

## **An Introduction to Sexually Transmitted Diseases**

Sexually transmitted diseases (STDs), once called venereal diseases, are among the most common infectious diseases in the United States today. More than 20 STDs have now been identified, and they affect more than 13 million men and women in this country each year. The annual comprehensive cost of STDs in the United States is estimated to be well in excess of \$10 billion.

Understanding the basic facts about STDs – the ways in which they are spread, their common symptoms, and how they can be treated – is the first step toward prevention. It is important to understand at least five key points about all STDs:

1. STDs affect men and women of all backgrounds and economic levels. They are most prevalent among teenagers and young adults. Nearly two-thirds of all STDs occur in people younger than 25 years of age.
2. The incidence of STDs is rising, in part because in the last few decades, young people have become sexually active earlier yet are marrying later. In addition, divorce is more common. The net result is that sexually active people today are more likely to have multiple sex partners during their lives and are potentially at risk for developing STDs.
3. Most of the time, STDs cause no symptoms, particularly in women. When and if symptoms develop, they may be confused with those of other diseases not transmitted through sexual contact. Even when an STD causes no symptoms, however, a person who is infected may be able to pass the disease on to a sex partner. That is why many doctors recommend periodic testing or screening for people who have more than one sex partner.
4. Health problems caused by STDs tend to be more severe and more frequent for women than for men, in part because the frequency of asymptomatic infection means that many women do not seek care until serious problems have developed.
  - Some STDs can spread into the uterus (womb) and fallopian tubes to cause pelvic inflammatory disease (PID), which in turn is a major cause of both infertility and ectopic (tubal) pregnancy. The latter can be fatal.
  - STDs in women also may be associated with cervical cancer. One STD, human papillomavirus infection (HPV), causes genital warts and cervical and other genital cancers.
  - STDs can be passed from a mother to her baby before, during, or immediately after birth; some of these infections of the newborn can be cured easily, but others may cause a baby to be permanently disabled or even die.
5. When diagnosed and treated early, many STDs can be treated effectively. Some infections have become resistant to the drugs used to treat them and now require

newer types of antibiotics. Experts believe that having STDs other than AIDS increases one's risk for becoming infected with the AIDS virus.

## **HIV Infection and AIDS**

AIDS (acquired immunodeficiency syndrome) was first reported in the United States in 1981. It is caused by the human immunodeficiency virus (HIV), a virus that destroys the body's ability to fight off infection. An estimated 900,000 people in the United States are currently infected with HIV. People who have AIDS are very susceptible to many life-threatening diseases, called opportunistic infections, and to certain forms of cancer. Transmission of the virus primarily occurs during sexual activity and by sharing needles used to inject intravenous drugs. It can also be transmitted through bodily fluids such as semen, vaginal secretions, and blood where the HIV virus is most concentrated when they come into contact with open cuts, sores, bleeding gums or mucous membranes.

## **Chlamydial Infection**

This infection is now the most common of all bacterial STDs, with an estimated 4 to 8 million new cases occurring each year. In both men and women, chlamydial infection may cause an abnormal genital discharge and burning with urination. In women, untreated chlamydial infection may lead to pelvic inflammatory disease, one of the most common causes of ectopic pregnancy and infertility in women. Many people with chlamydial infection, however, have few or no symptoms of infection. Once diagnosed with chlamydial infection, a person can be treated with an antibiotic.

## **Genital Herpes**

Genital herpes affects an estimated 60 million Americans. Approximately 500,000 new cases of this incurable viral infection develop annually. Herpes infections are caused by herpes simplex virus (HSV). The major symptoms of herpes infection are painful blisters or open sores in the genital area. These may be preceded by a tingling or burning sensation in the legs, buttocks, or genital region. The herpes sores usually disappear within two to three weeks, but the virus remains in the body for life and the lesions may recur from time to time. Severe or frequently recurrent genital herpes is treated with one of several antiviral drugs that are available by prescription. These drugs help control the symptoms but do not eliminate the herpes virus from the body. Suppressive antiviral therapy can be used to prevent occurrences and perhaps transmission. Women who acquire genital herpes during pregnancy can transmit the virus to their babies. Untreated HSV infection in newborns can result in mental retardation and death.

## **Genital Warts**

Genital warts (also called venereal warts or condylomata acuminata) are caused by human papillomavirus, a virus related to the virus that causes common skin warts. Genital warts usually first appear as small, hard painless bumps in the vaginal area, on the penis, or around the anus. If untreated, they may grow and develop a fleshy, cauliflower-like

appearance. Genital warts infect an estimated 1 million Americans each year. In addition to genital warts, certain high-risk types of HPV cause cervical cancer and other genital cancers. Genital warts are treated with a topical drug (applied to the skin), by freezing, or if they recur, with injections of a type of interferon. If the warts are very large, they can be removed by surgery.

## **Gonorrhea**

Approximately 400,000 cases of gonorrhea are reported to the U.S. Centers for Disease Control and Prevention (CDC) each year in this country. The most common symptoms of gonorrhea are a discharge from the vagina or penis and painful or difficult urination. The most common and serious complications occur in women and, as with chlamydial infection, these complications include PID, ectopic pregnancy, and infertility. Historically, penicillin has been used to treat gonorrhea, but in the last decade, four types of antibiotic resistance have emerged. New antibiotics or combinations of drugs must be used to treat these resistant strains.

## **Syphilis**

The incidence of syphilis has increased and decreased dramatically in recent years, with more than 11,000 cases reported in 1996. The first symptoms of syphilis may go undetected because they are very mild and disappear spontaneously. The initial symptom is a chancre; it is usually a painless open sore that usually appears on the penis or around or in the vagina. It can also occur near the mouth, anus, or on the hands. If untreated, syphilis may go on to more advanced stages, including a transient rash and, eventually, serious involvement of the heart and central nervous system. The full course of the disease can take years. Penicillin remains the most effective drug to treat people with syphilis.

Other diseases that may be sexually transmitted include trichomoniasis, bacterial vaginosis, cytomegalovirus infections, scabies, and pubic lice.

STDs in pregnant women are associated with a number of adverse outcomes, including spontaneous abortion and infection in the newborn. Low birth weight and prematurity appear to be associated with STDs, including chlamydial infection and trichomoniasis. Congenital or perinatal infection (infection that occurs around the time of birth) occurs in 30 to 70 percent of infants born to infected mothers, and complications may include pneumonia, eye infections, and permanent neurologic damage.

## What Can You Do to Prevent STDs?

The best way to prevent STDs is to avoid sexual contact with others. If you decide to be sexually active, there are things that you can do to reduce your risk of developing an STD.

- Have a mutually monogamous sexual relationship with an uninfected partner.
- Correctly and consistently use a male condom.
- Use clean needles if injecting intravenous drugs.
- Prevent and control other STDs to decrease susceptibility to HIV infection and to reduce your infectiousness if you are HIV-infected.
- Delay having sexual relations as long as possible. The younger people are when having sex for the first time, the more susceptible they become to developing an STD. The risk of acquiring an STD also increases with the number of partners over a lifetime.

Anyone who is sexually active should:

- Have regular checkups for STDs even in the absence of symptoms, and especially if having sex with a new partner. These tests can be done during a routine visit to the doctor's office.
- Learn the common symptoms of STDs. Seek medical help immediately if any suspicious symptoms develop, even if they are mild.
- Avoid having sex during menstruation. HIV-infected women are probably more infectious, and HIV-uninfected women are probably more susceptible to becoming infected during that time.
- Always use a condom for anal intercourse.
- Avoid douching because it removes some of the normal protective bacteria in the vagina and increases the risk of getting some STDs.

Anyone diagnosed as having an STD should:

- Be treated to reduce the risk of transmitting an STD to an infant.
- Discuss with a doctor the possible risk of transmission in breast milk and whether commercial formula should be substituted.
- Notify all recent sex partners and urge them to get a checkup.
- Follow the doctor's orders and complete the full course of medication prescribed. A follow-up test to ensure that the infection has been cured is often an important step in treatment.
- Avoid all sexual activity while being treated for an STD.

Sometimes people are too embarrassed or frightened to ask for help or information. Most STDs are readily treated, and the earlier a person seeks treatment and warns sex partners about the disease, the less likely the disease will do irreparable physical damage, be spread to others or, in the case of a woman, be passed on to a newborn baby.

STDs cause physical and emotional suffering to millions and are costly to individuals and to society as a whole.

Within the past few years, research has resulted in new tests to diagnose some STDs faster and more accurately. New drug treatments for STDs are under investigation by researchers. This is especially important because some STDs are becoming resistant to the standard drugs. In addition, vaccines are being developed or tested for effectiveness in preventing several STDs, including AIDS, chlamydial infection, genital herpes, and gonorrhea.

It is up to each individual to learn more about STDs and then make choices about how to minimize the risk of acquiring these diseases and spreading them to others. Knowledge of STDs, as well as honesty and openness with sex partners and with one's doctor, can be very important in reducing the incidence and complications of sexually transmitted diseases.