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What you need to know about Chlamydia and Gonorrhea if you are living with HIV

Sexually Transmitted Diseases and HIV transmission

Sexually transmitted diseases (STDs) make it easier to transmit HIV¹. If you already have an STD and are exposed to HIV, you are 2 to 5 times more likely to become infected than someone without an STD. HIV is also more likely to be transmitted through sex by people who are already infected with other STDs².

This is due to two reasons:

- **Increased susceptibility.** STDs can cause sores or swelling, or otherwise damage the skin of the genital area. This makes it easier for HIV to pass from one person to another. STDs can also increase the concentration of cells that serve as targets for HIV (e.g. CD4+ cells).
- **Increased infectiousness.** HIV-infected people who are also infected with other STDs are more likely to have HIV in their genital secretions (semen or “cum” and pre-cum in men; vaginal fluids in women). For example, men with HIV are more than twice as likely to shed HIV in their genital secretions if they also have gonorrhea, and the actual *concentration* of HIV in semen can be as much as 10 times higher.

Detecting and treating STDs can substantially reduce HIV transmission as well as prevent the damage caused by STDs.

- STD treatment reduces an individual's ability to transmit HIV. Treating STDs in HIV-infected individuals decreases both the amount of HIV they shed and how often they shed the virus³.
- STD treatment reduces the spread of HIV infection in communities⁴.
- Daily treatment for genital herpes, an STD, can reduce transmission to uninfected partners by 50%⁵ (see Article 6 of this series “*What you need to know about syphilis and herpes if you are living with HIV*”).

Chlamydia

Chlamydia (kla-MID-ee-yuh), caused by the bacterium *Chlamydia trachomatis*, is the most frequently reported bacterial sexually transmitted disease. However, since chlamydia symptoms may be mild, or absent altogether, many people are not even aware they have it.

If identified, chlamydia is easily treated. Left untreated, it can cause irreversible damage, including infertility in women.

How do you get chlamydia?

Chlamydia is spread through contact with the penis, vagina, mouth, or anus. It can also be passed from an infected mother to her baby during vaginal childbirth.

Any sexually active person can be infected with chlamydia. The greater the number of sex partners, the greater the risk of infection. Since chlamydia can be transmitted by oral or anal sex, men who have sex with men are also at risk for chlamydia infection. The transmission of chlamydia can be greatly reduced by using safer sex practices, including using condoms.

What are the symptoms of chlamydia?

Chlamydia is known as a “silent” disease because about three quarters of infected women, and about half of infected men, have no symptoms. If symptoms do occur, they usually appear within 1 to 3 weeks after exposure.

In women, the bacteria initially infect the cervix and the urethra (urine canal). Symptoms might include an abnormal vaginal discharge or a burning sensation when urinating. If the infection spreads from the cervix to the fallopian tubes (tubes that carry eggs from the ovaries to the uterus), some women still have no signs or symptoms. Others have lower abdominal pain, low back pain, nausea, fever, pain during intercourse, or bleeding between menstrual periods. Chlamydia infection of the cervix can spread to the rectum.

In men, symptoms might include a discharge from the penis, a burning sensation when urinating, or burning and itching around the opening of the penis. Pain and swelling in the testicles can happen, but are uncommon.

Men or women who have receptive anal intercourse may acquire chlamydia infection in the rectum, which can cause rectal pain, discharge, or bleeding. Oral sex with an infected partner can also cause chlamydia infection in the throat, possibly leading to a sore throat.

What are the complications of untreated chlamydia?

If untreated, chlamydia infections can lead to serious short-term and long-term problems. Like the disease itself, the damage that chlamydia causes is often “silent.”

In women, untreated infection can spread into the uterus or fallopian tubes and cause pelvic inflammatory disease (PID). This happens in up to 40% of women with untreated chlamydia. PID can cause permanent damage to the fallopian tubes, uterus, and surrounding tissues. The damage can lead to chronic pelvic pain, infertility, and potentially fatal ectopic pregnancy (pregnancy outside the uterus). If exposed to HIV, women infected with chlamydia are up to five times more likely to become infected.

In pregnant women, there is some evidence that untreated chlamydia infections can lead to premature delivery. Babies born to infected mothers can get chlamydia infections in their eyes and respiratory tracts. Chlamydia is a leading cause of early infant pneumonia and conjunctivitis (pink eye) in newborns.

Complications among men are rare. Infection sometimes spreads to the epididymis (a tube that carries sperm from the testis), causing pain, fever, and, rarely, sterility.

In rare cases, genital chlamydia infection can cause arthritis, sometimes with skin lesions and inflammation of the eye and urethra (Reiter's syndrome).



How is chlamydia caught and treated?

Chlamydia can be diagnosed with laboratory tests. Some can be performed on urine, other tests need a specimen from the part of the body suspected to be infected, such as the throat, penis, vagina or rectum.

Chlamydia can be easily treated and cured with antibiotics. A single dose of azithromycin or a week of doxycycline (twice daily) are the most commonly used treatments.

If you have chlamydia, all your sex partners should be evaluated, tested, and treated. You should not have sexual intercourse until you and their sex partners have completed treatment; otherwise re-infection is possible. Even after successful treatment, it's possible to get chlamydia again if you are re-exposed.

To help prevent the serious consequences of chlamydia, an annual screening test is recommended for *anyone* with a new sex partner or multiple sex partners. Screening at *least* annually is recommended for all sexually active men and women with HIV. All pregnant women should also be screened.

Gonorrhea

Gonorrhea (gon-uh-REE-uh) is another common sexually transmitted disease (STD). Gonorrhea is caused by *Neisseria gonorrhoea*, a bacterium that grows and multiplies 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.

If identified, gonorrhea is easily treated. Left untreated, it can cause serious problems.

How do you get gonorrhea?

Gonorrhea is spread through contact with the penis, vagina, mouth, or anus.

Ejaculation does not have to occur for gonorrhea to be transmitted or acquired. Gonorrhea can also be spread from mother to baby during delivery.

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

What are the symptoms of gonorrhea?

Many men with gonorrhea may have no symptoms at all. Some have signs or symptoms that appear two to five days after infection, although these can take as long

as 30 days to appear. They can include a burning sensation when urinating, or a white, yellow, or green discharge from the penis. Sometimes men with gonorrhea get painful or swollen testicles.

Most women who are infected have no symptoms. Even when a woman has symptoms, they can be mild, and vague enough to be mistaken for a less serious infection. The initial symptoms and signs in women 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, regardless of the presence or severity of symptoms.

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

What are the complications of untreated gonorrhea?

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

In women, gonorrhea is a common cause of pelvic inflammatory disease (PID). Women with PID do not necessarily have symptoms. When symptoms are present, they 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 long-lasting, chronic pelvic pain. PID can damage the fallopian tubes enough to cause infertility or increase the risk of ectopic pregnancy (a life-threatening condition in which a fertilized egg grows outside the uterus).

In men, gonorrhea can cause epididymitis, a painful condition of the testicles that can lead to infertility if left untreated.

Gonorrhea can spread to the blood or joints. This condition can be life-threatening. People with gonorrhea can more easily contract HIV, and HIV-infected people with gonorrhea are more likely to transmit HIV to someone else.

If a pregnant woman has gonorrhea, she may give the infection to her baby as the baby passes through the birth canal during delivery. This can cause blindness, joint infection, or a life-threatening blood infection in the baby. Treatment of gonorrhea as soon as it is detected in pregnant women will reduce the risk of these complications.

How is gonorrhea caught and treated?

A doctor or nurse can obtain a test sample (swab) from the parts of the body likely to be infected (cervix, urethra, rectum, or throat) and send the sample to a laboratory for analysis. Gonorrhea in the cervix or urethra can be diagnosed from a urine sample.

There are several antibiotics that can successfully cure gonorrhea. Because many people with gonorrhea also have chlamydia, antibiotics for both infections are usually given together. Persons with gonorrhea should be tested for other STDs.

How can you prevent chlamydia and gonorrhea?

The surest way to avoid transmission of sexually transmitted diseases is to not have sexual contact, or to be in a mutually monogamous relationship with an uninfected partner (that is, only have sex with each other).

Latex condoms made for men and the female condom, when used consistently and correctly, can reduce the risk of transmission of chlamydia and gonorrhea.

Any genital symptoms such as discharge or burning during urination, or an unusual sore or rash, are a signal to stop having sex and to consult a health care provider immediately. If someone has been treated for any sexually transmitted disease, he or she should notify all their recent sex partners, who should also see a health care provider. This will reduce the risk that the sex partners will develop serious complications, and will reduce the person's own risk of becoming re-infected. The person and all of his or her sex partners must avoid sex until they have completed their treatment.

- 1 Wasserheit JN et al. Janus considers the HIV epidemic: harnessing recent advances to enhance AIDS prevention. *AJPH* 1997;87:10-12.
- 2 McClelland RS, Lavreys L, Katingima C, et al. Contribution of HIV-1 infection to acquisition of sexually transmitted disease: a 10 year prospective study. *J Infect Dis*. 2005;191:333-338.
- 3 Fleming DT, Wasserheit JN. 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*. 1999. 75:3-17
- 4 Grosskurth H et al. Impact of improved treatment of sexually transmitted diseases on HIV infection in rural Tanzania: randomized controlled trial. *Lancet*. 1995;346:530-536.
- 5 Corey L, Wald A, Patel R, Sacks S et al. Once-daily Valacyclovir to reduce the risk of transmission of genital herpes. *N Engl J Med* 2004; 350 (1): 11-20.