precautions should be taken to avoid transmitting or receiving any potential infection.

Window Period. Regardless of which route is taken, it is critical to understand that there is a three to six-month "window" period¹¹ after a person engages in a behavior which could have caused an HIV infection, but most test results don't "register" a positive result. Therefore, two reasonably-prudent people would wait until after the six months have elapsed and retest themselves. Hopefully both will pass with flying colors.

Risks and Benefits of Testing. Preliminary test results are occasionally inaccurate and retesting is necessary. Keep in mind that while true-negative and false-positive results can provide relief, such reassurance would only provide a temporary reprieve if high-risk behaviors do not cease. True-positive and false-negative results provide a scary and uncertain future. For some, testing can be fraught with anxiety. Thoughts of the future, labeling, consequences and much more surface. Some of those thoughts will include fear of discrimination and stigmatization. For HIV negative results, retesting should be performed after the six-month window period has elapsed. For those who are HIV positive, retest again when it's

convenient. Assuming the same result, take each day as it comes, continue to read and learn as much as possible so that the best of care will be provided.

If high-risk behaviors pose an issue, risk reduction counseling can supply the needed education to not only make a difference for the immediate future but also for the long term. If you or a loved one engaged in a behavior wherein there is a risk for HIV infection, testing should occur sooner rather than later. For people who are at high risk of contracting HIV, testing should be done once per year at a minimum. The quicker any illness is known, generally speaking, the better the outcome.

Regardless of where HIV testing occurs, testing will hopefully include a prevention counseling component. For home tests, there is currently not a provision for appropriate counseling much less referrals for follow-up treatment and care. Seek this out if desired.

Care and Treatment. If you or a loved one received a diagnosis of HIV or AIDS, you have the benefit of more reliable medical knowledge than at any other time in history. During the past 25 years, much has been learned to improve the quality and quantity of people's lives who are living with HIV or AIDS. In particular, for patients fortunate enough to have access to highly active antiretroviral therapy (HAART), the results are astounding, particularly when patients understand and properly adhere to the high pill burdens. Conversely, suboptimal medication adherence not only reduces long-term success, but also leads to the creation of drug-resistant strains of the virus. Therefore, patients on HAART need to ensure that they completely understand and abide by the regimen.

Prior to HAART, almost 100% of people diagnosed HIV positive passed away. Now, with proper adherence, HAART postpones the AIDS diagnosis by as long as 20 years or more. In doing so, the patient lives with chronic HIV infection. For anyone recently diagnosed HIV

positive, it is critical to find quality health care and choose the right HIV treatment. There is no cookie cutter approach with HAART. Each patient's treatment regimen must be individually tailored.

Reinfection. For people who have been accurately diagnosed with HIV or AIDS, there is a reinfection risk if high-risk behaviors are not eliminated.

Remember. If you remember only one thing after reading this article, remember to protect yourself and ensure that your loved ones are protecting themselves from HIV. For intimate relationships, safe sex is the way to go!

*If you're hearing the call,
but not practicing abstinence at all,
Safe sex will help prevent a fall,
Do it now, forever and always and don't stall.*

¹ Socialist Worker Online, Bigoted Politicians, greedy drug companies and deadly neglect, The AIDS nightmare, June 30, 2006. MITCH Day looks at 25 years of U.S. politics and the AIDS pandemic. Available from http://www.socialistworker.org/2006-2/594/594_05_AIDS.shtml.

² Q & A with Mark Cochocki, R.N., Your Guide to HIV/AIDS, June 11, 2006. Available from <http://aids.about.com/od/technicalquestions/f/oral.htm>.

³ Q & A with Mark Cochocki, R.N., Your Guide to HIV/AIDS, October 7, 2006. Available from <http://aids.about.com/od/condominformation/a/Propercondom.htm>.

⁴ Centers for Disease Control and Prevention, Primary HIV Infection Associated with Oral Transmission, May 2003. Available from <http://www.cdc.gov/hiv/resources/factsheets/oralsexqa.htm>.

⁵ Centers for Disease Control and Prevention, HIV Prevention in the Third Decade, Specific Populations. How are they Affected? dated February 1, 2006. Available from <http://www.cdc.gov/hiv/resources/reports/hiv3rddecade/print/chapter4.htm>.

⁶ Global Health Counsel, Child Health. Available from http://www.globalhealth.org/view_top.php?id=226.

⁷ Mayo Clinic Staff, HIV/AIDS, December 22, 2006. Available from <http://www.mayoclinic.com/health/hiv-aids/DS00005/DSECTION=3>.

⁸ International AIDS Vaccine Initiative, IAVI Welcomes New Canadian Collaborative Initiative To Complement and Enhance Ongoing AIDS Vaccine Efforts, 2007. Available from <http://www.iavi.org/>.

⁹ Science and Development Network, Vaccine research needs to cover all bases, July 20, 2005. Available from <http://www.scidev.net/dossiers/index.cfm?fuseaction=dossierReadItem&type=3&itemid=412&language=1&dossier=22>.

¹⁰ Center for Aids Prevention Studies, University of California San Francisco Aids Research Institute, Can an HIV vaccine help in HIV prevention, Available from <http://www.hawaii.edu/hivandaids/Can%20An%20HIV%20Vaccine%20Help%20in%20HIV%20Prevention.pdf>.

¹¹ San Francisco Aids Foundation, HIV Testing, Window Period, August 30, 2005. Available from http://www.sfaf.org/aids101/hiv_testing.html#window.