

Infections with mycoplasma and ureaplasma



Mycoplasma and ureaplasma are types of bacteria that can be transferred from one person to another through sexual contact, however they are not classed as sexually transmitted infections.

There is limited knowledge surrounding these type of infections and any long term damage they may cause.

Epidemiology

Mycoplasma and ureaplasma bacteria are thought to be commonly found in the lower urogenital tracts of sexually active males and females, however they do not always cause infection.

What causes a mycoplasma or ureaplasma infection?

Mycoplasma and ureaplasma bacteria can live in the urogenital or respiratory tracts of healthy adults and not cause any harm. Bacteria cells live on our skin and in our body unnoticed but they can cause problems when the natural balance between 'good' and 'bad' bacteria is upset.

Mycoplasma and ureaplasma infections can be transferred during sexual intercourse but they are not classed as sexually transmitted infections. The bacteria live in the mucosa found in the urogenital tract.

You can contract a mycoplasma or ureaplasma infection through direct contact with infected cells: whether this be genital-to-genital or mouth-to-genital. Studies have also found that the infection can be passed from mother to baby in utero or during vaginal childbirth.

Those who are immunocompromised are considered to be at higher risk from infection and may require a different course of treatment if an infection is identified.

What are mycoplasma and ureaplasma?

Mycoplasma and ureaplasma are:

- Bacterial cells
- One of the smallest free-living organisms

- Difficult to identify due to their size
- Characterised by a lack of cell walls found in other types of bacteria

It is thought that there are many types of mycoplasma bacteria, the majority of which are harmless and do not cause health problems. It is currently understood that only four species cause human infections, including:

- **Mycoplasma pneumoniae** - Also known as atypical or 'walking' pneumonia, it can be contracted by breathing in infected respiratory fluid. The infection can cause symptoms such as wheezing, sore throat, cough, headache and fatigue. Most cases are mild and do not lead to pneumonia.
- **Mycoplasma genitalium** - First identified in the 1980s, this particular infection can cause men to experience non-gonococcal or non-chlamydial urethritis, and women to experience cervicitis. However, it is more commonly asymptomatic. A piece of research has suggested a link between Mycoplasma genitalium infections and female infertility, as the bacteria has been identified more frequently in the reproductive organs of women with pelvic inflammatory disease (PID).

Symptoms of Mycoplasma genitalium in women:



- Have pain during sex
- Bleed from the vagina after sex
- Get a discharge from the vagina

Symptoms Mycoplasma genitalium in men:

- Urethritis - a swelling of the urethra, the tube that urine goes through as it leaves the body
- Stinging or burning when you urinate
- Discharge from the penis

The **diagnosis** is confirmed due to test called **PCR**, which looks for the bacteria's DNA.

Samples are:

- Urine (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).

- swab from the vagina, cervix, or urethra.
- **Mycoplasma hominis** - These bacteria live in the urinary tract and genitals of about half of all women and fewer men. But if you're in general good health, you don't have to worry. They rarely cause an infection.

Sometimes this infection could be picked up during sex. The bacteria can also pass from a mother to her baby during childbirth.

Complications:

In **women**, these bacteria may be linked to pelvic inflammatory disease, an infection of reproductive organs. They can also lead to problems during pregnancy as:

- Ectopic pregnancy (the embryo grows outside the uterus)
- Early delivery
- Miscarriage
- *Mycoplasma hominis* can also cause a fever and infection in your newborn baby.

To find out if there is an infection caused by this type of bacteria, the doctor will test by **PCR** a sample of fluid from your vagina, cervix or urethra. Protected sex is the best prevention.

- **Ureaplasma urealyticum and Ureaplasma parvum**

Most healthy women have these bacteria in their vagina, and a smaller number of men also have them in their urethra. Normally, they don't cause any problems.

Ureaplasma can spread during sex. If you're pregnant and you're infected, you can pass the bacteria to your baby in the womb or during childbirth.

Symptoms of U. urealyticum/U. parvum in women:

- Painful or difficult urination
- Belly pain
- Pain, odor, or discharge from the vagina
- Swelling at the opening of the urethra
- Discharge from the urethra

Men who are infected can get inflammation of the urethra, called urethritis.

During **pregnancy**, the bacteria can lead to infections in both the mother and the baby. Problems in newborn babies can include:

- Low birth weight
- Pneumonia
- Bacteria in the Blood, called septicemia

To **diagnose** via **PCR** test ureaplasma infection, next samples are suitable:

- Blood
- Amniotic fluid
- Placental tissue

- Cervical/vagina swabs
- Urethra swabs
- Urine

What are the clinical manifestations of infection with these organisms?

- Associated clinical diseases include pelvic inflammatory disease, cervicitis, urethritis, epididymitis, pyelonephritis, chorioamnionitis, post-partum fever, still birth, and rarely meningitis, brain abscess, endocarditis, wound infections, and bacteremia. *Ureaplasma* and *M. hominis* have been associated with bacteremia, pneumonia and meningoencephalitis in neonates.
- Genital mycoplasma or ureaplasma infection may be asymptomatic in many cases.
- Urethritis may present with urethral discharge in men, vaginal discharge in women or urethral irritation or dysuria in either men or women.
- Epididymitis most often presents as unilateral warmth, tenderness and swelling of the epididymis overlying the testis within the scrotum. Patients may describe discomfort with ejaculation.
- Cervicitis may result in vaginal discharge, pelvic pain or dyspareunia. On pelvic examination, a swab placed into the cervical os will reveal discharge, and wet mount will have copious white blood cells.
- Pelvic inflammatory disease is a clinical diagnosis. Many cases may be asymptomatic or have only minimal symptoms. Classic findings include fever, pelvic or low abdominal pain and one or more of the following on pelvic exam: uterine, cervical or adnexal tenderness.
- The clinical manifestations of pyelonephritis include fever, dysuria, abdominal and/or back pain, and tenderness to percussion of the costovertebral angle on the affected side. Hematuria may be present.
- Pregnant women with chorioamnionitis present with fever and abdominal or pelvic pain. Uterine tenderness is present on examination.

Why are mycoplasma and ureaplasma not classed as STIs?

The pathogenicity (or, the ability of these bacteria to cause disease) is yet to be confirmed. Due to a lack of conclusive evidence it is not known whether mycoplasma or ureaplasma infections cause long term health problems.

Confirmed sexually transmitted infections such as chlamydia and gonorrhea can damage the reproductive organs, rendering the area susceptible to further infections in the future. The long term effects of mycoplasma and ureaplasma infections are largely unknown.

How can I prevent a mycoplasma or ureaplasma infection?

One method to tackle the spread of this type of infection is to practice safe sex by wearing either a male or female condom.

Maintaining good sexual health can help to reduce the chances of long term damage or repeat infections. If you are sexually active it is best practice to regularly schedule STI screening. Screening is important because numerous STIs are asymptomatic so without being tested you would not know if you are living with the disease; and regular STI testing allows for infections to be picked up quickly so that treatment can be administered in a timely manner.

However, if you have unprotected sex (and are not in a monogamous relationship) or if you think you have come into contact with an STI, you should get tested as soon as possible.

If you are concerned that you have a mycoplasma or ureaplasma infection you should speak to your doctor.