

How is HIV transmitted?

HIV is spread most commonly by having unprotected sex with an infected partner. The virus can enter the body through the lining of the vagina, vulva, penis, rectum or mouth during sex.

HIV also is spread through contact with infected blood. Before donated blood was screened for evidence of HIV infection and before heat-treating techniques to destroy HIV in blood products were introduced, HIV was transmitted through transfusions of contaminated blood or blood components.

HIV frequently is spread among injection drug users by the sharing of needles or syringes contaminated with very small quantities of blood from someone infected with the virus.

Women can transmit HIV to their babies during pregnancy or birth.

About one-quarter to one-third of all untreated pregnant women infected with HIV will pass the infection to their babies. HIV also can be spread to babies through the breast milk of mothers infected with the virus. If the mother takes the drug AZT during pregnancy, she can reduce significantly the chances that her baby will get be infected with HIV.

If health providers treat mothers with AZT and deliver their babies by Cesarean section, the chances of the baby being infected can be reduced to a rate of 1 percent.

Although researchers have found HIV in the saliva of infected people, there is no evidence that the virus is spread by contact with saliva.

Studies of families of HIV-infected people have shown clearly that HIV is not spread through casual contact such as the sharing of food utensils, towels and bedding, swimming pools, telephones, or toilet seats. HIV is not spread by biting insects such as mosquitoes or bedbugs.

HIV can infect anyone who practices risky behaviors such as:

- Sharing drug needles or syringes
- Having sexual contact with an infected person without using a condom
- Having sexual contact with someone whose HIV status is unknown

Having a sexually transmitted disease such as syphilis, genital herpes, chlamydial infection, gonorrhea, or bacterial vaginosis appears to make people more susceptible to getting HIV infection during sex with infected partners.

What are the early symptoms of HIV infection?

Many people do not have any symptoms when they first become infected with HIV. Some people, however, have a flu-like illness within a month or two after exposure to the virus. This illness may include:

- Fever
- Headache
- Tiredness
- Enlarged lymph nodes (glands of the immune system easily felt in the neck and groin)

These symptoms usually disappear within a week to a month and are often mistaken for those of another viral infection. During this period, people are very infectious, and HIV is present in large quantities in genital fluids.

More persistent or severe symptoms may not appear for 10 years or more after HIV first enters the body in adults, or within two years in children born with HIV infection. This period of "asymptomatic" infection is highly individual. Some people may begin to have symptoms within a few months, while others may be symptom-free for more than 10 years.

Even during the asymptomatic period, the virus is actively multiplying, infecting, and killing cells of the immune system. HIV's effect is seen most obviously in a decline in the blood levels of CD4 positive T cells (also called T4 cells) -- the immune system's key infection fighters. At the beginning of its life in the human body, the virus disables or destroys these cells without causing symptoms.

As the immune system worsens, a variety of complications start to take over. For many people, their first sign of infection is large lymph nodes or "swollen glands" that may be enlarged for more than three months. Other symptoms often experienced months to years before the onset of AIDS include:

- Lack of energy
- Weight loss
- Frequent fevers and sweats
- Persistent or frequent yeast infections (oral or vaginal)
- Persistent skin rashes or flaky skin
- Pelvic inflammatory disease in women that does not respond to treatment

- Short-term memory loss

Some people develop frequent and severe herpes infections that cause mouth, genital, or anal sores, or a painful nerve disease called shingles. Children may grow slowly or be sick a lot.

What is AIDS?

The term AIDS applies to the most advanced stages of HIV infection.

CDC's definition of AIDS includes all HIV-infected people who have fewer than 200 CD4 positive T cells per cubic millimeter of blood. (Healthy adults usually have CD4 positive T-cell counts of 1,000 or more.)

In people with AIDS, infections are often severe and sometimes fatal because the immune system is so ravaged by HIV that the body cannot fight off certain bacteria, viruses, fungi, parasites, and other microbes.

Symptoms of opportunistic infections common in people with AIDS include:

- Coughing and shortness of breath
- Seizures and lack of coordination
- Difficult or painful swallowing
- Mental symptoms such as confusion and forgetfulness
- Severe and persistent diarrhea
- Fever
- Vision loss

HIV rates a 'wake-up call' for Blacks

By KEVIN J. SHAY
Dallas Examiner

There was a time when AIDS was thought to be primarily a disease targeting gay, white people.

Those days are long gone. Today, the scourge of AIDS is disproportionately killing people on the African continent and, at the same time, affecting African Americans at greater rates than any other racial group in the United States.

Dallas residents don't have to look far to see the impact.

The city ranks 10th in the country for new AIDS cases. There were 267 new AIDS cases involving African Americans in 2001, or about one for every 1,700 Blacks in the county. Compare that to the 254 AIDS cases affecting whites that year, or about one for every 3,900 white residents. For now, local Latinos are affected at an even lower rate, about one for every 5,350 Hispanics.

Put another way, African Americans make up about 20 percent of the population in Dallas County, but account for 43 percent of its AIDS cases.

AIDS prevention advocates say it is time for the community to "wake up" and take action.

"In the African American community, the perception is that it is a disease of gay, white men and can't happen to them," said Assefa Tulu, chief epidemiologist for the Dallas County Health and Human Services Department. "I'm not sure African American community leaders have taken the situation as seriously as it should be taken."

The first AIDS cases were believed to have been diagnosed in the late 1970s among gay, white men in New York and in heterosexuals in Africa.

In the mid-1980s, it ravaged the white, homosexual community.

But in the succeeding decades, the situation changed.

Today, across the nation, it's the leading cause of death among Black women between 25 and 34 and African American men between 35 and 44. Of the roughly 22 million deaths worldwide from AIDS, some 18 million, or 82 percent, have been people of African descent.

Particularly troubling is the growing rate at which the Human Immunodeficiency Virus [HIV], the virus that causes AIDS, is striking African American children under age 13. Almost two-thirds -- 64 percent -- of all reported pediatric HIV cases in the country involve Black kids.

In four southern African countries -- Botswana, Lesotho, Swaziland and Zimbabwe -- adult HIV incidence exceeds 30 percent. Last year, 77 percent of the deaths in sub-Saharan Africa were due to AIDS.

Several factors contribute to keeping the numbers high among African Americans. These include limited access to health care and above average rates of sexually transmitted diseases and substance abuse.

In addition, there is the false belief that not many African Americans are gay or bi-sexual and don't need to engage in safe sex practices.

Furthermore, there is a cruel social stigma attached to the disease, and that drives people to keep their status private, said Anthony Jacobs, Minority Access Project Coordinator with Renaissance III, a nonprofit HIV and AIDS testing and prevention center in South Dallas.

"A lot of African American homosexuals are ostracized in the community," Jacobs said. "Consequently, many who are gay or bi-sexual don't tell their partners. They live double lives."

The relatively high prison rate among African Americans also plays a role, he said. "Men go to prison and have homosexual experiences. When they come back, they don't consider themselves to be gay and might not be aware they are infected," he said.

Nausea, abdominal cramps, and vomiting
Weight loss and extreme fatigue
Severe headaches
Coma

During the course of HIV infection, most people experience a gradual decline in the number of CD4 positive T cells, although some may have abrupt and dramatic drops in their CD4 positive T cell counts. A person with CD4 positive T cells above 200 may experience some of the early symptoms of HIV disease. Others may have no symptoms even though their CD4 positive T-cell count is below 200.

How is HIV infection diagnosed?

Because early HIV infection often causes no symptoms, a doctor or other health care provider usually can diagnose it by testing a person's blood for the presence of antibodies (disease-fighting proteins) to HIV. HIV antibodies generally do not reach detectable levels in the blood for one to three months following infection. It may take the antibodies as long as six months to be produced in quantities large enough to show up in standard blood tests.

People exposed to the virus should get an HIV test as soon as they are likely to develop antibodies to the virus -- within 6 weeks to 12 months after possible exposure to the virus. By getting tested early, people with HIV infection can discuss with a health care provider when they should start treatment to help their immune systems combat HIV and help prevent the emergence of certain opportunistic infections (see section on treatment below). Early testing also alerts HIV-infected people to avoid high-risk behaviors that could spread the virus to others.

Health care providers diagnose HIV infection by using two different types of antibody tests, ELISA and Western Blot. If a person is highly likely to be infected with HIV and yet both tests are negative, the health care provider may request additional tests. The person also may be told to repeat antibody testing at a later date, when antibodies to HIV are more likely to have developed.

Babies born to mothers infected with HIV may or may not be

Lack of information about the disease and testing is also a huge issue.

The Atlanta-based U.S. Centers for Disease Control and Prevention estimate that as many as 280,000 of the more than 800,000 Americans living with AIDS are unaware they have the virus.

In April, the CDC announced a new program to make HIV testing a routine part of medical care and prenatal tests. About 300 infants contract HIV from their mothers each year.

"It's intolerable that about one-fourth of those infected with HIV don't know they're infected and therefore are not receiving appropriate medical care," said Julie Gerberding, director of the CDC. "This new initiative will go a long way to help frontline clinicians help people overcome some of the barriers they face getting diagnosed and treated for HIV."

To combat the lack of knowledge, June has been designated as National Testing Month in the African American community, and the National Association of People With AIDS has declared June 27 National Testing Day.

"The first preference is to only engage in a monogamous relationship with a partner who has been tested," Tulu said. "But if that is not possible, use protection like condoms."

In recent years, the African American community has developed more programs and events to raise greater awareness.

One is an annual National Black HIV/AIDS Awareness Day each February.

The event is organized by the Community Capacity Building Coalition, which is federally funded through the National Minority AIDS Initiative.

Coalition group members include Concerned Black Men of Philadelphia, the Mississippi Urban Research Center at Jackson State University, the National Black Alcoholism and Addiction Council and the National Black Leadership Commission on AIDS.

"We are in a fight for our lives," said U.S. Rep. Donna Christensen, D-Virgin Islands, who was honorary chairwoman of the third annual National Black HIV/AIDS Awareness Day last February.

That event also involved Laila Ali, daughter of boxing legend Muhammad Ali.

This year, testing was conducted at Renaissance III, whose executive director, Don Sneed, is a member of the President's Advisory Council on HIV/AIDS.

And there is the annual Black Church Week of Prayer, conducted each March since 1989. Getting more churches and community leaders involved would really help, say doctors and AIDS advocates.

"Churches are a particularly important part of the Black community," Jacobs said. "Some have been involved in raising awareness about AIDS, but we would like to see more."

Renaissance also has a program targeting youth, a susceptible age group.

"It's important to educate them when they are young," Jacobs said.

Treatment for HIV and AIDS usually centers around medication like AZT, an antiviral drug. Earlier this year, Brisbane, Calif.-based VaxGen Inc. released results of a five-year trial with a prototype vaccine called Aidsvax that seems to provide more hope for African Americans. Among a small group of Blacks, the vaccine reduced the infection rate by 78 percent.

Overall, the reduction rate was about 4 percent.

But some cautioned that the data might not have been interpreted accurately.

Most African Americans in the study were women, while all of the whites were males, thus it might be a gender effect rather than a racial one.

It's hard to say whether those vaccine trials provide some hope, Tulu said. "We've been saying that for years," he noted. "The main aspect to work on is prevention."

The rise in HIV cases in most categories in recent years could be largely due to greater detection, Tulu said. It was encouraging to see the number of AIDS cases among Blacks in Dallas County decline slightly in 2001, he said.

"That's a sign of hope," Tulu said. "But it's hard to say if it's a trend unless that happens for five consecutive years."

infected with the virus, but all carry their mothers' antibodies to HIV for several months. If these babies lack symptoms, a doctor cannot make a definitive diagnosis of HIV infection using standard antibody tests until after 15 months of age.

How is HIV infection treated?

When AIDS first surfaced in the United States, there were no medicines to combat the underlying immune deficiency and few treatments existed for the opportunistic diseases that resulted. During the past 10 years, however, researchers have developed drugs to fight both HIV infection and its associated infections and cancers.

The U.S. Food and Drug Administration (FDA) has approved a number of drugs for treating HIV infection. The first group of drugs used to treat HIV infection, called nucleoside reverse transcriptase (RT) inhibitors, interrupts an early stage of the virus making copies of itself. These drugs may slow the spread of HIV in the body and delay the start of opportunistic infections.

More recently, FDA has approved a second class of drugs for treating HIV infection. These drugs, called protease inhibitors, interrupt virus replication at a later step in its life cycle.

Because HIV can become resistant to any of these drugs, health care providers must use a combination treatment to effectively suppress the virus. When RT inhibitors and protease inhibitors are used in combination, it is referred to as highly active antiretroviral therapy, or HAART, and can be used by people who are newly infected with HIV as well as people with AIDS.

While HAART is not a cure for AIDS, it has greatly improved the health of many people with AIDS and it reduces the amount of virus circulating in the blood to nearly undetectable levels. Researchers, however, have shown that HIV remains present in hiding places, such as the lymph nodes, brain, testes, and retina of the eye even in patients who have been treated.

In addition to antiretroviral therapy, health care providers treat adults with HIV, whose CD4+ T-cell counts drop below 200, to prevent the occurrence of PCP, which is one of the most common and deadly opportunistic infections associated with HIV.

source: *The Centers for Disease Control and Prevention*