This fact sheet summarizes 2011 data on chlamydia, gonorrhea, and syphilis published in CDC’s annual report, *Sexually Transmitted Disease Surveillance, 2011* (available at www.cdc.gov/std/stats). The data are based on state and local STD case reports from a variety of private and public sources which indicate that the majority of cases are seen in non-STD clinic settings, such as private physician offices and health maintenance organizations.Many cases of chlamydia, gonorrhea, and syphilis continue to go undiagnosed and unreported, and data on several additional STDs — such as human papillomavirus, herpes simplex virus, and trichomoniasis — are not routinely reported to CDC. As a result, the annual surveillance report captures only a fraction of the true burden of STDs in America. However, it provides important insights into the scope and trends of this hidden epidemic. **STDs Inflict Significant Human and Economic Costs** STDs are a significant health challenge facing the United States. CDC estimates that 19 million new STD infections occur every year in this country, nearly half among young people ages 15–24. Each of these infections is a potential threat to an individual’s immediate and long-term health and well-being. In addition to increasing a person’s risk for HIV infection, STDs can lead to severe reproductive health complications, such as infertility. STDs are also a serious drain on the U.S. health care system, costing the nation about $17 billion in health care costs every year.

**Snapshot: STDs in the United States, 2011**

**ChlamydiaSyphilis (primary and secondary)** Cases reported in 2011: 1,412,791 Cases reported in 2011: 13,970 R ate per 100,000 people: 457.6; increase of 8% since 2010 Rate per 100,000 people: 4.5; unchanged from 2010 T his rise is most likely due to increased screening, T he overall steady trend masks declining infections expanded use of more sensitive tests and more among women and increases among men, complete national reportingparticularly gay and bisexual men**GonorrheaSyphilis (congenital)** Cases reported in 2011: 321,849 C ases reported in 2011: 360 R ate per 100,000 people: 104.2; 4% increase since 2010 Rate per 100,000 live births: 8.5; 7% decrease since 2010 T hough rates remain at near-historic lows, this is the S ince 2008, the rate has decreased by nearly second consecutive year of increases20 percent

**Other STDs**

**On this Page**

* [Chancroid](http://www.cdc.gov/std/general/other.htm#chancroid)
* [Lymphogranuloma Venereum (LGV)](http://www.cdc.gov/std/general/other.htm#lgv)
* [Pubic Lice Infestation](http://www.cdc.gov/std/general/other.htm#lice)
* [Scabies](http://www.cdc.gov/std/general/other.htm#scabies)

**Chancroid**

**Statistics**

* [STD Surveillance 2011 - Other Sexually Transmitted Diseases - Chancroid](http://www.cdc.gov/std/stats11/other.htm) 
  + [Chancroid—Reported Cases, United States, 1981–2011](http://www.cdc.gov/std/stats11/figures/51.htm) (Figure 51)
  + [Cases of Sexually Transmitted Diseases Reported by State Health Departments and Rates per 100,000 Population, United States, 1941-2011](http://www.cdc.gov/std/stats11/tables/1.htm) (Table 1)
  + [Chancroid - Reported Cases and Rates by State/Area in Alphabetical Order, United States and Outlying Areas, 2007-2011](http://www.cdc.gov/std/stats11/tables/43.htm) (Table 43)

**Treatment**

* [2010 STD Treatment Guidelines - Chancroid](http://www.cdc.gov/std/treatment/2010/genital-ulcers.htm#chancroid) (December 16, 2011)

**Lymphogranuloma Venereum (LGV)**

* [2010 STD Treatment Guidelines - Lymphogranuloma Venereum](http://www.cdc.gov/std/treatment/2010/genital-ulcers.htm#lymphogranuloma)- new information regarding lymphogranuloma venereum proctocolitis among men who have sex with men (December 16, 2010)
  + [Proctitis, Proctocolitis, and Enteritis](http://www.cdc.gov/std/treatment/2010/proctitis.htm)

**Pubic Lice Infestation**

* [Pubic "Crab" Lice](http://www.cdc.gov/lice/pubic/index.html) - Risk factors, control and prevention, fact sheet and more
* [2010 STD Treatment Guidelines - Pediculosis Pubis](http://www.cdc.gov/std/treatment/2010/ectoparasitic.htm#a1) (December 16, 2010)

**Scabies**

* [Scabies](http://www.cdc.gov/scabies/) - risk, symptoms, prevention and control, and more
* [2010 STD Treatment Guidelines - Scabies](http://www.cdc.gov/std/treatment/2010/ectoparasitic.htm#a2)[(December 16, 2010)](http://www.cdc.gov/std/treatment/2010/default.htm)

**The Role of STD Detection and Treatment in HIV Prevention - CDC Fact Sheet**



Testing and treatment of sexually transmitted diseases (STDs) can be an effective tool in preventing the spread of [HIV](http://www.cdc.gov/std/hiv/default.htm), the virus that causes AIDS. An understanding of the relationship between STDs and HIV infection can help in the development of effective HIV prevention programs for persons with high-risk sexual behaviors.

**What is the link between STDs and HIV infection?**

Individuals who are infected with STDs are at least two to five times more likely than uninfected individuals to acquire HIV infection if they are exposed to the virus through sexual contact. In addition, if an HIV-infected individual is also infected with another STD, that person is more likely to transmit HIV through sexual contact than other HIV-infected persons (Wasserheit, 1992).

There is substantial biological evidence demonstrating that the presence of other STDs increases the likelihood of both transmitting and acquiring HIV.

* **Increased susceptibility.** STDs appear to increase susceptibility to HIV infection by two mechanisms. Genital ulcers (e.g., [syphilis](http://www.cdc.gov/std/Syphilis/default.htm), [herpes](http://www.cdc.gov/std/Herpes/default.htm), or chancroid) result in breaks in the genital tract lining or skin. These breaks create a portal of entry for HIV. Additionally, inflammation resulting from genital ulcers or non-ulcerative STDs (e.g., [chlamydia](http://www.cdc.gov/std/Chlamydia/default.htm), [gonorrhea](http://www.cdc.gov/std/Gonorrhea/default.htm), and [trichomoniasis](http://www.cdc.gov/std/Trichomonas/default.htm)) increase the concentration of cells in genital secretions that can serve as targets for HIV (e.g., CD4+ cells).
* **Increased infectiousness.** STDs also appear to increase the risk of an HIV-infected person transmitting the virus to his or her sex partners. Studies have shown that HIV-infected individuals who are also infected with other STDs are particularly likely to shed HIV in their genital secretions. For example, men who are infected with both gonorrhea and HIV are more than twice as likely to have HIV in their genital secretions than are those who are infected only with HIV. Moreover, the median concentration of HIV in semen is as much as 10 times higher in men who are infected with both [gonorrhea](http://www.cdc.gov/std/Gonorrhea/default.htm) and HIV than in men infected only with HIV. The higher the concentration of HIV in semen or genital fluids, the more likely it is that HIV will be transmitted to a sex partner.

**How can STD treatment slow the spread of HIV infection?**

Evidence from intervention studies indicates that detecting and treating STDs may reduce HIV transmission.

* **STD treatment reduces an individual's ability to transmit HIV**. Studies have shown that treating STDs in HIV-infected individuals decreases both the amount of HIV in genital secretions and how frequently HIV is found in those secretions (Fleming, Wasserheit, 1999).
* Herpes can make people more susceptible to HIV infection, and it can make HIV-infected individuals more infectious. It is critical that all individuals, **especially those with herpes**, know whether they are infected with HIV and, if uninfected with HIV, take measures to protect themselves from infection with HIV.
* Among individuals with both herpes and HIV, trials are underway studying if treatment of the genital herpes helps prevent HIV transmission to partners.

**What are the implications for HIV prevention?**

Strong STD prevention, testing, and treatment can play a vital role in comprehensive programs to prevent sexual transmission of HIV. Furthermore, STD trends can offer important insights into where the HIV epidemic may grow, making STD surveillance data helpful in forecasting where HIV rates are likely to increase. Better linkages are needed between HIV and STD prevention efforts nationwide in order to control both epidemics.

In the context of persistently high prevalence of STDs in many parts of the United States and with emerging evidence that the U.S. HIV epidemic increasingly is affecting populations with the highest rates of curable STDs, the CDC/HRSA Advisory Committee on HIV/AIDS and STD Prevention (CHAC) recommended the following:

* Early detection and treatment of curable STDs should become a major, explicit component of comprehensive HIV prevention programs at national, state, and local levels;
* In areas where STDs that facilitate HIV transmission are prevalent, screening and treatment programs should be expanded;
* HIV testing should always be recommended for individuals who are diagnosed with or suspected to have an STD.
* HIV and STD prevention programs in the United States, together with private and public sector partners, should take joint responsibility for implementing these strategies.

CHAC also notes that early detection and treatment of STDs should be only one component of a comprehensive HIV prevention program, which also must include a range of social, behavioral, and biomedical interventions.

[All STD Fact Sheets](http://www.cdc.gov/std/healthcomm/fact_sheets.htm)

**Where can I get more information?**

[Sexually Transmitted Diseases](http://www.cdc.gov/std/) - Home Page  
[HIV/AIDS and STDs](http://www.cdc.gov/std/hiv/default.htm) - Topic Page

[Order Publications Online](http://www.cdc.gov/std/pubs/)

CDC-INFO Contact Center  
1-800-CDC-INFO begin\_of\_the\_skype\_highlighting 1-800-CDC-INFO end\_of\_the\_skype\_highlighting (1-800-232-4636 begin\_of\_the\_skype\_highlighting 1-800-232-4636 end\_of\_the\_skype\_highlighting)  
Email: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

CDC National Prevention Information Network (NPIN)  
P.O. Box 6003  
Rockville, MD 20849-6003  
1-800-458-5231 begin\_of\_the\_skype\_highlighting 1-800-458-5231 end\_of\_the\_skype\_highlighting  
1-888-282-7681 Fax  
1-800-243-7012 begin\_of\_the\_skype\_highlighting 1-800-243-7012 end\_of\_the\_skype\_highlighting TTY  
E-mail: [info@cdcnpin.org](mailto:info@cdcnpin.org)

[American Social Health Association](http://www.ashastd.org/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html) (ASHA)  
P. O. Box 13827  
Research Triangle Park, NC 27709-3827  
1-800-783-9877 begin\_of\_the\_skype\_highlighting 1-800-783-9877 end\_of\_the\_skype\_highlighting

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Centers for Disease Control and Prevention. 1998. [HIV prevention through early detection and treatment of other sexually transmitted diseases - United States. MMWR 47(RR-12):1-24.](http://www.cdc.gov/mmwr/preview/mmwrhtml/00054174.htm)

Fleming DT, Wasserheit JN. 1999. From epidemiological synergy to public health policy and practice: The contribution of other sexually transmitted diseases to sexual transmission of HIV infection. Sexually Transmitted Infections 75:3-17.

Wasserheit JN. 1992. Epidemiologic synergy: Interrelationships between human immunodeficiency virus infection and other sexually transmitted diseases. Sexually Transmitted Diseases 9:61-77.

**Genital HPV Infection - Fact Sheet**

[**Español**](http://www.cdc.gov/std/spanish/STDFact-HPV-s.htm)

* [What is it?](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a1)
* [Who is at risk?](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a2)
* [How do people get it?](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a3)
* [Potential Health Problems](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a4)
* [How does HPV lead to health problems?](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a5)
* [How common is it?](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a6)
* [Difference from HIV](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a7)
* [Pregnancy](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a8)
* [Is there a test?](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a9)
* [Preventing HPV](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a10)
* [Preventing health problems caused by HPV](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a11)
* [Treatment](http://www.cdc.gov/std/HPV/STDFact-HPV.htm#a12)



**What is genital HPV infection?**

Genital human papillomavirus (also called HPV) is the most common sexually transmitted infection (STI). There are more than 40 types of HPV that can infect the genital areas of males and females. These HPV types can also infect the mouth and throat.

HPV can cause serious health problems, including genital warts and certain cancers. There is no certain way to tell who will develop health problems from HPV and who will not. In most cases HPV goes away by itself before it causes any health problems, and most people who become infected with HPV do not even know they have it.

HPV is not the same as herpes or HIV (the virus that causes AIDS). Both viruses can be passed on during sex, but they have different symptoms and cause different health problems.

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**Who is at risk for HPV?**

Anyone who is having (or has ever had) sex can get HPV. HPV is so common that nearly all sexually-active men and women get it at some point in their lives. This is true even for people who only have sex with one person in their lifetime.

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**How do people get HPV?**

HPV is passed on through genital contact, most often during vaginal and anal sex. HPV may also be passed on during oral sex and genital-to-genital contact. HPV can be passed on between straight and same-sex partners—even when the infected person has no signs or symptoms.

Most infected persons do not realize they are infected, or that they are passing HPV on to a sex partner. A person can still have HPV, even if years have passed since he or she has had sexual contact with an infected person. It is also possible to get more than one type of HPV.

In rare circumstances, a pregnant woman with genital HPV can pass the HPV on to her baby during delivery.

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**What are the potential health problems caused by HPV?**

Most people with HPV never develop symptoms or health problems. Most HPV infections (90%) go away by themselves within two years. But, sometimes, HPV infections will persist and can cause a variety of serious health problems. Health problems that can be caused by HPV include

* Genital warts (warts on the genital areas);
* Recurrent respiratory papillomatosis (RRP), a rare condition in which warts grow in the throat;
* Cervical cancer, cancer on a woman's cervix; and
* Other, less common, but serious cancers, including genital cancers (cancer of the vulva, vagina, penis, or anus), and a type of head and neck cancer called oropharyngeal cancer (cancer in the back of throat, including the base of the tongue and tonsils).

All cases of genital warts and RRP, and nearly all cases of cervical cancer, are caused by HPV. A subset of cancers of the vagina, vulva, anus, penis, and oropharynx, are caused by HPV.

The types of HPV that can cause genital warts are not the same as the types of HPV that can cause cancers.

**Signs and symptoms of health problems caused by HPV:**

**Genital warts** usually appear as a small bump or group of bumps in the genital area. They can be small or large, raised or flat, or shaped like a cauliflower. Healthcare providers can usually diagnose warts by looking at the genital area. Warts can appear within weeks or months after sexual contact with an infected partner—even if the infected partner has no signs of genital warts. If left untreated, genital warts might go away, remain unchanged, or increase in size or number. The types of HPV that can cause genital warts are not the same as the types of HPV that can cause cancers.

**Cervical cancer** usually does not cause symptoms until it is quite advanced. For this reason, it is important for women to get regular [screening for cervical cancer](http://www.cdc.gov/cancer/cervical/basic_info/screening.htm). Screening tests can find early signs of disease so that problems can be treated early, before they ever turn into cancer.

**Other cancers caused by HPV** might not have signs or symptoms until they are advanced and hard to treat. Other [HPV-associated cancers](http://www.cdc.gov/cancer/hpv/) include some cancers of the vulva, vagina, penis, anus, and oropharynx.

**RRP** is a condition in which warts grow in the throat. RRP can occur in children (juvenile-onset) and adults (adult-onset). These growths can sometimes block the airway, causing a hoarse voice or trouble breathing.

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**How does HPV lead to health problems?**

In most cases the virus goes away and it does not lead to any health problems. However, when the virus persists, or does not go away, HPV can cause normal cells to become abnormal and, most of the time you cannot see or feel these cell changes.

* Warts can appear within months after getting HPV.
* Cancer often takes years—even decades—to develop after a person gets HPV.

There is no certain way to know which people infected with HPV will go on to develop cancer or other health problems. However, persons with weak immune systems (including persons with HIV) may be less able to fight off HPV and more likely to develop health problems from it.

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**How common are HPV and health problems caused by HPV?**

**HPV (the virus):** Approximately 79 million Americans are currently infected with HPV. About 14 million people become newly infected each year. HPV is so common that nearly all sexually-active men and women will get at least one type of HPV at some point in their lives.

**Genital warts:** About 360,000 persons in the U.S. get genital warts each year.

**Cervical cancer:** About 12,000 women in the U.S. get cervical cancer each year.

**Other cancers that can be caused by HPV,** including some vaginal, vulvar, penile, anal, and oropharyngeal cancers: Each year in the U.S., HPV is thought to cause an estimated

* 2,100 vulvar cancers,
* 500 vaginal cancers,
* 600 penile cancers,
* 2,800 anal cancers in women,
* 1,500 anal cancers in men,
* 1,700 oropharyngeal cancers in women,\* and
* 6,700 oropharyngeal cancers in men.\*

\*Note: Other factors, notably tobacco and alcohol use, may also play a role with HPV to cause these cancers.

About 21,000 of these cancers are potentially preventable by HPV vaccines.

**Recurrent respiratory papillomatosis (RRP)** is very rare. It is estimated that about 820 children get juvenile-onset RRP every year in the U.S.

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**What is the difference between HPV and HIV?**

HPV is a different virus than HIV, and causes different health problems. HPV does not live in the blood cells, but rather lives on the skin. Also, whereas HIV can lead to AIDS, genital HPV can lead to genital warts and certain types of cancer. However, persons with HIV are more likely to get HPV and to develop health problems from HPV. This is especially true for anal cancer.

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**Does HPV affect a pregnant woman and her baby?**

Women who are pregnant can get infected with HPV. Usually these infections do not cause any problems. But sometimes

* HPV leads to genital warts, which can grow during pregnancy. Women with genital warts during the late stages of pregnancy are more likely to have children with warts in the throat, a condition called recurrent respiratory papillomatosis; however, this is a very rare condition.
* Pregnant women can develop cervical cell changes due to HPV. These changes can be detected through routine cervical cancer screening. Women should get routine cervical cancer screening, even during pregnancy.

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**Is there a test for HPV?**

HPV tests are available to help screen women aged 30 years and older for cervical cancer. These HPV tests are not recommended to screen men, adolescents, or women under the age of 30 years. There is no general HPV test for men or women to check one's overall "HPV status." Also, there is not an approved HPV test to find HPV in the mouth or throat.

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**How can HPV be prevented?**

There are several ways that people can lower their chances of getting HPV:

* [HPV vaccines](http://www.cdc.gov/hpv/vaccine.html) are recommended for 11- or 12-year-old boys and girls. HPV vaccines are safe and effective, and can protect males and females against some of the most common types of HPV that can lead to disease and cancer. HPV vaccines are given in three shots over six months; it is important to get all three doses to get the best protection. Boys and girls at ages 11 or 12 are most likely to have the best protection provided by HPV vaccines, and their immune response to vaccine is better than older women and men.
  + **Girls and women:** Two vaccines (Cervarix and Gardasil) are available to protect females against the types of HPV that cause most cervical cancers. One of these vaccines (Gardasil) also protects against most genital warts, and has been shown to protect against anal, vaginal, and vulvar cancers. Either vaccine is recommended for 11- and 12-year-old girls, and for females 13 through 26 years of age who did not get any or all of the shots when they were younger. These vaccines can also be given to girls beginning at 9 years of age.
  + **Boys and men:** One vaccine (Gardasil) is available to protect males against most genital warts and anal cancers. Gardasil is recommended for 11- and 12-year-old boys, and for males 13 through 21 years of age who did not get any or all of the shots when they were younger. Gay, bisexual, and other men who have sex with men should receive the vaccine through age 26 years. Males 22–26 years of age may also get the vaccine.
* For those who choose to be sexually active, condoms may lower the risk of HPV. Condoms may also lower the risk of developing HPV-related diseases, such as genital warts and cervical cancer. To be most effective, condoms should be used with every sex act, from start to finish. HPV can infect areas that are not covered by a condom - so [condoms may not *fully* protect against HPV](http://www.cdc.gov/condomeffectiveness/brief.html).
* People can also lower their chances of getting HPV by being in a faithful relationship with one partner; limiting their number of sex partners; and choosing a partner who has had no or few prior sex partners. But even people with only one lifetime sex partner can get HPV, and it may not be possible to determine if a person who has been sexually active in the past is currently infected. Because HPV is so common, and almost every sexually-active person will get HPV at some time in their lives, it is important to protect against the possible health effects of HPV.

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**Can people prevent health problems caused by HPV?**

Yes, there are different prevention strategies for different health problems caused by HPV. HPV vaccines can prevent many diseases and cancers caused by HPV. In addition to vaccination, there are other ways to lower the risk of health problems caused by HPV.

A person can lower their risk of

* Cervical cancer by getting routine screening if they are a woman aged 21–65 years (and following up on any abnormal results);
* Oropharyngeal cancers by avoiding tobacco and limiting alcohol intake; and
* Genital warts by using condoms all the time and the right way.

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**Is there a treatment for HPV or health problems caused by HPV?**

There is no treatment for the virus itself, but there *are* treatments for the health problems that HPV can cause:

* **Genital warts** can be removed with treatments applied by the provider or the person himself/herself. No one treatment is better than another. Some people choose not to treat warts, but to see if they disappear on their own. If left untreated, genital warts may go away, stay the same, or grow in size or number.
* **Cervical cancer** is most treatable when it is diagnosed and treated early. Women who get routine Pap tests and follow up as needed can identify problems *before* cancer develops. Prevention is always better than treatment. For more information visit [www.cancer.org](http://www.cancer.org/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html).
* **Other HPV-related cancers** are also more treatable when diagnosed and treated early. For more information visit [www.cancer.org](http://www.cancer.org/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html).
* **Recurrent respiratory papillomatosis (RRP)** can be treated with surgery or medicines. Curing RRP can sometimes require many treatments or surgeries over a period of years.

[All STD Fact Sheets](http://www.cdc.gov/std/healthcomm/fact_sheets.htm)

**Where can I get more information?**

[STD information](http://www.cdc.gov/std/)

[HPV Information](http://www.cdc.gov/hpv/)

[HPV Vaccination](http://www.cdc.gov/vaccines/vpd-vac/hpv/)

[Cancer Information](http://www.cdc.gov/cancer/)

[Cervical Cancer Screening](http://www.cdc.gov/cancer/cervical/basic_info/screening.htm)

[CDC’s National Breast and Cervical Cancer Early Detection Program](http://www.cdc.gov/cancer/nbccedp/)

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1-800-CDC-INFO begin\_of\_the\_skype\_highlighting 1-800-CDC-INFO end\_of\_the\_skype\_highlighting (1-800-232-4636 begin\_of\_the\_skype\_highlighting 1-800-232-4636 end\_of\_the\_skype\_highlighting)  
TTY: (888) 232-6348  
  
[CDC National Prevention Information Network (NPIN)](http://www.cdcnpin.org/scripts/index.asp)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html)   
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1-800-243-7012 begin\_of\_the\_skype\_highlighting 1-800-243-7012 end\_of\_the\_skype\_highlighting TTY  
E-mail: [info@cdcnpin.org](mailto:info@cdcnpin.org)

[National HPV and Cervical Cancer Prevention Resource Center American Social Health Association (ASHA)](http://www.ashastd.org/std-sti/hpv.html)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html)  
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Research Triangle Park, NC  
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**Pelvic Inflammatory Disease (PID) - CDC Fact Sheet**



**What is PID?**

Pelvic inflammatory disease (PID) refers to infection of the uterus (womb), fallopian tubes (tubes that carry eggs from the ovaries to the uterus) and other reproductive organs that causes symptoms such as lower abdominal pain. It is a serious complication of some sexually transmitted diseases (STDs), especially [chlamydia](http://www.cdc.gov/std/Chlamydia/default.htm) and [gonorrhea](http://www.cdc.gov/std/Gonorrhea/default.htm). PID can damage the fallopian tubes and tissues in and near the uterus and ovaries. PID can lead to serious consequences including infertility, ectopic pregnancy (a pregnancy in the fallopian tube or elsewhere outside of the womb), abscess formation, and chronic pelvic pain.

**How common is PID?**

Each year in the United States, it is estimated that more than 750,000 women experience an episode of acute PID. Up to 10-15% of these women may become infertile as a result of PID. A large proportion of the ectopic pregnancies occurring every year are due to the consequences of PID.

The more sex partners a woman has, the greater her risk of developing PID. Also, a woman whose partner has more than one sex partner is at greater risk of developing PID, because of the potential for more exposure to infectious agents.

**How do women get PID?**

PID occurs when bacteria move upward from a woman's vagina or cervix (opening to the uterus) into her reproductive organs. Many different organisms can cause PID, but many cases are associated with gonorrhea and chlamydia, two very common bacterial STDs. A prior episode of PID increases the risk of another episode because the reproductive organs may be damaged during the initial bout of infection.

Sexually active women in their childbearing years are most at risk, and those under age 25 are more likely to develop PID than those older than 25. This is partly because the cervix of teenage girls and young women is not fully matured, increasing their susceptibility to the STDs that are linked to PID.

The more sex partners a woman has, the greater her risk of developing PID. Also, a woman whose partner has more than one sex partner is at greater risk of developing PID, because of the potential for more exposure to infectious agents.

Women who douche may have a higher risk of developing PID compared with women who do not douche. Research has shown that douching changes the vaginal flora (organisms that live in the vagina) in harmful ways, and can force bacteria into the upper reproductive organs from the vagina.

Women who have an intrauterine device (IUD) inserted may have a slightly increased risk of PID near the time of insertion compared with women using other contraceptives or no contraceptive at all. However, this risk is greatly reduced if a woman is tested and, if necessary, treated for STDs before an IUD is inserted.

**What are the signs and symptoms of PID?**

Symptoms of PID vary from mild to severe. When PID is caused by [chlamydial infection](http://www.cdc.gov/std/Chlamydia/default.htm), a woman may be more likely to experience only mild symptoms even when serious damage is being done to her reproductive organs. Chlamydia can also cause fallopian tube infection without any symptoms. Because of vague symptoms, PID often goes unrecognized by women and their health care providers. Women who have symptoms of PID most commonly have lower abdominal pain. Other signs and symptoms include fever, unusual vaginal discharge that may have a foul odor, painful intercourse, painful urination, irregular menstrual bleeding, and pain in the right upper abdomen (rare).

**What are the complications of PID?**

Prompt and appropriate treatment can help prevent complications of PID, including permanent damage to the female reproductive organs. Infection-causing bacteria can silently invade the fallopian tubes, causing normal tissue to turn into scar tissue. This scar tissue blocks or interrupts the normal movement of eggs into the uterus. If the fallopian tubes are totally blocked by scar tissue, sperm cannot fertilize an egg, and the woman becomes infertile. Infertility also can occur if the fallopian tubes are partially blocked or even slightly damaged. Up to 10-15% of women with PID may become infertile, and if a woman has multiple episodes of PID, her chances of becoming infertile increase.

In addition, a partially blocked or slightly damaged fallopian tube may cause a fertilized egg to remain in the fallopian tube. If this fertilized egg begins to grow in the tube as if it were in the uterus, it is called an ectopic pregnancy. As it grows, an ectopic pregnancy can rupture the fallopian tube causing severe pain, internal bleeding, and even death.

Scarring in the fallopian tubes and other pelvic structures can also cause chronic pelvic pain (pain that lasts for months or even years). Women with repeated episodes of PID are more likely to suffer infertility, ectopic pregnancy, or chronic pelvic pain.

**How is PID diagnosed?**

PID is difficult to diagnose because the symptoms are often subtle and mild. Many episodes of PID go undetected because the woman or her health care provider fails to recognize the implications of mild or nonspecific symptoms. Because there are no precise tests for PID, a diagnosis is usually based on clinical findings. If symptoms such as lower abdominal pain are present, a health care provider should perform a physical examination to determine the nature and location of the pain and check for fever, abnormal vaginal or cervical discharge, and for evidence of gonorrheal or chlamydial infection. If the findings suggest PID, treatment is necessary.

The health care provider may also order tests to identify the infection-causing organism (e.g., chlamydial or gonorrheal infection) or to distinguish between PID and other problems with similar symptoms. A pelvic ultrasound is a helpful procedure for diagnosing PID. An ultrasound can view the pelvic area to see whether the fallopian tubes are enlarged or whether an abscess is present. In some cases, a laparoscopy may be necessary to confirm the diagnosis. A laparoscopy is a surgical procedure in which a thin, rigid tube with a lighted end and camera (laparoscope) is inserted through a small incision in the abdomen. This procedure enables the doctor to view the internal pelvic organs and to take specimens for laboratory studies, if needed.

**What is the treatment for PID?**

PID can be cured with several types of antibiotics. A health care provider will determine and prescribe the best therapy. However, antibiotic treatment does not reverse any damage that has already occurred to the reproductive organs. If a woman has pelvic pain and other symptoms of PID, it is critical that she seek care immediately. Prompt antibiotic treatment can prevent severe damage to reproductive organs. The longer a woman delays treatment for PID, the more likely she is to become infertile or to have a future ectopic pregnancy because of damage to the fallopian tubes.

Because of the difficulty in identifying organisms infecting the internal reproductive organs and because more than one organism may be responsible for an episode of PID, PID is usually treated with at least two antibiotics that are effective against a wide range of infectious agents. These antibiotics can be given by mouth or by injection. The symptoms may go away before the infection is cured. Even if symptoms go away, the woman should finish taking all of the prescribed medicine. This will help prevent the infection from returning. Women being treated for PID should be re-evaluated by their health care provider three days after starting treatment to be sure the antibiotics are working to cure the infection. In addition, a woman’s sex partner(s) should be treated to decrease the risk of re-infection, even if the partner(s) has no symptoms. Although sex partners may have no symptoms, they may still be infected with the organisms that can cause PID.

Hospitalization to treat PID may be recommended if the woman (1) is severely ill (e.g., nausea, vomiting, and high fever); (2) is pregnant; (3) does not respond to or cannot take oral medication and needs intravenous antibiotics; (4) has an abscess in the fallopian tube or ovary (tubo-ovarian abscess); or (5) needs to be monitored to be sure that her symptoms are not due to another condition that would require emergency surgery (e.g., appendicitis). If symptoms continue or if an abscess does not go away, surgery may be needed. Complications of PID, such as chronic pelvic pain and scarring are difficult to treat, but sometimes they improve with surgery.

**How can PID be prevented?**

Women can protect themselves from PID by taking action to prevent STDs or by getting early treatment if they do get an STD.

The surest way to avoid transmission of STDs 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.

Latex male condoms, when used consistently and correctly, can reduce the risk of transmission of chlamydia and gonorrhea.

CDC recommends yearly chlamydia testing of all sexually active women age 25 or younger, older women with risk factors for chlamydial infections (those who have a new sex partner or multiple sex partners), and all pregnant women. An appropriate sexual risk assessment by a health care provider should always be conducted and may indicate more frequent screening for some women.

Any genital symptoms such as an unusual sore, discharge with odor, burning during urination, or bleeding between menstrual cycles could mean an STD infection. If a woman has any of these symptoms, she should stop having sex and consult a health care provider immediately. Treating STDs early can prevent PID. Women who are told they have an STD and are treated for it should notify all of their recent sex partners so they can see a health care provider and be evaluated for STDs. Sexual activity should not resume until all sex partners have been examined and, if necessary, treated.

[All STD Fact Sheets](http://www.cdc.gov/std/healthcomm/fact_sheets.htm)

**Where can I get more information?**

Division of STD Prevention (DSTDP)  
Centers for Disease Control and Prevention  
[www.cdc.gov/std](http://www.cdc.gov/std/)

CDC-INFO Contact Center  
1-800-CDC-INFO begin\_of\_the\_skype\_highlighting 1-800-CDC-INFO end\_of\_the\_skype\_highlighting (1-800-232-4636 begin\_of\_the\_skype\_highlighting 1-800-232-4636 end\_of\_the\_skype\_highlighting)  
Email: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

**Resources:**

CDC National Prevention Information Network (NPIN)  
P.O. Box 6003  
Rockville, MD 20849-6003  
1-800-458-5231 begin\_of\_the\_skype\_highlighting 1-800-458-5231 end\_of\_the\_skype\_highlighting   
1-888-282-7681 Fax   
1-800-243-7012 begin\_of\_the\_skype\_highlighting 1-800-243-7012 end\_of\_the\_skype\_highlighting TTY   
E-mail [info@cdcnpin.org](mailto:info@cdcnpin.org)   
[www.cdcnpin.org](http://www.cdcnpin.org/scripts/index.asp)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html)

American Social Health Association (ASHA)  
P. O. Box 13827  
Research Triangle Park, NC 27709-3827  
1-800-783-9877 begin\_of\_the\_skype\_highlighting 1-800-783-9877 end\_of\_the\_skype\_highlighting  
[www.ashastd.org](http://www.ashastd.org/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html)

**Sources**

American College of Obstetricians and Gynecologists (ACOG). Pelvic Inflammatory Disease. ACOG Patient Education Pamphlet, 1999.

Westrom L and Eschenbach D. In: K. Holmes, P. Sparling, P. Mardh et al (eds). Sexually Transmitted Diseases, 3rd Edition. New York: McGraw-Hill, 1999, 783-809.

 **What is trichomoniasis?**

Trichomoniasis (or “trich”) is a very common sexually transmitted disease (STD) that is caused by infection with a **protozoan parasite** called *Trichomonas vaginalis*. Although symptoms of the disease vary, most women and men who have **the parasite** cannot tell they are infected.

How common is trichomoniasis?

Trichomoniasis is considered the most common curable STD. In the United States, an estimated 3.7 million people have the infection, but only about 30% develop any symptoms of trichomoniasis. Infection is more common in women than in men, and older women are more likely than younger women to have been infected.

**How do people get trichomoniasis?**

The parasite is passed from an infected person to an uninfected person during sex. In women, the most commonly infected part of the body is the lower genital tract (vulva, vagina, or urethra), and in men, the most commonly infected body part is the inside of the penis (urethra). During sex, the parasite is usually transmitted from a penis to a vagina, or from a vagina to a penis, but it can also be passed from a vagina to another vagina. It is not common for the parasite to infect other body parts, like the hands, mouth, or anus. It is unclear why some people with the infection get symptoms while others do not, but it probably depends on factors like the person’s age and overall health. Infected people without symptoms can still pass the infection on to others.

**What are the signs and symptoms of trichomoniasis?**

About 70% of infected people do not have any signs or symptoms. When trichomoniasis does cause symptoms, they can range from mild irritation to severe inflammation. Some people with symptoms get them within 5 to 28 days after being infected, but others do not develop symptoms until much later. Symptoms can come and go.

Men with trichomoniasis may feel itching or irritation inside the penis, burning after urination or ejaculation, or some discharge from the penis.

Women with trichomoniasis may notice itching, burning, redness or soreness of the genitals, discomfort with urination, or a thin discharge with an unusual smell that can be clear, white, yellowish, or greenish.

Having trichomoniasis can make it feel unpleasant to have sex. Without treatment, the infection can last for months or even years.

**What are the complications of trichomoniasis?**

Trichomoniasis can increase the risk of getting or spreading other sexually transmitted infections. For example, trichomoniasis can cause genital inflammation that makes it easier to get infected with the HIV virus, or to pass the HIV virus on to a sex partner.

**How does trichomoniasis affect a pregnant woman and her baby?**Pregnant women with trichomoniasis are more likely to have their babies too early (preterm delivery). Also, babies born to infected mothers are more likely to have an officially low birth weight (less than 5.5 pounds).

**What is chlamydia?**

[Chlamydia](http://www.cdc.gov/std/chlamydia/default.htm) is a common sexually transmitted disease (STD) caused by a bacterium. Chlamydia can infect both men and women and can cause serious, permanent damage to a woman's reproductive organs.

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**How common is chlamydia?**

Chlamydia is the most frequently reported bacterial sexually transmitted infection in the United States. In 2011, 1,412,791 cases of chlamydia were reported to CDC from 50 states and the District of Columbia, but an estimated 2.86 million infections occur annually. A large number of cases are not reported because most people with chlamydia do not have symptoms and do not seek testing. Chlamydia is most common among young people. It is estimated that 1 in 15 sexually active females aged 14-19 years has chlamydia.

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**How do people get chlamydia?**

People get chlamydia by having sex with someone who has the infection. “Having sex” means anal, vaginal, or oral sex. Chlamydia can still be transmitted even if a man does not ejaculate. People who have had chlamydia and have been treated can get infected again if they have sex with an infected person.

Chlamydia can also be spread [from an infected woman to her baby](http://www.cdc.gov/std/pregnancy/STDfact-Pregnancy.htm) during childbirth.

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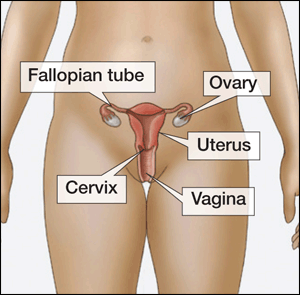
**Who is at risk for chlamydia?**

Any sexually active person can be infected with chlamydia. It is a very common STD, especially among young people. It is estimated that 1 in 15 sexually active females aged 14-19 years has chlamydia.

Sexually active young people are at high risk of acquiring chlamydia for a combination of behavioral and biological reasons. Men who have sex with men (MSM) are also at risk for chlamydial infection since chlamydia can be transmitted by oral or anal sex.

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**What are the symptoms of chlamydia?**



Chlamydia is known as a ‘silent’ infection because most infected people have no symptoms. If symptoms do occur, they may not appear until several weeks after exposure. Even when it causes no symptoms, chlamydia can damage a woman’s reproductive organs.

In women, the bacteria first infect the cervix (structure that connects the vagina or birth canal to the uterus or womb) and/or the urethra (urine canal). Some infected women have an abnormal vaginal discharge or a burning sensation when urinating. Untreated infections can spread upward to the uterus and fallopian tubes (tubes that carry fertilized eggs from the ovaries to the uterus), causing pelvic inflammatory disease (PID). PID can be silent, or can cause symptoms such as abdominal and pelvic pain. Even if PID causes no symptoms initially, it can lead to infertility (not being able to get pregnant) and other complications later on.

Some infected men have discharge from their penis or a burning sensation when urinating. Pain and swelling in one or both testicles (known as “epididymitis”) may also occur, but is less common.

Chlamydia can also infect the rectum in men and women, either through receptive anal sex, or possibly via spread from the cervix and vagina. While these infections often cause no symptoms, they can cause rectal pain, discharge, and/or bleeding (known as “proctitis”).

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**What complications can result from chlamydial infection?**

The initial damage that chlamydia causes often goes unnoticed. However, chlamydial infections can lead to serious health problems.

[STDs & Infertility](http://www.cdc.gov/std/infertility/)

In women, untreated infection can spread upward to the uterus and fallopian tubes (tubes that carry fertilized eggs from the ovaries to the uterus), causing [pelvic inflammatory disease](http://www.cdc.gov/std/PID/STDFact-PID.htm) (PID). PID can be silent, or can cause symptoms such as abdominal and pelvic pain. Both symptomatic and silent PID can cause permanent damage to a woman’s reproductive tract and lead to long-term pelvic pain, [inability to get pregnant](http://www.cdc.gov/std/infertility/), and [potentially deadly ectopic pregnancy](http://www.cdc.gov/std/pregnancy/STDFact-Pregnancy.htm) (pregnancy outside the uterus).

In pregnant women, untreated chlamydia has been associated with pre-term delivery, and can spread to the newborn, causing an eye infection or pneumonia.

Complications are rare in men. Infection sometimes spreads to the tube that carries sperm from the testis, causing pain, fever, and, rarely, preventing a man from being able to father children.

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**What about chlamydia and HIV?**

Untreated chlamydia may increase a person’s chances of acquiring or transmitting HIV – the virus that causes AIDS.

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**How does chlamydia affect a pregnant woman and her baby?**

[STDs & Pregnancy](http://www.cdc.gov/std/pregnancy/)

In [pregnant women](http://www.cdc.gov/std/pregnancy/STDFact-Pregnancy.htm), untreated chlamydia has been associated with pre-term delivery, and can spread to the newborn, causing an eye infection or pneumonia. Screening and treatment of chlamydia during pregnancy is the best way to prevent these complications. All pregnant women should be screened for chlamydia at their first prenatal visit.

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**Who should be tested for chlamydia?**

Any sexually active person can be infected with chlamydia. Anyone with genital symptoms such as discharge, burning during urination, unusual sores, or rash should avoid having sex until they are able to see a health care provider about their symptoms.

Also, anyone with an oral, anal, or vaginal sex partner who has been recently diagnosed with an STD should see a health care provider for evaluation.



**Find an STD testing site near you.**

Top of Form

ZIP Code:  


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CDC recommends yearly chlamydia testing for all sexually active women age 25 or younger and older women with risk factors for chlamydial infections (e.g., women who have a new or more than one sex partner), and all pregnant women. Any woman who is sexually active should discuss her risk factors with a health care provider who can then determine if more frequent testing is necessary.

Men who have sex with men (MSM) who have receptive anal sex should be tested for chlamydia each year. MSM who have multiple and/or anonymous sex partners should be tested more frequently.

HIV-infected sexually active women who are age 25 or younger or have other risk factors, and all HIV-infected patients who report having receptive anal sex should be tested for chlamydia at their first HIV care visit and then at least annually. A patient’s health care provider might determine more frequent testing is necessary, based on the patient’s risk factors.

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**How is chlamydia diagnosed?**

There are laboratory tests to diagnose chlamydia. Specimens commonly used for testing include a cotton swab of the vagina (collected by the woman herself or her health care provider) or a urine sample.

[Find an STD testing facility near you](http://www.cdc.gov/std/widgets/widget-1-m.html)

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**What is the treatment for chlamydia?**

Chlamydia can be easily treated and cured with antibiotics. HIV-positive persons with chlamydia should receive the same treatment as those who are HIV-negative.

Persons with chlamydia should abstain from having sex for seven days after single dose antibiotics, or until completion of a seven-day course of antibiotics, to prevent spreading the infection to partners.

Repeat infection with chlamydia is common. Persons whose sex partners have not been appropriately treated are at high risk for re-infection. Having multiple chlamydial infections increases a woman's risk of serious reproductive health complications, including pelvic inflammatory disease and ectopic pregnancy. Women and men with chlamydia should be retested about three months after treatment of an initial infection, regardless of whether they believe that their sex partners were successfully treated.

Infants infected with chlamydia may develop conjunctivitis (infection of the membrane lining the eyelids) and/or pneumonia. Chlamydial infection in infants can be treated with antibiotics.

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**What about partners?**

If a person has been diagnosed and treated for chlamydia, he or she should tell all anal, vaginal, or oral sex partners from the past 2 months so that they can see a healthcare provider and be treated. This will reduce the risk that the sex partners will develop serious complications from chlamydia and will also reduce the person’s risk of becoming re-infected. A person with chlamydia and all of his or her sex partners must avoid having sex until they have completed their treatment for chlamydia (i.e., seven days after a single dose of antibiotics or until completion of a seven-day course of antibiotics) and until they no longer have symptoms. For tips on talking to partners about sex and STD testing, visit [www.gytnow.org/talking-to-your-partner/](http://www.gytnow.org/talking-to-your-partner/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html)

To help get partners treated quickly, healthcare providers may give patients extra medicine or prescriptions to give to their sex partners. This is called [expedited partner therapy or EPT](http://www.cdc.gov/std/ept/default.htm). EPT is only available in some parts of the country. Consult a healthcare provider to find out if it is available in a specific area. Sex partners should still be encouraged to see a healthcare provider, regardless of whether they receive EPT.

**How can chlamydia be prevented?**

[Latex male condoms](http://www.cdc.gov/condomeffectiveness/brief.html#Condom), when used consistently and correctly, can reduce the risk of getting or giving chlamydia. The surest way to avoid chlamydia is to abstain from vaginal, anal, and oral sex or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

**Where can I get more information?**

Division of STD Prevention (DSTDP)  
Centers for Disease Control and Prevention  
[www.cdc.gov/std](http://www.cdc.gov/std/)

CDC-INFO Contact Center  
1-800-CDC-INFO begin\_of\_the\_skype\_highlighting 1-800-CDC-INFO end\_of\_the\_skype\_highlighting (1-800-232-4636 begin\_of\_the\_skype\_highlighting 1-800-232-4636 end\_of\_the\_skype\_highlighting)  
Email: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

[CDC National Prevention Information Network](http://www.cdcnpin.org/scripts/index.asp)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html) (NPIN)   
P.O. Box 6003  
Rockville, MD 20849-6003  
1-800-458-5231 1-800-458-5231   
1-888-282-7681 Fax  
1-800-243-7012 1-800-243-7012   
E-mail: [info@cdcnpin.org](mailto:info@cdcnpin.org)

[American Social Health Association](http://www.ashastd.org/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html) (ASHA)   
P.O. Box 13827  
Research Triangle Park, NC 27709-3827  
1-800-783-9877 1-800-783-9877

**What is gonorrhea?**

[Gonorrhea](http://www.cdc.gov/std/gonorrhea/default.htm) is a sexually transmitted disease (STD) caused by a bacterium. Gonorrhea can grow easily in the warm, moist areas of the reproductive tract, including the cervix (opening to the womb), uterus (womb), and fallopian tubes (egg canals) in women, and in the urethra (urine canal) in women and men. The bacterium can also grow in the mouth, throat, eyes, and anus.

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**How common is gonorrhea?**

Gonorrhea is a very common infectious disease. CDC estimates that, annually, 820,000 people in the United States get new gonorrhea infections and less than half of these infections are detected and reported to CDC. CDC estimates that 570,000 of them were among young people 15-24 years of age. In 2011, 321,849 cases of gonorrhea were [reported to CDC](http://www.cdc.gov/std/stats11/gonorrhea.htm).

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**How do people get gonorrhea?**

People get gonorrhea by having sex with someone who has the disease. “Having sex” means anal, vaginal, or oral sex. Gonorrhea can still be transmitted via fluids even if a man does not ejaculate. Gonorrhea can also be spread from an untreated mother to her baby during childbirth.

People who have had gonorrhea and have been treated may get infected again if they have sexual contact with a person infected with gonorrhea.

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**Who is at risk for gonorrhea?**

Any sexually active person can be infected with gonorrhea. It is a very common STD. In the United States, the highest reported rates of infection are among sexually active teenagers, young adults, and African Americans.

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**What are the symptoms of gonorrhea?**

Some men with gonorrhea may have no symptoms at all. However, common symptoms in men include a burning sensation when urinating, or a white, yellow, or green discharge from the penis that usually appears 1 to 14 days after infection. Sometimes men with gonorrhea get painful or swollen testicles.

Most women with gonorrhea do not have any symptoms. Even when a woman has symptoms, they are often mild and can be mistaken for a bladder or vaginal infection. The initial symptoms in women can include a painful or burning sensation when urinating, increased vaginal discharge, or vaginal bleeding between periods. Women with gonorrhea are at risk of developing serious complications from the infection, even if symptoms are not present or are mild.

Symptoms of rectal infection in both men and women may include discharge, anal itching, soreness, bleeding, or painful bowel movements. Rectal infections may also cause no symptoms. Infections in the throat may cause a sore throat, but usually cause no symptoms.

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**What are the complications of gonorrhea?**

[Pelvic Inflammatory Disease (PID)](http://www.cdc.gov/std/pid/)

Untreated gonorrhea can cause serious and permanent health problems in both women and men.

In women, gonorrhea can spread into the uterus (womb) or fallopian tubes (egg canals) and cause [pelvic inflammatory disease (PID)](http://www.cdc.gov/std/PID/STDFact-PID.htm). The symptoms may be mild or can be very severe and can include abdominal pain and fever. PID can lead to internal abscesses (pus-filled pockets that are hard to cure) and chronic (long-lasting) pelvic pain. PID can damage the fallopian tubes enough that a woman will be unable to have children. It also can increase her risk of ectopic pregnancy. Ectopic pregnancy is a life-threatening condition in which a fertilized egg grows outside the uterus, usually in a fallopian tube.

In men, gonorrhea can cause a painful condition called epididymitis in the tubes attached to the testicles. In rare cases, this may prevent a man from being able to father children.

If not treated, gonorrhea can also spread to the blood or joints. This condition can be life-threatening.

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**What about Gonorrhea and HIV?**

Untreated gonorrhea can increase a person’s risk of acquiring or transmitting HIV—the virus that causes AIDS.

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**How does gonorrhea affect a pregnant woman and her baby?**

If a [pregnant](http://www.cdc.gov/std/pregnancy/STDFact-Pregnancy.htm) woman has gonorrhea, she may give the infection to her baby as the baby passes through the birth canal during delivery. This can cause serious health problems for the baby. Treating gonorrhea as soon as it is detected in pregnant women will make these health outcomes less likely. Pregnant women should consult a health care provider for appropriate examination, testing, and treatment, as necessary.

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**Who should be tested for gonorrhea?**

Any sexually active person can be infected with gonorrhea. Anyone with genital symptoms such as discharge, burning during urination, unusual sores, or rash should stop having sex and see a health care provider immediately.

Also, anyone with an oral, anal, or vaginal sex partner who has been recently diagnosed with an STD should see a health care provider for evaluation.

Some people should be tested for gonorrhea even if they do not have symptoms or know of a sex partner who has gonorrhea. Anyone who is sexually active should discuss his or her risk factors with a health care provider and ask whether he or she should be tested for gonorrhea or other STDs.

People who have gonorrhea should also be tested for other STDs.

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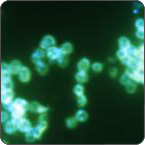
**How is gonorrhea diagnosed?**

Most of the time, a urine test can be used to test for gonorrhea. However, if a person has had oral and/or anal sex, swabs may be used to collect samples from the throat and/or rectum. In some cases, a swab may be used to collect a sample from a man’s urethra (urine canal) or a woman’s cervix (opening to the womb).

[Find an STD testing facility near you](http://www.cdc.gov/std/widgets/widget-1-m.html)

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**What is the treatment for gonorrhea?**

[Antibiotic-Resistant Gonorrhea](http://www.cdc.gov/std/gonorrhea/arg/default.htm)

[Gonorrhea can be cured with the right treatment](http://www.cdc.gov/std/gonorrhea/treatment.htm). It is important to take all of the medication prescribed to cure gonorrhea. Medication for gonorrhea should not be shared with anyone. Although medication will stop the infection, it will not repair any permanent damage done by the disease. [Drug-resistant strains of gonorrhea](http://www.cdc.gov/std/gonorrhea/arg/default.htm) are increasing, and successful treatment of gonorrhea is becoming more difficult. If a person’s symptoms continue for more than a few days after receiving treatment, he or she should return to a health care provider to be reevaluated.

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**What about partners?**

If a person has been diagnosed and treated for gonorrhea, he or she should tell all recent anal, vaginal, or oral sex partners so they can see a health care provider and be treated. This will reduce the risk that the sex partners will develop serious complications from gonorrhea and will also reduce the person’s risk of becoming re-infected. A person with gonorrhea and all of his or her sex partners must avoid having sex until they have completed their treatment for gonorrhea and until they no longer have symptoms. For tips on talking to partners about sex and STD testing, visit [www.gytnow.org/talking-to-your-partner/](http://www.gytnow.org/talking-to-your-partner/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html)

[Back to Top](http://www.cdc.gov/std/gonorrhea/STDFact-gonorrhea.htm)

**How can gonorrhea be prevented?**

Latex condoms, when used consistently and correctly, can reduce the risk of getting or giving gonorrhea. The most certain way to avoid gonorrhea is to not have sex or to be in a long-term, mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

[Find an STD testing facility near you](http://www.cdc.gov/std/widgets/widget-1-m.html)

[All STD Fact Sheets](http://www.cdc.gov/std/healthcomm/fact_sheets.htm)

[Back to Top](http://www.cdc.gov/std/gonorrhea/STDFact-gonorrhea.htm)

**Where can I get more information?**

Division of STD Prevention (DSTDP)  
Centers for Disease Control and Prevention  
[www.cdc.gov/std](http://www.cdc.gov/std/)

CDC-INFO Contact Center  
1-800-CDC-INFO begin\_of\_the\_skype\_highlighting 1-800-CDC-INFO end\_of\_the\_skype\_highlighting (1-800-232-4636 begin\_of\_the\_skype\_highlighting 1-800-232-4636 end\_of\_the\_skype\_highlighting)  
Email: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

**What is genital herpes?**

[Genital herpes](http://www.cdc.gov/std/herpes/default.htm) is a sexually transmitted disease (STD) caused by the herpes simplex viruses type 1 (HSV-1) or type 2 (HSV-2).

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**How common is genital herpes?**

CDC estimates that, annually, 776,000 people in the United States get new herpes infections. Genital herpes infection is common in the United States. Nationwide, 16.2%, or about one out of six, people aged 14 to 49 years have genital HSV-2 infection. Over the past decade, the percentage of persons with genital herpes infection in the United States has remained stable.

Transmission from an infected male to his female partner is more likely than from an infected female to her male partner. Because of this, genital HSV-2 infection is more common in women (approximately one out of five women aged 14 to 49 years) than in men (about one out of nine men aged 14 to 49 years).

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**What are the symptoms of genital herpes?**

Most individuals infected with HSV-1 or HSV-2 experience either no symptoms or have very mild symptoms that go unnoticed or are mistaken for another skin condition. Because of this, most people infected with HSV-2 are not aware of their infection. When symptoms do occur, they typically appear as one or more blisters on or around the genitals, rectum or mouth. The blisters break and leave painful sores that may take two to four weeks to heal. Experiencing these symptoms is sometimes referred to as having an “outbreak.” The first time someone has an outbreak they may also experience flu-like symptoms such as fever, body aches and swollen glands.

Repeat outbreaks of genital herpes are common, in particular during the first year of infection. Symptoms of repeat outbreaks are typically shorter in duration and less severe than the first outbreak of genital herpes. Although the infection can stay in the body indefinitely, the number of outbreaks tends to decrease over a period of years.

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**How do people get genital herpes?**

People get herpes by having sex with someone who has the disease. “Having sex” means anal, vaginal, or oral sex. HSV-1 and HSV-2 can be found in and released from the sores that the viruses cause. The viruses can also be released from skin that does not appear to have a sore. Generally, a person can only get HSV-2 infection during sexual contact with someone who has a genital HSV-2 infection. Transmission can occur from an infected partner who does not have a visible sore and may not know that he or she is infected.

HSV-1 can cause sores in the genital area and infections of the mouth and lips, so-called “fever blisters.” HSV-1 infection of the genitals is caused by mouth to genital or genital to genital contact with a person who has HSV-1 infection.

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**What are the complications of genital herpes?**

Genital herpes can cause painful genital sores in many adults and can be severe in people with suppressed immune systems. If a person with genital herpes touches their sores or the fluids from the sores, they may transfer herpes to another part of the body. This is particularly problematic if it is a sensitive location such as the eyes. This can be avoided by not touching the sores or fluids. If they are touched, immediate and thorough hand-washing make the transfer less likely.

Some people who contract genital herpes have concerns about how it will impact their overall health, sex life, and relationships. It is best to talk to a health care provider about those concerns, but it also is important to recognize that while herpes is not curable, it is a manageable condition. Since a genital herpes diagnosis may affect perceptions about existing or future sexual relationships, it is important to understand how to talk to sexual partners about STDs. One resource can be found here: [GYT Campaign.](http://www.cdcnpin.org/stdawareness/GYT.aspx)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html)

There are also potential complications for a pregnant woman and her unborn child. See “[How does herpes infection affect a pregnant woman and her baby?](http://www.cdc.gov/std/Herpes/STDFact-Herpes.htm#preg)” below for information about this.

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[HIV/AIDS & STDs](http://www.cdc.gov/std/hiv/)

**What is the link between genital herpes and HIV?**

Genital herpes can cause sores or breaks in the skin or mucous membranes (lining of the mouth, vagina, and rectum). The genital sores caused by herpes can bleed easily. When the sores come into contact with the mouth, vagina, or rectum during sex, they increase the risk of HIV transmission if either partner is HIV-infected.

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**How does genital herpes affect a pregnant woman and her baby?**

It is crucial that pregnant women infected with HSV-1 or HSV-2 go to prenatal care visits and tell their doctor if they have ever experienced any symptoms of, been exposed to, or been diagnosed with genital herpes. Sometimes genital herpes infection can lead to miscarriage or premature birth. Herpes infection can be passed from mother to child resulting in a potentially fatal infection (neonatal herpes). It is important that women avoid contracting herpes during pregnancy.

A woman with genital herpes may be offered antiviral medication from 36 weeks gestation through delivery to reduce the risk of an outbreak. At the time of delivery a woman with genital herpes should undergo careful examination. If herpes symptoms are present at delivery, a cesarean delivery (also called a ‘C-section’) is usually performed.

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**How is genital herpes diagnosed?**

Health care providers can diagnose genital herpes by visual inspection if the outbreak is typical. Providers can also take a sample from the sore(s) and test it. Sometimes, HSV infections can be diagnosed between outbreaks with a blood test. A person should discuss such testing options with their health care provider.

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**Is there a cure or treatment for herpes?**

There is no treatment that can cure herpes. Antiviral medications can, however, prevent or shorten outbreaks during the period of time the person takes the medication. In addition, daily suppressive therapy (i.e., daily use of antiviral medication) for herpes can reduce the likelihood of transmission to partners.

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**How can herpes be prevented?**

Correct and consistent use of latex condoms can reduce the risk of genital herpes, because herpes symptoms can occur in both male and female genital areas that are covered or protected by a latex condom. However, outbreaks can occur in areas that are not covered by a condom.

The surest way to avoid transmission of sexually transmitted diseases, including genital herpes, is to abstain from sexual contact, or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

Persons with herpes should abstain from sexual activity with partners when sores or other symptoms of herpes are present. It is important to know that even if a person does not have any symptoms, he or she can still infect sex partners. Sex partners of infected persons should be advised that they may become infected and they should use condoms to reduce the risk. Sex partners can seek testing to determine if they are infected with HSV.

[All STD Fact Sheets](http://www.cdc.gov/std/healthcomm/fact_sheets.htm)

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**Where can I get more information?**

[Division of STD Prevention (DSTDP)](http://www.cdc.gov/std/)  
Centers for Disease Control and Prevention

**Personal health inquiries and information about STDs:**

CDC-INFO Contact Center   
1-800-CDC-INFO begin\_of\_the\_skype\_highlighting 1-800-CDC-INFO end\_of\_the\_skype\_highlighting (1-800-232-4636 begin\_of\_the\_skype\_highlighting 1-800-232-4636 end\_of\_the\_skype\_highlighting)  
Email: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

**Resources:**

[CDC National Prevention Information Network](http://www.cdcnpin.org/scripts/index.asp)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html) (NPIN)  
P.O. Box 6003  
Rockville, MD 20849-6003  
1-800-458-5231 begin\_of\_the\_skype\_highlighting 1-800-458-5231 end\_of\_the\_skype\_highlighting  
1-888-282-7681 Fax  
1-800-243-7012 begin\_of\_the\_skype\_highlighting 1-800-243-7012 end\_of\_the\_skype\_highlighting TTY  
E-mail: [info@cdcnpin.org](mailto:info@cdcnpin.org)

[American Social Health Association](http://www.ashastd.org/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html) (ASHA)  
P. O. Box 13827  
Research Triangle Park, NC 27709-3827  
1-800-783-9877 begin\_of\_the\_skype\_highlighting 1-800-783-9877 end\_of\_the\_skype\_highlighting

**The Role of STD Detection and Treatment in HIV Prevention - CDC Fact Sheet**



Testing and treatment of sexually transmitted diseases (STDs) can be an effective tool in preventing the spread of [HIV](http://www.cdc.gov/std/hiv/default.htm), the virus that causes AIDS. An understanding of the relationship between STDs and HIV infection can help in the development of effective HIV prevention programs for persons with high-risk sexual behaviors.

**What is the link between STDs and HIV infection?**

Individuals who are infected with STDs are at least two to five times more likely than uninfected individuals to acquire HIV infection if they are exposed to the virus through sexual contact. In addition, if an HIV-infected individual is also infected with another STD, that person is more likely to transmit HIV through sexual contact than other HIV-infected persons (Wasserheit, 1992).

There is substantial biological evidence demonstrating that the presence of other STDs increases the likelihood of both transmitting and acquiring HIV.

* **Increased susceptibility.** STDs appear to increase susceptibility to HIV infection by two mechanisms. Genital ulcers (e.g., [syphilis](http://www.cdc.gov/std/Syphilis/default.htm), [herpes](http://www.cdc.gov/std/Herpes/default.htm), or chancroid) result in breaks in the genital tract lining or skin. These breaks create a portal of entry for HIV. Additionally, inflammation resulting from genital ulcers or non-ulcerative STDs (e.g., [chlamydia](http://www.cdc.gov/std/Chlamydia/default.htm), [gonorrhea](http://www.cdc.gov/std/Gonorrhea/default.htm), and [trichomoniasis](http://www.cdc.gov/std/Trichomonas/default.htm)) increase the concentration of cells in genital secretions that can serve as targets for HIV (e.g., CD4+ cells).
* **Increased infectiousness.** STDs also appear to increase the risk of an HIV-infected person transmitting the virus to his or her sex partners. Studies have shown that HIV-infected individuals who are also infected with other STDs are particularly likely to shed HIV in their genital secretions. For example, men who are infected with both gonorrhea and HIV are more than twice as likely to have HIV in their genital secretions than are those who are infected only with HIV. Moreover, the median concentration of HIV in semen is as much as 10 times higher in men who are infected with both [gonorrhea](http://www.cdc.gov/std/Gonorrhea/default.htm) and HIV than in men infected only with HIV. The higher the concentration of HIV in semen or genital fluids, the more likely it is that HIV will be transmitted to a sex partner.

**How can STD treatment slow the spread of HIV infection?**

Evidence from intervention studies indicates that detecting and treating STDs may reduce HIV transmission.

* **STD treatment reduces an individual's ability to transmit HIV**. Studies have shown that treating STDs in HIV-infected individuals decreases both the amount of HIV in genital secretions and how frequently HIV is found in those secretions (Fleming, Wasserheit, 1999).
* Herpes can make people more susceptible to HIV infection, and it can make HIV-infected individuals more infectious. It is critical that all individuals, **especially those with herpes**, know whether they are infected with HIV and, if uninfected with HIV, take measures to protect themselves from infection with HIV.
* Among individuals with both herpes and HIV, trials are underway studying if treatment of the genital herpes helps prevent HIV transmission to partners.

**What are the implications for HIV prevention?**

Strong STD prevention, testing, and treatment can play a vital role in comprehensive programs to prevent sexual transmission of HIV. Furthermore, STD trends can offer important insights into where the HIV epidemic may grow, making STD surveillance data helpful in forecasting where HIV rates are likely to increase. Better linkages are needed between HIV and STD prevention efforts nationwide in order to control both epidemics.

In the context of persistently high prevalence of STDs in many parts of the United States and with emerging evidence that the U.S. HIV epidemic increasingly is affecting populations with the highest rates of curable STDs, the CDC/HRSA Advisory Committee on HIV/AIDS and STD Prevention (CHAC) recommended the following:

* Early detection and treatment of curable STDs should become a major, explicit component of comprehensive HIV prevention programs at national, state, and local levels;
* In areas where STDs that facilitate HIV transmission are prevalent, screening and treatment programs should be expanded;
* HIV testing should always be recommended for individuals who are diagnosed with or suspected to have an STD.
* HIV and STD prevention programs in the United States, together with private and public sector partners, should take joint responsibility for implementing these strategies.

CHAC also notes that early detection and treatment of STDs should be only one component of a comprehensive HIV prevention program, which also must include a range of social, behavioral, and biomedical interventions.

[All STD Fact Sheets](http://www.cdc.gov/std/healthcomm/fact_sheets.htm)

**Where can I get more information?**

[Sexually Transmitted Diseases](http://www.cdc.gov/std/) - Home Page  
[HIV/AIDS and STDs](http://www.cdc.gov/std/hiv/default.htm) - Topic Page

[Order Publications Online](http://www.cdc.gov/std/pubs/)

CDC-INFO Contact Center  
1-800-CDC-INFO begin\_of\_the\_skype\_highlighting 1-800-CDC-INFO end\_of\_the\_skype\_highlighting (1-800-232-4636 begin\_of\_the\_skype\_highlighting 1-800-232-4636 end\_of\_the\_skype\_highlighting)  
Email: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

CDC National Prevention Information Network (NPIN)  
P.O. Box 6003  
Rockville, MD 20849-6003  
1-800-458-5231 begin\_of\_the\_skype\_highlighting 1-800-458-5231 end\_of\_the\_skype\_highlighting  
1-888-282-7681 Fax  
1-800-243-7012 begin\_of\_the\_skype\_highlighting 1-800-243-7012 end\_of\_the\_skype\_highlighting TTY  
E-mail: [info@cdcnpin.org](mailto:info@cdcnpin.org)

[American Social Health Association](http://www.ashastd.org/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html) (ASHA)  
P. O. Box 13827  
Research Triangle Park, NC 27709-3827  
1-800-783-9877 begin\_of\_the\_skype\_highlighting 1-800-783-9877 end\_of\_the\_skype\_highlighting

**References**

Centers for Disease Control and Prevention. 1998. [HIV prevention through early detection and treatment of other sexually transmitted diseases - United States. MMWR 47(RR-12):1-24.](http://www.cdc.gov/mmwr/preview/mmwrhtml/00054174.htm)

Fleming DT, Wasserheit JN. 1999. From epidemiological synergy to public health policy and practice: The contribution of other sexually transmitted diseases to sexual transmission of HIV infection. Sexually Transmitted Infections 75:3-17.

Wasserheit JN. 1992. Epidemiologic synergy: Interrelationships between human immunodeficiency virus infection and other sexually transmitted diseases. Sexually Transmitted Diseases 9:61-77.

**What is syphilis?**

[Syphilis](http://www.cdc.gov/std/Syphilis/default.htm) is a sexually transmitted disease (STD) caused by a bacterium. Syphilis can cause long-term complications and/or death if not adequately treated.

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**How common is syphilis?**

CDC estimates that, annually, 55,400 people in the United States get new syphilis infections. There were 46,042 reported new cases of syphilis in 2011, compared to 48,298 estimated new diagnoses of HIV infection and 321,849 cases of gonorrhea in 2011. Of new cases of syphilis, 13,970 cases were of primary and secondary (P&S) syphilis, the earliest and most infectious stages of syphilis. In 2011, 72% of P&S syphilis occurred among men who have sex with men. There were also 360 reports of children with congenital syphilis in 2011.

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**How do people get syphilis?**

Syphilis is transmitted from person to person by direct contact with syphilis sores. Sores occur mainly on the external genitals, vagina, anus, or in the rectum. Sores also can occur on the lips and in the mouth. Syphilis can be transmitted during vaginal, anal, or oral sexual contact. [Pregnant women](http://www.cdc.gov/std/pregnancy/STDfact-Pregnancy.htm) with the disease can pass it to their unborn children.

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[](http://www.cdc.gov/std/syphilis/images/chancre-penile.htm)  
Example of a primary syphilis sore.

**How quickly do symptoms appear after infection?**

The average time between infection with syphilis and appearance of the first symptom is 21 days, but it can range from 10 to 90 days.

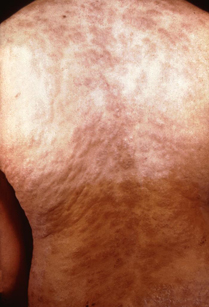
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**What are the symptoms in adults?**

**Primary Stage**

The appearance of a single sore marks the first (primary) stage of syphilis symptoms, but there may be multiple sores. The sore appears at the location where syphilis entered the body. The sore is usually firm, round, and painless. Because the sore is painless, it can easily go unnoticed. The sore lasts 3 to 6 weeks and heals regardless of whether or not a person is treated. However, if the infected person does not receive adequate treatment the infection progresses to the secondary stage.

**Secondary Stage**

[](http://www.cdc.gov/std/syphilis/images/rash-palmar.htm)  
Examples of a secondary palmar rash (above) and a generalized body rash (below).  
[](http://www.cdc.gov/std/syphilis/images/rash-gbr.htm)

Skin rashes and/or sores in the mouth, vagina, or anus (also called mucous membrane lesions ) mark the secondary stage of symptoms. This stage usually starts with a rash on one or more areas of the body. Rashes associated with secondary syphilis can appear from the time when the primary sore is healing to several weeks after the sore has healed. The rash usually does not cause itching. This rash may appear as rough, red, or reddish brown spots both on the palms of the hands and/or the bottoms of the feet. However, this rash may look different on other parts of the body and can look like rashes caused by other diseases.

Large, raised, gray or white lesions may develop in warm, moist areas such as the mouth, underarm or groin region. Sometimes rashes associated with secondary syphilis are so faint that they are not noticed. Other symptoms of secondary syphilis include fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue. The symptoms of secondary syphilis will go away with or without treatment. Without appropriate treatment, the infection will progress to the latent and possibly late stages of disease.

**Late and Latent Stages**

The latent (hidden) stage of syphilis begins when primary and secondary symptoms disappear. Without treatment, the infected person can continue to have syphilis in their body even though there are no signs or symptoms. This latent stage can last for years.

About 15% of people who have not been treated for syphilis develop late stage syphilis, which can appear 10–30 years after infection began. Symptoms of the late stage of syphilis include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness, and dementia. In the late stages of syphilis, the disease damages the internal organs, including the brain, nerves, eyes, heart, blood vessels, liver, bones, and joints. This damage can result in death.

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**How does syphilis affect a pregnant woman and her baby?**

A pregnant woman with syphilis can pass the disease to her unborn baby. Babies born with syphilis can have many health problems. This may lead to low birth weight, premature delivery or even having a stillbirth (a baby born dead). To protect their babies, **pregnant women should be tested for syphilis regularly during the pregnancy and at delivery and receive immediate treatment, if positive.**

An infected baby may be born without signs or symptoms of disease. However, if not treated immediately, the baby may develop serious problems within a few weeks. Untreated babies can have many health problems (such as cataracts, deafness, or seizures), and they can die.

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**How is syphilis diagnosed?**

[](http://www.cdc.gov/std/syphilis/images/treponema-pallidum.htm)  
Darkfield micrograph of *Treponema pallidum*. Click to view full size.

A blood test is the most common way to determine if someone has syphilis. Shortly after infection, the body produces syphilis antibodies that can be detected by an accurate, safe, and inexpensive blood test.

Some health care providers can diagnose syphilis by examining material from a syphilis sore using a special microscope called a dark-field microscope. If syphilis bacteria are present in the sore, they will show up when observed through the microscope.

*Special note:* **Because untreated syphilis in a pregnant woman can infect and kill her developing baby, every pregnant woman should receive prenatal care and be tested for syphilis during pregnancy and at delivery.**

[Find an STD testing facility near you](http://www.cdc.gov/std/widgets/widget-1-m.html)

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**What is the link between syphilis and HIV?**

Oral, anal, vaginal, or penile syphilis sores make it easier to transmit and acquire [HIV](http://www.cdc.gov/std/HIV/default.htm) infection. A person is 2 to 5 times more likely to get HIV if exposed when syphilis sores are present.

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**How is syphilis treated?**

No home remedies or over-the-counter drugs will cure syphilis, but syphilis is simple to cure with appropriate antibiotics from a physician. Treatment will kill the syphilis bacterium and prevent further damage, but it will not repair damage already done.  
  
Persons treated for syphilis 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 treated if necessary.

**Who should be tested for syphilis?**

Providers should routinely test persons who:

* are pregnant
* are men who have sex with men
* have HIV infection
* have partner(s) who have tested positive for syphilis

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**Will syphilis recur or "come back?"**

Follow-up testing is recommended to be sure that treatment is successful. Having syphilis once does not protect a person from getting it again. Even following successful treatment, people can still be ***re***-infected. Only laboratory tests can confirm whether someone has syphilis.

Because syphilis sores can be hidden in the vagina, anus, under the foreskin, or mouth, it may not be obvious that a sex partner has syphilis. Unless a person knows that their sex partners have been tested and treated, they may be at risk of getting syphilis again from an untreated sex partner.

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**How can syphilis be prevented?**

Correct and consistent use of latex condoms can reduce the risk of syphilis when the sore or site of potential exposure is covered, but it is best to abstain from sex while any sore is present in the genital, anal, or oral area. Contact with a sore outside of the area covered by a latex condom can still cause infection.

The surest way to avoid transmission of sexually transmitted diseases, including syphilis, is to abstain from sexual contact or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

Transmission of an STD, including syphilis, cannot be prevented by washing the genitals, urinating, and/or douching after sex. Any unusual discharge, sore, or rash, particularly in the groin area, should be a signal to abstain from having sex and to see a doctor immediately.

Avoiding alcohol and drug use may also help prevent transmission of syphilis because these activities may lead to risky sexual behavior. It is important that sex partners talk to each other about their HIV status and history of other STDs so that preventive action can be taken.

[Find an STD testing facility near you](http://www.cdc.gov/std/widgets/widget-1-m.html)

[All STD Fact Sheets](http://www.cdc.gov/std/healthcomm/fact_sheets.htm)

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**Where can I get more information?**

[Sexually Transmitted Diseases](http://www.cdc.gov/std/) - Home Page  
[Syphilis](http://www.cdc.gov/std/syphilis/default.htm) - Topic Page  
[Syphilis and MSM](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm) - Fact Sheet  
[STDs and Pregnancy](http://www.cdc.gov/std/pregnancy/STDFact-Pregnancy.htm) - Fact Sheet  
[Order Publications Online](http://www.cdc.gov/std/pubs/)

STD information and referrals to STD Clinics  
CDC-INFO   
1-800-CDC-INFO begin\_of\_the\_skype\_highlighting 1-800-CDC-INFO end\_of\_the\_skype\_highlighting (800-232-4636 begin\_of\_the\_skype\_highlighting 800-232-4636 end\_of\_the\_skype\_highlighting)  
TTY: 1-888-232-6348 begin\_of\_the\_skype\_highlighting 1-888-232-6348 end\_of\_the\_skype\_highlighting  
In English, en Español

**Syphilis & MSM (Men Who Have Sex With Men) - CDC Fact Sheet**

[**Español**](http://www.cdc.gov/std/Spanish/STDFact-MSM-Syphilis-s.htm)

* [What is syphilis?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#Whatis)
* [How common is syphilis?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#common)
* [How do people get syphilis?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#Howspread)
* [What are the signs and symptoms in adults?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#signs)
* [Why should MSM be concerned about syphilis?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#concern)
* [How is syphilis diagnosed?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#diagnosed)
* [What is the link between syphilis and HIV?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#hivlink)
* [What is the treatment for syphilis?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#treatment)
* [Will syphilis recur?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#recur)
* [How can syphilis be prevented?](http://www.cdc.gov/std/syphilis/STDFact-MSM-Syphilis.htm#prevent)



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**What is syphilis?**

[Syphilis](http://www.cdc.gov/std/syphilis/default.htm) is a 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.

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**How common is syphilis?**

In the United States, health officials reported over 36,000 cases of syphilis in 2006, including 9,756 cases of primary and secondary (P&S) syphilis. In 2006, half of all P&S syphilis cases were reported from 20 counties and 2 cities; and most P&S syphilis cases occurred in persons 20 to 39 years of age. The incidence of P&S syphilis was highest in women 20 to 24 years of age and in men 35 to 39 years of age. Reported cases of congenital syphilis in newborns increased from 2005 to 2006, with 339 new cases reported in 2005 compared to 349 cases in 2006.

Between 2005 and 2006, the number of reported P&S syphilis cases increased 11.8 percent. P&S rates have increased in males each year between 2000 and 2006 and among females between 2004 and 2006. In 2006, 64% of the reported P&S syphilis cases were among men who have sex with men (MSM).

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**How do people get syphilis?**

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](http://www.cdc.gov/std/pregnancy/STDfact-Pregnancy.htm) with the disease can pass it to the babies they are carrying. Syphilis cannot be spread through contact with toilet seats, doorknobs, swimming pools, hot tubs, bathtubs, shared clothing, or eating utensils.

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**What are the signs and symptoms in adults?**

Many people infected with syphilis do not have any symptoms for years, yet remain at risk for late complications if they are not treated. Although transmission occurs from persons with sores who are in the primary or secondary stage, many of these sores are unrecognized. Thus, transmission may occur from persons who are unaware of their infection.

**Primary Stage**  
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 time between infection with syphilis and the start of the first symptom can range from 10 to 90 days (average 21 days). The chancre is usually firm, round, small, and painless. It appears at the spot where syphilis entered the body. The chancre lasts 3 to 6 weeks, and it heals without treatment. However, if adequate treatment is not administered, the infection progresses to the secondary stage.

**Secondary Stage**  
Skin rash and mucous membrane lesions characterize the secondary stage. This stage typically starts with the development of a rash on one or more areas of the body. The rash usually does not cause itching. Rashes associated with secondary syphilis can appear as the chancre is healing or several weeks after the chancre has healed. The characteristic rash of secondary syphilis may appear as rough, red, or reddish brown spots both on the palms of the hands and the bottoms of the feet. However, rashes with a different appearance may occur on other parts of the body, sometimes resembling rashes caused by other diseases. Sometimes rashes associated with secondary syphilis are so faint that they are not noticed. In addition to rashes, symptoms of secondary syphilis may include fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue. The signs and symptoms of secondary syphilis will resolve with or without treatment, but without treatment, the infection will progress to the latent and possibly late stages of disease.

**Latent and Late Stages**  
The latent (hidden) stage of syphilis begins when primary and secondary symptoms disappear. Without treatment, the infected person will continue to have syphilis even though there are no signs or symptoms; infection remains in the body. This latent stage can last for years. The late stages of syphilis can develop in about 15% of people who have not been treated for syphilis, and can appear 10-20 years after infection was first acquired. In the late stages of syphilis, the disease may damage the internal organs, including the brain, nerves, eyes, heart, blood vessels, liver, bones, and joints. Signs and symptoms of the late stage of syphilis include difficulty coordinating muscle movements, paralysis, numbness, gradual blindness, and dementia. This damage may be serious enough to cause death.

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**Why should MSM be concerned about syphilis?**

Over the past several years, increases in syphilis among MSM have been reported in various cities and areas, including Chicago, Seattle, San Francisco, Southern California, Miami, and New York City. In the recent outbreaks, high rates of [HIV](http://www.cdc.gov/std/HIV/default.htm) co-infection were documented, ranging from 20 percent to 70 percent. While the health problems caused by syphilis in adults 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](http://www.cdc.gov/std/HIV/default.htm).

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**How is syphilis diagnosed?**

Some health care providers can diagnose syphilis by examining material from a chancre (infectious sore) using a special microscope called a dark-field microscope. If syphilis bacteria are present in the sore, they will show up when observed through the microscope.

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 likely stay in the blood for months or years even after the disease has been successfully treated.

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[HIV/AIDS & STDs](http://www.cdc.gov/std/hiv/)

**What is the link between syphilis and HIV?**

Genital sores (chancres) caused by syphilis make it easier to transmit and acquire [HIV](http://www.cdc.gov/std/HIV/default.htm) infection sexually. There is an estimated 2- to 5-fold increased risk of acquiring HIV if exposed to that infection when syphilis is present.

Ulcerative STDs that cause sores, ulcers, or breaks in the skin or mucous membranes, such as syphilis, disrupt barriers that provide protection against infections. The genital ulcers caused by syphilis can bleed easily, and when they come into contact with oral and rectal mucosa during sex, increase the infectiousness of and susceptibility to HIV. Having other STDs is also an important predictor for becoming HIV infected because STDs are a marker for behaviors associated with HIV transmission.

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**What is the treatment for syphilis?**

Syphilis is easy to cure in its early stages. A single intramuscular injection of penicillin, an antibiotic, will cure a person who has had syphilis for less than a year. Additional doses are needed to treat someone who has had syphilis 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. Treatment will kill the syphilis bacterium and prevent further damage, but it will not repair damage already done.

Because effective treatment is available, it is important that persons be screened for syphilis on an on-going basis if their sexual behaviors put them at risk for STDs.

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 receive treatment if necessary.

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**Will syphilis recur?**

Having syphilis once does not protect a person from getting it again. Following successful treatment, people can still be susceptible to re-infection. Only laboratory 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. Talking with a health care provider will help to determine the need to be re-tested for syphilis after being treated.

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**How can syphilis be prevented?**

The surest way to avoid transmission of sexually transmitted diseases, including syphilis, is to abstain from sexual contact or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

Avoiding alcohol and drug use may also help prevent transmission of syphilis because these activities may lead to risky sexual behavior. It is important that sex partners talk to each other about their HIV status and history of other STDs so that preventive action can be taken.

Genital ulcer diseases, like syphilis, can occur in both male and female genital areas that are covered or protected by a latex condom, as well as in areas that are not covered. Correct and consistent use of latex condoms can reduce the risk of syphilis, as well as [genital herpes](http://www.cdc.gov/std/Herpes/default.htm) and chancroid, only when the infected area or site of potential exposure is protected.

Condoms lubricated with spermicides (especially Nonoxynol-9 or N-9) are no more effective than other lubricated condoms in protecting against the transmission of STDs. Use of condoms lubricated with N-9 is not recommended for STD/HIV prevention. Transmission of an STD, including syphilis cannot be prevented by washing the genitals, urinating, and or douching after sex. Any unusual discharge, sore, or rash, particularly in the groin area, should be a signal to refrain from having sex and to see a doctor immediately.

The CDC’s [2006 Sexually Transmitted Disease Treatment Guidelines](http://www.cdc.gov/std/treatment/2006/default.htm) recommend that MSM who are at risk for STDs be tested for syphilis annually.

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[All STD Fact Sheets](http://www.cdc.gov/std/healthcomm/fact_sheets.htm)

**Where can I get more information?**

[Sexually Transmitted Diseases](http://www.cdc.gov/std/) - Home Page  
[Syphilis](http://www.cdc.gov/std/syphilis/default.htm) - Topic Page   
[Syphilis](http://www.cdc.gov/std/syphilis/STDFact-Syphilis.htm) - Fact Sheet  
[STDs and Pregnancy](http://www.cdc.gov/std/pregnancy/STDfact-Pregnancy.htm) - Fact Sheet  
[Order Publications Online](http://www.cdc.gov/std/pubs/)

STD information and referrals to STD Clinics  
CDC-INFO   
1-800-CDC-INFO begin\_of\_the\_skype\_highlighting 1-800-CDC-INFO end\_of\_the\_skype\_highlighting (800-232-4636 begin\_of\_the\_skype\_highlighting 800-232-4636 end\_of\_the\_skype\_highlighting)  
TTY: 1-888-232-6348 begin\_of\_the\_skype\_highlighting 1-888-232-6348 end\_of\_the\_skype\_highlighting  
In English, en Español

**Resources:**

[CDC National Prevention Information Network](http://www.cdcnpin.org/scripts/index.asp)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html) (NPIN)  
P.O. Box 6003  
Rockville, MD 20849-6003  
1-800-458-5231 begin\_of\_the\_skype\_highlighting 1-800-458-5231 end\_of\_the\_skype\_highlighting  
1-888-282-7681 Fax  
1-800-243-7012 begin\_of\_the\_skype\_highlighting 1-800-243-7012 end\_of\_the\_skype\_highlighting TTY  
E-mail: [info@cdcnpin.org](mailto:info@cdcnpin.org)

[American Social Health Association](http://www.ashastd.org/)[External Web Site Icon](http://www.cdc.gov/Other/disclaimer.html) (ASHA)  
P. O. Box 13827  
Research Triangle Park, NC 27709-3827  
1-800-783-9877 begin\_of\_the\_skype\_highlighting 1-800-783-9877 end\_of\_the\_skype\_highlighting

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