



STDs

Sexually Transmitted Diseases





It's the problem you don't want to think about. Sexually transmitted diseases (STDs) affect both men and women. Antibiotics and vaccines can help control many diseases, but STDs are more troubling than ever. About 19 million cases occur in the United States each year, **nearly half of them in teens and young adults** between the ages of 15 and 24. And with the rise of HIV/AIDS, STDs have joined the ranks of killers. Luckily, STDs can be prevented and treated.

General Considerations

What are STDs?

STDs are infections that you get by having sex. Sex between a man and a woman is how most STDs are spread, but they can also be spread by oral sex, anal sex, or contaminated drug needles and blood products. Pregnant women can also transmit STDs to their newborns.

More than 30 different infections can be transmitted sexually. The most important ones are listed in Table 1 (see right).

This brochure will cover basic guidelines for the prevention and diagnosis of STDs.

Table 1 Major STDs in the U.S.

Caused by bacteria	Gonorrhea
	Syphilis
	Chlamydia
	Pelvic Inflammatory Disease (PID)
Caused by viruses	HIV/AIDS
	Genital herpes
	Human papilloma virus (HPV)
	Hepatitis A, B, and C
Caused by parasites	Trichomonas vaginitis*
	*bacterial and yeast vaginitis may also be transmitted sexually





Who Gets STDs?

Anyone who is sexually active can get an STD, but some people are at much higher risk than others.

Risk factors include:

- Having multiple or new sexual partners
- Having unprotected sex
- Living in a large city
- Having contact with sex workers
- Men who have sex with men
- Illicit drug use
- Having a previous STD

Screening for STDs

It is important to diagnose STDs early for two reasons:

- 1 To start treatment as soon as possible
- 2 To prevent spreading the infection to others

The following people should be tested for STDs:

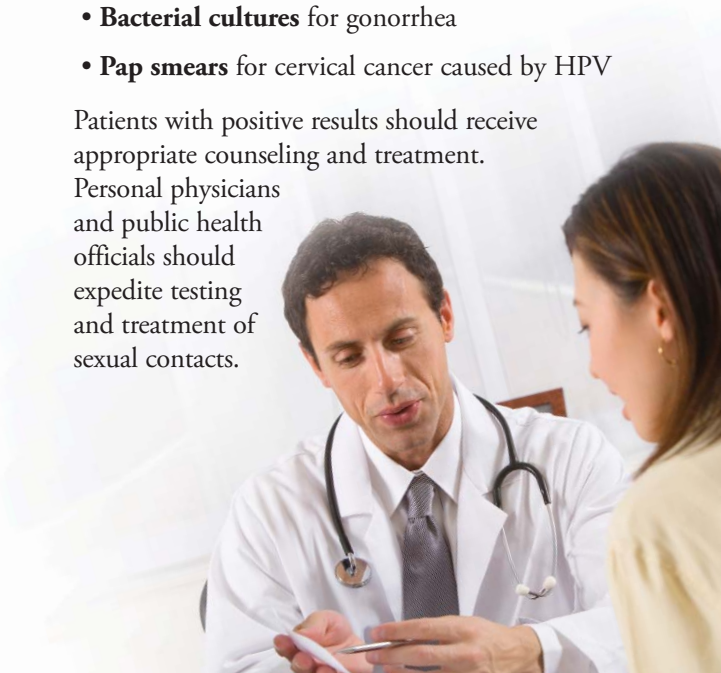
- Anyone who has been exposed to an STD
- Men or women with symptoms of an STD, such as genital sores or ulcers
- Men with discharge from the penis or burning on urination
- Women with vaginal discharge, burning, or itching
- Women with lower abdominal pain and fever
- People who are at high risk, even without symptoms, such as: people who have unprotected sex; young, sexually active women; men who have sex with men; and illicit drug users
- Pregnant women

Several types of screening tests are available. They include:

- **Blood tests** for HIV, syphilis, and hepatitis
- **Urine tests** for chlamydia and gonorrhea
- **Bacterial cultures** for gonorrhea
- **Pap smears** for cervical cancer caused by HPV

Patients with positive results should receive appropriate counseling and treatment.

Personal physicians and public health officials should expedite testing and treatment of sexual contacts.





Preventing STDs

The only sure way to prevent STDs is not have sex or only have sex with one partner who is healthy.

It sounds simple, but it doesn't stop millions of Americans from getting STDs every year. Even people who can't follow the simple rules of prevention can get substantial protection by practicing safer sex.

The most important aspect of safer sex is the proper use of a male condom. Latex condoms are best. If either partner is allergic to latex, a polyurethane condom should be used. Animal skin condoms do not prevent infection.

- Condoms should be **stored in a cool, dry place.**
- **Never** use condoms that are **torn, brittle, or discolored.**
- **Never reuse a condom.**
- If a condom breaks, **stop** sexual activity until the condom has been **replaced.**

A condom should be put on before any sexual contact occurs. It should be unrolled on the erect penis and fully cover it; a small space should be left at the tip to collect semen. Remove air pockets by pressing air down toward the base.

After ejaculation, the penis should be withdrawn while it is still erect. To prevent spills, hold the condom at its base during withdrawal. Finally, the condom should be wrapped in tissue and discarded.

Water-based lubricants (such as “K-Y gel” and “Astroglide”) are safe for condoms, but oil-based lubricants (such as petroleum jelly, mineral oil, cold cream, and hand lotion) can damage latex. Spermicides do not provide additional protection against STDs.

A female condom may also help prevent STDs, but there is little data about how well it works. Other methods to prevent pregnancy do not protect against STDs.

Vaccines can protect you from HPV and hepatitis A and B. Preventive antibiotics should be used in people recently exposed to chlamydia, gonorrhea, or syphilis. People with genital herpes can take antiviral drugs to protect their partners.

The most important message of all: ▶



Specific STDs

Chlamydia

With an estimated 2.8 million cases each year, chlamydia is the most common STD in America.

It is caused by a tiny bacterium (*Chlamydia trachomatis*) that can be identified in urine samples or on swabs of the genital tract. Different strains of chlamydia that are not spread by having sex can cause pneumonia and other illnesses.

In men, chlamydia can cause a thin discharge from the penis, often with itching or burning on urination. Women may have urinary symptoms and/or inflammation of the cervix. The infection can also spread up through the uterus and fallopian tubes to cause pelvic inflammation disease (PID, See pages 9 & 10). But many women and some men contract chlamydia without developing any symptoms. Silent infection can spread to sex partners and newborns, so annual chlamydia testing is recommended for all sexually active women under age 26, for older women at risk, and for all pregnant women.

Once it's diagnosed, chlamydia is easy to treat with antibiotics. Most patients will be cured by a single dose of *azithromycin* or a 1-week course of *doxycycline* (which cannot be taken by pregnant women).

Gonorrhea

This infection is caused by a bacterium that can be seen under a microscope, cultured in a laboratory, or detected in urine tests. In men, gonorrhea can cause a pus-like discharge from the penis and burning on urination. Women may develop urinary symptoms and/or lower abdominal pain due to an inflamed cervix. The infection can also spread up to the uterus and fallopian tubes to cause PID. In addition, the bacterium may invade the blood, especially in women, to cause fever, rash, and painful joint inflammation. But many women and some men can also contract and spread the infection without knowing it.

Antibiotics can cure gonorrhea, but the bacterium has become resistant to many drugs over the years. Experts now suggest treatment with an injection of *ceftriaxone*. If that's not possible, the oral drug *cefixime* may be used.

Because chlamydia and gonorrhea often occur together, patients with either one of these infections should be treated for both unless tests show they only have one.

Pelvic Inflammatory Disease (PID)

PID is a serious infection that strikes about 1 million American women a year. It can be caused by chlamydia, gonorrhea, or both, sometimes with other bacteria.





Women with PID develop an infection in the uterus, fallopian tubes, ovaries, and nearby tissues. They suffer from fever, lower abdominal pain, and tenderness. **Treatment requires a combination of anti-biotics, often given by injection in a hospital.** Although antibiotics can control nearly all cases of PID, many women develop scar tissue that can make them unable to have children.

Syphilis

Although syphilis has become less common in the U.S. **the number of reported cases has risen over the past few years.** The special type of bacterium that causes syphilis cannot be seen under a microscope or grown in a lab. Most cases are diagnosed by a blood test.

Syphilis develops slowly. The first phase is a painless ulcer at the point of contact, which is usually on the genitals. Even without antibiotics, the ulcer heals, but after several weeks a fever develops along with

a body rash, swollen glands, and inflammation of various organs. This too settles down, but years later **many patients develop permanent damage** to the heart, brain, or other organs. Women who have syphilis during pregnancy can spread the infection to their babies. Proper treatment will prevent all these problems.

***Penicillin* is the best treatment, but other anti-biotics are available for patients who are allergic to penicillin.**

Genital Herpes

This common infection is caused by the herpes simplex virus, usually type 2. **Up to 75% of people with this infection don't know they have it,** but they can still spread the virus to sexual partners. When symptoms occur, they include small, painful ulcers and blisters on the genitals and nearby tissues. Swollen glands, fever, and headache are common, especially in the first episode.

There is no cure for herpes. The herpes simplex virus makes its way to the nervous system where it stays throughout the patient's lifetime. The virus can travel back down the nerves to the skin causing repeat attacks of genital herpes. Attacks tend to become milder and less frequent over the years. People with herpes can pass the virus to their sex



partners even if they don't have blisters or ulcers. Pregnant women can infect their newborns.

Genital herpes can be diagnosed with blood tests or with special viral cultures. Antiviral medications *acyclovir*, *valacyclovir*, or *famciclovir* can reduce symptoms. **Long-term treatment can prevent spread of the infection, but won't cure it.**

Human Papillomavirus (HPV)

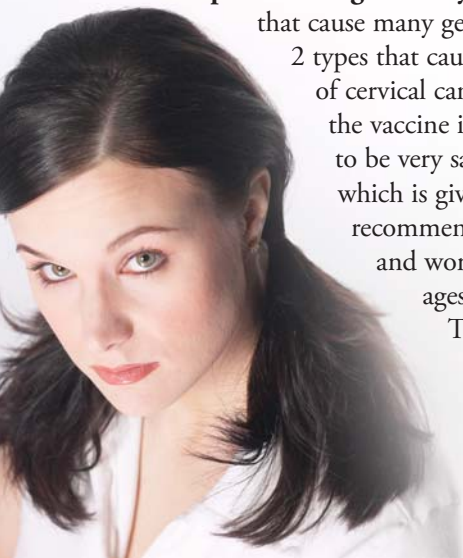
For years, doctors have known that this sexually transmitted virus causes genital warts (*condyloma*) in men and women. In an exciting breakthrough, they have now learned that **a few strains of HPV cause almost all cases of cervical cancer.** HPV also plays a role in rare cancers in men, mostly in men who have sex with men.

Most people who are infected with HPV don't know it. Others develop soft, moist, pink warts on the genitals or nearby tissues. Doctors can administer local treatments to clear up the warts, but the virus can still persist in the body for several years.

The FDA has approved a vaccine that provides protection against 2 types of HPV

that cause many genital warts and 2 types that cause many cases of cervical cancer. Although the vaccine is new, it appears to be very safe. The vaccine, which is given in 3 doses, is recommended for all girls and women between ages 9 and 26 years.

The vaccine is also being studied for men.



Hepatitis

Most people don't think of hepatitis as an STD. That's understandable, since the infection harms the liver, not the sex organs, and because many cases are contracted non-sexually. **But the major hepatitis viruses can also be spread by sex,** and pregnant women can pass it on to their newborns.

The hepatitis B vaccine is recommended for all infants, for children who were not vaccinated in infancy, and for adults who are at risk.

Human Immunodeficiency Virus (HIV)

HIV can be transmitted sexually or by exposure to infected blood and body fluids. The virus attacks the immune system, opening the door to the devastating infections and cancers of AIDS. Without treatment it is almost always fatal. New anti-HIV drugs can control, but not cure, HIV. However, drug therapy is tough and expensive, and side effects are common.

Drug therapy for HIV has been a huge advance. Even so, HIV reminds us of the first and foremost rule for all STDs: **PREVENTION FIRST.**



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