

STD/STI INFORMATIONAL FACT SHEET

SYPHILIS (SIF I lis)

What is syphilis?

Syphilis is a curable infection caused by the bacterium *Treponema pallidum*. Sometimes the disease is called “the great imitator” because many of the signs and symptoms are so similar to other diseases. During infection, the bacterium enters the body through chafed skin or soft mucous membranes and moves into the blood stream. While in the blood, bacteria travels throughout the body attaching to various cells where it can, over time, damage organs. While infected and if untreated, an individual may progress through various (and sometimes, overlapping) stages of the disease. Each stage of syphilis (primary, secondary, latent, and tertiary) has its own characteristic signs and symptoms. The primary stage generally emerges within 10 to 90 days (with an average of 21 days) after exposure. The secondary stage may appear within 17 days up to six and a half months (averaging about three to six weeks after sores appear). The latent stage begins when the secondary stage disappears. The last, and tertiary stage, may occur anywhere from two to 30 years after infection. The longer the length of time between infection and treatment, the greater potential there is for damage to the body.

How common is syphilis?

In the year 2000, the rate of primary and secondary syphilis in the U.S. was 2.1 cases per 100,000 people. That was the lowest rate since reporting began in 1941. From 2001 to 2004, however, the rate increased to 2.7 cases per 100,000. In the 2000 to 2004 time frame, the number of primary and secondary cases increased from 5,979 to 7,980. Of the 7,980 cases, 6,722 (about 84%) were reported among males. An interesting note is that syphilis rates tend to show fluctuation in increases and decreases in seven-to-ten year cycles.

How is syphilis transmitted?

Syphilis is transmitted through direct contact with sores (sometimes called chancres or lesions) during unprotected anal, oral, or vaginal intercourse with an infected person. The soft skin inside the genital area and chafed skin are easy sites for bacteria to enter the body—even if there is no sexual penetration. Syphilis is especially contagious in the primary stage of the disease when chancres are present and oozing liquid. Syphilis also can be transmitted through lesions or syphilitic warts during the secondary stage of the disease. People are not usually contagious during the latent or tertiary stages. However, symptoms of secondary syphilis can recur during the latency stage. In these cases, the disease can spread. Syphilis sores can occur on the lips and in the mouth, which allows syphilis to be transmitted rarely through kissing. Pregnant women also can transmit the disease to babies during pregnancy or during childbirth.

Syphilis cannot be transmitted through contact such as, hugging, shaking hands, touching doorknobs, or sitting on toilet seats; sharing eating utensils, food, or clothing; or using swimming pools, hot tubs, or bathtubs.

What are the signs and symptoms of syphilis?

Syphilis is a curable bacterial infection. The bacteria cause sores (lesions or chancres) to appear on the lips or in the mouth and on the external genitals of the vagina, anus, scrotum, or in the rectum. If left untreated, the disease will evolve through four stages of infection with increasingly severe symptoms. Yet, some people do not have symptoms for years. Even though there are no symptoms, complications escalate if the infected person is not treated. Most transmissions occur from infected persons who are in the primary and secondary stages of the disease. Even during this time, many chancres may go unnoticed, as well as the swollen glands generally associated with early stages of syphilis.

The primary stage of syphilis generally is marked by growth of a single chancre within 10 to 90 days. Many more may develop in short time. The sores may last from three to six weeks. The chancre is painless and shows the spot where syphilis enters the body. It is noticed by its wet, small, elevated, firm, and round appearance. These sores will go away without treatment. However, the body is still infected and progressing into the secondary stage of the illness.

The secondary stage of syphilis can start 17 days to six and a half months after initial infection and can last from two to six weeks. Rashes, rather than chancres, are symptoms associated with secondary syphilis. A rash develops on one or more body parts; yet, it does not itch. The rashes may come and go for about two years. The rashes may appear as rough, reddish-brown spots on both the palms and bottoms of feet. Sometimes rashes in the secondary syphilis stage are so slight that they go unnoticed. Other symptoms associated with the secondary syphilis stage include: Fever, fatigue, hair loss, headaches, muscle aches and pain, sore throat, swollen lymph glands, and weight loss. The signs and symptoms of secondary syphilis will clear up with or without treatment, but the disease will progress to the latent and tertiary stages of the disease.

The latent stage of syphilis begins when the secondary symptoms disappear and the individual experiences no signs or symptoms of disease. This stage can develop anywhere from two to thirty years after infection. Within the first two years of latency, it is not uncommon for the infected person to have relapses of symptoms normally associated with secondary syphilis.

In the tertiary (late) stage of syphilis, infection remains in the body even though no signs or symptoms are present. At this stage, the infected person is not contagious. Yet, severe health problems evolve at this stage, such as: small bumps or tumors on the skin, bones, liver, and other organs. There also is damage to the brain, nervous system, eyes, heart, and blood vessels. These problems can lead to disorders such as, blindness, lack of muscle coordination, numbness, paralysis,

insanity, and dementia. If the infected person is treated during this period, future damage to the body can be controlled. However, treatment cannot repair or reverse any damage that occurred before treatment started.

If children infected during pregnancy or at childbirth are not treated, early symptoms of the disease generally appear from three to eight weeks after birth. Even though symptoms develop soon after birth, most cases go unnoticed until late childhood or adolescence. At this stage, infected youth experience many symptoms of tertiary syphilis in adults, without the heart complications.

What are complications of syphilis?

A critical complication of syphilis is the link between this disease and HIV infection. This connection exists because the chancres caused by syphilis offer easy access to transmit the human immunodeficiency virus sexually. These sores essentially eliminate barriers that normally provide protection against other infections. It is estimated that a person infected with syphilis is two to five times more likely to acquire HIV from an infected person compared with someone not infected with syphilis. Having an STD (such as syphilis) has become a predictor for becoming infected with HIV.

As stated in the section above, untreated individuals infected with syphilis can experience, over time, disorders such as, blindness, cardiovascular disease, reduced muscle coordination, numbness, paralysis, tumors on bones and body organs, insanity, and dementia. Even though infected people seek treatment and are cured, they are not immune to the disease. A cured person still is susceptible to re-infection.

How does syphilis affect a pregnant woman and her baby?

It is important that all pregnant women are tested for STDs, including syphilis. The effect of syphilis bacterium on the fetus is serious. If untreated, the pregnant woman is at high risk of having a stillbirth (a baby born dead) or giving birth to a baby that dies shortly after birth. If babies are not treated soon after birth, they can develop serious problems within weeks. Birth defects are common among untreated babies, including: damage to the heart, brain, and skeleton; blindness; developmental delays; or seizures.

How is syphilis diagnosed?

Syphilis can be diagnosed only by health care providers using one of three procedures: 1) a Darkfield Exam that tests fluid samples taken from chancres during primary syphilis or from tissues in the vagina or urethra during secondary syphilis; 2) blood tests that can be used at any stage of syphilis, which looks for antibodies formed to fight the bacteria; and 3) a cerebrospinal fluid test that can be used on individuals with damaged central nervous systems. Blood tests are used to test infants at birth and are performed every two to three months until the test

shows a negative. The continual testing on babies is necessary so the health care provider can know that the results are a true reflection of the infant's health and not a result of the mother's antibodies, which are in the baby's system at birth.

What is the treatment for syphilis?

Syphilis is easy to cure in the early stages of the disease. A single injection of penicillin is the preferred treatment. Penicillin will destroy the bacteria and prevent further damage to the body. However, it will not repair any damage already done. All sexual partners should be treated simultaneously and abstain from sexual contact until all sores are completely healed. The single dose should cure anyone infected for less than a year. If infected for longer than a year, additional doses are needed. For those allergic to penicillin or who also have HIV, other antibiotics can be used for treatment.

After treatment for primary or secondary syphilis, individuals should be retested after six months and then again after a year. If patients are treated while in the latent stage, they should be re-tested at six months, 12 months, and 24 months. People treated for syphilis and who are HIV infected should be re-tested every three months for two years to make sure the bacteria are gone.

How can syphilis be prevented?

The surest way to prevent syphilis is to abstain from sexual intercourse, or to be in a long-term, mutually monogamous relationship with a partner who has been tested and is known to be uninfected. Avoid using alcohol and drugs because these activities may create environments for individuals to participate in risky sexual behaviors. When used consistently and correctly, condoms can help reduce the risk of transmission of syphilis during anal or vaginal intercourse. Condoms, however, cannot protect contact with the scrotum. Condoms also are not good barriers for use during oral sex. Other barriers such as dental dams or plastic wrap can offer better protection than a condom. In 2001, CDC recommended that spermicides (especially Nonoxynol-9 or N-9) not be used as protection against transmission of STDs. They are not effective. Additionally, research studies showed that N-9 might cause lesions that provide a gateway for HIV and other STDs into the body. Washing the genitals, urinating, and douching are not effective in preventing transmission of STDs, including syphilis.

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For information about specific STDs/STIs, below are sources to use:

**Alan Guttmacher Institute
(AGI)**

120 Wall Street, 21st Floor
New York, NY 10005
Phone: 212/248-1111
Fax: 212/248-1951
<http://www.agi-usa.org>

**American Social Health
Association (ASHA)**

P. O. Box 13827
Research Triangle Park, NC 27709-
3827
Phone: 800-783-9877
<http://www.ashastd.org/>

**Centers for Disease Control and
Prevention** – Sexually Transmitted
Disease - STD information and
referrals to STD Clinics

CDC-INFO
Phone: 800-CDC-INFO (800-232-
4636); TTY: 888-232-6348 In English,
en Espanol
<http://www.cdc.gov/std/default.htm>

**CDC National Prevention
Information Network (NPIN)**

P.O. Box 6003
Rockville, MD 20849-6003
Phone: 800-458-5231;
Fax: 888-282-7681
1-800-243-7012 TTY
E-mail: info@cdcnpin.org

**The Henry J. Kaiser Family
Foundation**

2400 Sand Hill Road
Menlo Park, CA 94025
Phone: 650/854-9400
Fax: 650/854-4800
<http://www.kff.org>

National Herpes Hotline (NHH)

Open from 9 A.M. to 7 P.M., ET,
Monday - Friday.
Phone: 919/361-8488

**National HPV and Cervical
Cancer Prevention Hotline**

Open from 2 P.M. to 7 P.M., ET,
Monday - Friday.
Phone: 919/361-4848

**Planned Parenthood Federation
of America**

434 West 33rd St.
New York, NY 10001
212/541-7800
FAX: 212/245-1845
<http://www.plannedparenthood.org/>

**Sexuality Information and
Education Council of the United
States (SIECUS)**

130 West 42nd Street, Suite 350
New York, New York 10036-7802
Phone: 212/819-9770
Fax: 212/819-9776
<http://www.siecus.org>

Virginia Department of Health

109 Governor Street
Richmond, VA 23219
VIRGINIA STD/AIDS HOTLINE
Phone: 800-533-4148
<http://www.vdh.virginia.gov/epidemiology/DiseasePrevention/factsheets.htm>