

Drug Abuse and the Link to HIV/AIDS and Other Infectious Diseases

HIV/AIDS ———

Behavior associated with drug abuse, such as sharing needle injection equipment and/or risky sexual behavior after drug or alcohol intoxication whether or not injection equipment is used, has been central to the spread of HIV/AIDS since the pandemic began more than 25 years ago.

HIV, the Human Immunodeficiency Virus, which causes Acquired Immune Deficiency Syndrome (AIDS), is a virus that lives and multiplies primarily in white blood cells (CD4+ lymphocytes), which are part of the immune system. HIV ultimately causes severe depletion of these cells. An HIV-infected person may look and feel fine for many years and may therefore be unaware of the infection. However, as the immune system weakens, the individual becomes more vulnerable to illnesses and common infections.

Over time, a person with untreated HIV is likely to succumb to multiple, concurrent illnesses and to develop AIDS. Because HIV/AIDS is a condition characterized by a defect in the body's natural immunity to diseases, infected individuals are at risk for severe illnesses

that are not usually a threat to anyone whose immune system is working properly.

As yet, there is no cure for AIDS, and there is no vaccine to prevent a person from acquiring HIV.

How HIV/AIDS Is Spread ———

HIV can be transmitted by contact with the blood or other body fluids of an infected person. In addition, infected pregnant women can pass HIV to their infants during pregnancy, delivery, and breastfeeding.

Among drug abusers, HIV transmission can occur through sharing needles and other injection paraphernalia such as cotton swabs, rinse water, and cookers. However, another way people may be at risk for HIV is *simply by using drugs—regardless of whether a needle and syringe are involved*. Research sponsored by NIDA and the National Institute on Alcohol Abuse and Alcoholism has shown that drugs and alcohol use can interfere with judgment and can lead to risky sexual behaviors that put people in danger of contracting or transmitting HIV.

Extent and Impact of HIV/AIDS ———

HIV/AIDS has become one of the deadliest pandemics in human history, killing more than 25 million people around the world, including more than 500,000 Americans. Despite beneficial advances in treating HIV/AIDS, the pandemic is far from over. The Centers for Disease Control and Prevention (CDC) estimates that 40,000 Americans become infected with HIV annually, and many of these are under the age of 25. Also, due to a number of complex biological, social, and economic factors, there are some populations who are at increased risk for HIV/AIDS. For example:

- While African-Americans made up about 13 percent of the U.S. population in 2004, they accounted for half of the total AIDS cases diagnosed.
- Hispanics made up about 13 percent of the population in 2004, yet they accounted for 18 percent of new diagnoses reported in the 35 areas with long-term, confidential name-based HIV reporting in the United States.
- Women remain a particularly vulnerable population, and accounted for 29 percent of all HIV diagnoses in 2004.
- African-American women accounted for 69 percent of female HIV diagnoses during 2000–2003.
- In 2001, HIV infection was the leading cause of death for African-

American women aged 25–34; African-American men of all ages; and Hispanic women, aged 35–44.

- MSM (men having sex with other men) remains the largest transmission category.

Further, CDC estimates that about one-fourth of the HIV-infected persons in the United States are unaware of their infection. Not only are these infected individuals at high risk for transmitting HIV to others, but they are also not taking advantage of effective medical treatments for HIV that can reduce AIDS-related illnesses and slow disease progression.

Since 1996, lives of people with HIV/AIDS have been prolonged and symptoms decreased through the use of highly active antiretroviral therapy (HAART). HAART is a customized combination of different classes of medications prescribed for individual patients based on such factors as their viral load, CD4⁺ lymphocyte count, and clinical symptoms.

Preventing the Spread of HIV/AIDS ———

Early detection of HIV can help prevent HIV transmission. Research indicates that routine HIV screening in healthcare settings among populations with a prevalence rate as low as 1 percent is as cost effective as screening for other conditions such as breast cancer and high blood pressure. These findings suggest

that HIV screening can lower healthcare costs by preventing high-risk practices and decreasing virus transmission.

Cumulative research has shown that comprehensive HIV prevention—drug abuse treatment, community-based outreach, testing and counseling for HIV and other infections, and HIV treatment—is the most effective way to reduce the risk of blood-borne infections.

Combined pharmacological and behavioral treatments for drug abuse have a demonstrated impact on HIV risk behaviors and incidence of HIV infection. For example, recent research showed that when behavioral therapies were combined with methadone treatment, about half of study participants who reported injection drug use at intake reported no such use at study exit, and over 90 percent of all participants reported no needle sharing at study exit. While these findings show great promise for achieving reductions in HIV risk behaviors, studies are now needed to improve the long-term effectiveness of such interventions.

Behavioral treatments for drug abuse have also shown promise for enhancing patient adherence to HAART. Interventions aimed at increasing HIV treatment adherence are crucial to treatment success, but usually require dramatic lifestyle changes to counter the often irregular lifestyle created by drug abuse and addiction. Adequate medical care for HIV/AIDS and related illnesses is

also critical to reducing and preventing the spread of new infections.

Other Infectious Diseases ———

Besides increasing their risk of HIV infection, individuals who take drugs or engage in high-risk behaviors associated with drug use also put themselves and others at risk for contracting or transmitting hepatitis C (HCV), hepatitis B (HBV), tuberculosis (TB), as well as a number of other sexually transmitted diseases, including syphilis, chlamydia, trichomoniasis, gonorrhea, and genital herpes. Injecting drug users (IDUs) are also commonly susceptible to skin infections at the site of injection and to bacterial and viral infections, such as bacterial pneumonia and endocarditis, which, if left untreated, can lead to serious health problems.

HCV, HBV, and HIV/AIDS

HCV, the leading cause of liver disease, is highly prevalent among IDUs and often co-occurs with HIV; HBV is also common among drug abusers. These are two of several viruses which can cause an inflammation of the liver. Chronic infection with HCV or HBV can result in cirrhosis (liver scarring) or primary liver cancer. While a vaccine does not yet exist for HCV, HBV infection can be prevented by an effective vaccine.

HCV is highly transmissible through blood-borne exposure. NIDA-funded

studies have found that, within 3 years of beginning injection drug use, most IDUs contract HCV—and up to 90 percent of HIV-infected IDUs may also be infected with HCV. Chronic HCV and HIV co-infection results in an accelerated progression to end-stage liver disease and death when compared with individuals infected with HCV alone.

While the treatment of co-occurring HIV and HCV presents certain challenges, treatment during the acute phase of HCV infection (i.e., within 6 to 12 months of detection) can be very effective in controlling the virus. Treatment for chronic HCV can significantly improve quality of life.

TB and HIV/AIDS

TB is a chronic and infectious lung disease. Through major public health detection and treatment initiatives, its prevalence declined in the U.S. for several years, with the 2005 report of 14,000 cases being the lowest since surveillance began in 1953. However, the decline of TB prevalence has slowed by half in recent years, and TB infection remains intertwined with HIV/AIDS and drug abuse.

People with latent TB infection do not have symptoms, may not develop active disease, and cannot spread TB. However, if such individuals do not receive preventive therapy, they may develop active TB, which is contagious. NIDA research has shown that IDUs have high rates of latent TB infection. Because HIV infection severely weakens the immune system, people infected with both HIV and latent TB are at increased risk of developing active TB disease and becoming highly infectious, thereby increasing the risk of further TB transmission. Effective treatment for HIV and TB can reduce TB/HIV-associated disease and the risk of transmission to others.

To learn more about the link between drug abuse and HIV/AIDS, visit www.nida.nih.gov/DrugPages/HIV.html.

To learn more about resources for HIV/AIDS, HCV, and TB information, or for testing and referral in your geographic area, call 1-800-CDC-INFO (1-800-232-4636), or visit www.cdc.gov/hiv or www.cdc.gov/ncidod/diseases/hepatitis.

To find publicly-funded treatment services for drug abuse and addiction in your state, visit www.findtreatment.samhsa.gov.