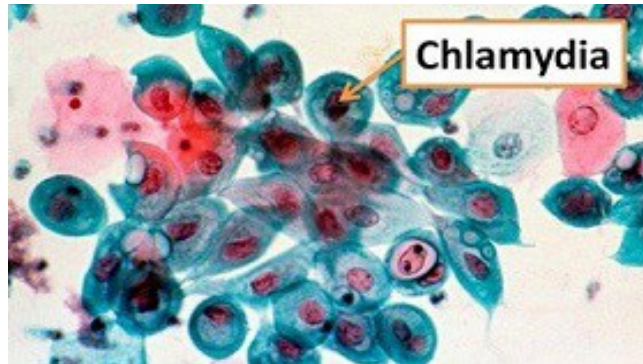


Chlamydia trachomatis



Chlamydia is one of the most common bacterial sexually transmitted diseases (STD) in the world and can cause serious complications if not treated. Screening for, diagnosing, and treating chlamydia is very important in preventing long-term complications and spread of the infection to others.

Chlamydia is a genus of pathogenic bacteria that are obligate intracellular parasites.

C. trachomatis includes three human biovars, but Serovars D-K – cause urethritis, pelvic inflammatory disease, ectopic pregnancy, neonatal pneumonia, and neonatal conjunctivitis.

Prevalence

Millions of people will be diagnosed with the infection each year, with two-thirds of infections occurring in people between the ages of 15 and 24. The actual incidence is likely higher, however, given that the majority of people do not have symptoms. It's diagnosed almost twice as often in women, but that is most likely due to the fact that women tend to go for screenings more often than men. Catching the infection in so many women is a good thing, of course, but disproportionate screening also means that there are too many sexual partners of infected women who are not being treated.

Chlamydia is generally spread through sexual contact (oral, vaginal, or anal) with an infected partner. Risk factors include having multiple sex partners, coinfection or previous infection with another STD, and not using a condom correctly and consistently.

Many people with chlamydia infections have no symptoms and some may experience only mild symptoms. Signs and symptoms of chlamydia are similar to and can be confused with those cause by another STD, gonorrhea, so tests for these infections are often done at the same time.

Chlamydia symptoms in women



- Abnormal vaginal discharge that may have an odor;
- Bleeding between periods;
- Painful periods;
- Abdominal pain with fever;
- Pain when having sex;
- Itching or burning in or around the vagina;
- Pain when urinating;

Chlamydia symptoms in men

- Small amounts of clear or cloudy discharge from the tip of the penis;
- Painful urination;
- Burning and itching around the opening of the penis;
- Pain and swelling around the testicles;

Complications

Chlamydia is easily treated with a course of antibiotics. If not diagnosed and treated, it can cause severe reproductive and other health problems.

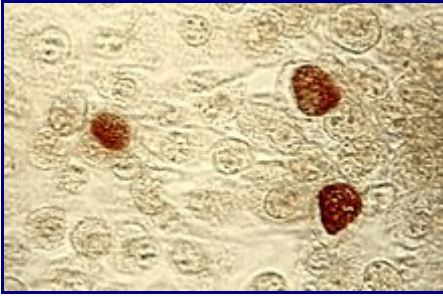
In women, untreated chlamydia infections can lead to pelvic inflammatory disease (PID) from infections that start on the cervix but spread to the fallopian tubes and ovaries. This can cause:

- Long-term (chronic) pelvic pain;
- Infertility;
- An increased risk of tubal (ectopic) pregnancy, which can be fatal;

Pregnant women who are infected may experience heavy bleeding before delivery and premature rupture of the membranes and/or have babies with low birth weights. Infected mothers can pass the infection to their baby during childbirth. These babies are at risk of developing complications such as pneumonia or conjunctivitis, an inflammation that, left untreated, can threaten eyesight.

Rarely, men who are not treated may become infertile.

Diagnosis



Chlamydia trachomatis inclusion bodies (brown) in a McCoy cell culture.

The diagnosis of genital chlamydial infections evolved rapidly from the 1990s through 2006. Nucleic acid amplification tests (NAAT), such as polymerase chain reaction (PCR) and transcription mediated amplification (TMA), now are the mainstays. NAAT for chlamydia may be performed on swab specimens sampled from the cervix (women) or urethra (men). NAAT has been estimated to have a sensitivity of approximately 90% and a specificity of approximately 99%, regardless of sampling from a cervical swab or by urine specimen. In women seeking an STI clinic and a urine test is negative, a subsequent cervical swab has been estimated to be positive in approximately 2% of the time.

Because of improved test accuracy, the NAATs have largely replaced culture, the historic gold standard for chlamydia diagnosis, and the non-amplified probe tests.

Prevention

Prevention is by not having sex, the use of condoms, or having sex with only one other person, who is not infected.

How is the sample collected for testing?

For women, cervical swabs are the optimal sample for genital chlamydia testing. A healthcare practitioner may use a swab or small brush to collect a sample of cells or secretion from the cervix during a pelvic examination.

Urine is recommended for men, but can also be used for women. As you begin to urinate, collect the initial portion of your urine stream (first-catch) in a container.

Sometimes, a healthcare practitioner may use a swab or brush to collect a sample of cells or secretion from other areas that may be infected, such as the urethra, penis, anus, or throat.

Is any test preparation needed to ensure the quality of the sample?

Tell the healthcare practitioner about any use of antibiotics or, if you are a woman, douches or vaginal creams. You may be asked to avoid using these within 24 hours before testing cervical samples since they may affect test results. Menstruation will not affect results. You may be instructed to wait one to two hours after you last urinated before collecting a urine sample. Follow any instructions you are given.

Other Chlamydial Syndromes

There are two other types of chlamydial infections in addition to standard genital infections, though these are less common in the United States.

Lymphogranuloma Venereum: Chlamydia also causes a sexually transmitted infection called lymphogranulom venereum, which has symptoms much different than standard genital chlamydia infections. It has historically been thought of as a condition found in third-world countries, but its incidence is increasing worldwide, including in the United States. It is more common in MSM, and the symptoms are similar to syphilis. It is caused by chlamydia serovars (types) L1, L2, and L3.

Trachoma:Trachoma is an eye infection caused by the chlamydia bacteria known as serovars A through C. Unlike genital infections and lymphogranuloma venereum, trachoma is *not* considered to be an STI. While it is uncommon in the United States, it is the leading cause of blindness worldwide. It is caused by autoinoculation (when people touch a surface containing the bacteria and then touch their eyes) and can be spread by hands, clothing, bedding, or even flies.

In conclusion, untreated chlamydia can cause complications, some of which can be serious. But the bottom line is that the infection is easy to test for, is very treatable, and often preventable.