

Some facts about Syphilis

What is syphilis?

Syphilis is a complex sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum*. It has often been called "the great imitator" because so many of the signs and symptoms are indistinguishable from those of other diseases.

How is syphilis spread?

Syphilis is passed from person to person through direct contact with a syphilis sore. Sores occur mainly on the external genitals, vagina, anus, or in the rectum. Sores also can occur on the lips and in the mouth. Transmission of the organism occurs during vaginal, anal, or oral sex. Pregnant women with the disease can pass it to the babies they are carrying. Syphilis cannot be spread by toilet seats, door knobs, swimming pools, hot tubs, bath tubs, shared clothing, or eating utensils.

What are the signs and symptoms in adults?

Primary Stage

The time between infection with syphilis and the start of the first symptom can range from 10-90 days (average 21 days). The primary stage of syphilis is usually marked by the appearance of a single sore (called a chancre), but there may be multiple sores. The chancre is usually firm, round, small, and painless. It appears at the spot where syphilis entered the body. The chancre lasts 3-6 weeks, and it will heal on its own. If adequate treatment is not administered, the infection progresses to the secondary stage.

Secondary Stage

The second stage starts when one or more areas of the skin break into a rash that usually does not itch. Rashes can appear as the chancre is fading or can be delayed for weeks. The rash often appears as rough, red or reddish brown spots both on the palms of the hands and on the bottoms of the feet. The rash also may also appear on other parts of the body with different characteristics, some of which resemble other diseases. Sometimes the rashes are so faint that they are not noticed. Even without treatment, rashes clear up on their own. In addition to rashes, second-stage symptoms can include fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and tiredness. A person can easily pass the disease to sex partners when primary or secondary stage signs or symptoms are present.

Late Syphilis

The latent (hidden) stage of syphilis begins when the secondary symptoms disappear. Without treatment, the infected person still has syphilis even though there are no signs or symptoms. It remains in the body, and it may begin to damage the internal organs, including the brain, nerves, eyes, heart, blood vessels, liver, bones, and joints. This internal damage may show up many years later in the late or tertiary stage of syphilis. Late stage signs and symptoms include not being able to coordinate muscle movements, paralysis, numbness, gradual blindness and dementia. This damage may be serious enough to cause death.

Can a newborn get syphilis?

Depending on how long a pregnant woman has been infected, she has a good chance of having a stillbirth (syphilitic stillbirth) or of giving birth to a baby who dies shortly after birth. If not treated immediately, an infected baby may be born without symptoms but could develop them within a few weeks. These signs and symptoms can be very serious. Untreated babies may become developmentally delayed, have seizures, or die.

How is syphilis diagnosed?

A health care provider can diagnose syphilis by using dark field microscopy to examine material from infectious sores. If syphilis bacteria are present in the sore, they will show up with a characteristic appearance.

A blood test is another way to determine whether someone has syphilis. Shortly after infection occurs, the body produces syphilis antibodies that can be detected by an accurate, safe and inexpensive blood test. A low level of antibodies will stay in the blood for months or years even after the disease has been successfully treated. Because untreated syphilis in a pregnant woman can infect and possibly kill her developing baby, every pregnant woman should have a blood test for syphilis.

How common is syphilis?

In the United States, over 35,600 cases of syphilis were reported by health officials in 1999, including 6,650 cases of primary and secondary syphilis (a decline of 5.4% from 1998) and 556 cases of congenital syphilis in newborns. More cases occur each year than come to the attention of health officials. Of the nine states with the highest 1999 syphilis rates (2-5 times higher than the national rate of 2.5 cases per 100,000), eight were in the South. Although syphilis rates remain higher in the South than in other regions, the South had a 32% decline in the primary and secondary syphilis rate from 1997 to 1999, illustrating that the greatest improvements in disease control have taken place where syphilis incidence has been the greatest. In 1999, 25 counties accounted for 50% of all primary and secondary syphilis cases. Two hundred sixty-five counties had syphilis rates above the U.S. Public Health Service's Healthy People 2000 objective of 4 cases per 100,000. These 265 counties (9% of the total number of counties in the U.S.) accounted for approximately 74% of the total primary and secondary syphilis cases reported in 1999.

In 1999, syphilis occurred primarily in persons aged 20 to 39, and the reported rate in men was 1.5 times greater than the rate in women. The incidence of syphilis was highest in women aged 20 to 29 years and in men 30 to 39. Some fundamental societal problems, such as poverty, inadequate access to health care, and lack of education are associated with disproportionately high levels of syphilis in certain populations. Cases of primary and secondary syphilis in 1999 had the following race or ethnicity distribution: African Americans 75%, whites 16%, Hispanics 8%, and others 1%. Syphilis reflects one of the most glaring examples of racial disparity in health status, with the rate for African Americans nearly 30 times the rate for whites.

What is the link between syphilis and HIV?

While the health problems caused by syphilis in adults and newborns are serious in their own right, it is now known that the genital sores caused by syphilis in adults also make it easier to transmit and acquire HIV infection sexually. There is a 2- to 5-fold increased risk of acquiring HIV infection when syphilis is present.

Is there a cure for syphilis?

Yes! A single dose of penicillin, an antibiotic, will cure a person who has had syphilis for less than a year. Larger doses are needed to cure someone who has had it for longer than a year. For people who are allergic to penicillin, other antibiotics are available to treat syphilis. There are no home remedies or over-the-counter drugs that will cure syphilis. Penicillin treatment will kill the syphilis bacterium and prevent further damage, but it will not repair any damage already done. Persons who receive syphilis treatment must abstain from sexual contact with new partners until the syphilis sores are completely healed. Persons with syphilis must notify their sex partners so that they also can be tested, and, if necessary, receive treatment.

Will syphilis recur?

Having had syphilis does not protect a person from getting it again. Antibodies are produced as a person reacts to the disease, and, after treatment, these antibodies may offer partial protection from getting infected again, if exposed right away. Even though there may be a short period of protection, the antibody levels naturally decrease in the blood, and people become susceptible to syphilis infection again if they are sexually exposed to syphilis sores.

How can people protect themselves against infection?

Two people who know that they are not infected and who have sex only with each other cannot contract syphilis. When someone's syphilis status is unknown, a good defense against becoming infected during sex is to use a latex condom before beginning sex and to keep it on until the penis is withdrawn. However, condoms do not provide complete protection because syphilis sores can sometimes be on areas not covered by a condom. This is equally important for other STDs, including HIV, as well. Only lab tests can confirm whether someone has syphilis. Because syphilis sores can be hidden in the vagina, rectum, or mouth, it may not be obvious that a sex partner has syphilis. Washing the genitals, urinating, or douching after sex does not prevent STDs, including syphilis. Any unusual discharge, sore, or rash, especially in the groin area, should be a signal to stop having sex and to see a doctor at once.

References:

K. Holmes, P. Mardh, P. Sparling et al (eds). Sexually Transmitted Diseases, 3rd Edition. New York: McGraw-Hill, 1999, chapters 33-37.

[Division of STD Prevention. Sexually Transmitted Disease Surveillance, 1999. U.S. Department of Health and Human Services, Atlanta: Centers for Disease Control and Prevention \(CDC\), September 2000.](#)