TEST

Urethral discharge culture

A urethral discharge culture grows bacteria from urethral fluid to identify infection and guide antibiotic treatment.

WHAT IT MEASURES
Bacteria growing from a sample of urethral discharge

SAMPLE
Urethral discharge collected with a swab

FASTING NEEDED?
No

HOW LONG IT TAKES
Usually a few minutes

RESULTS IN
Usually 2-5 days; turnaround differs by laboratory

USED FOR
Diagnosis and antibiotic susceptibility testing

MAIN LIMITATION
Fragile gonorrhoea bacteria may die during transport

Overview

A urethral discharge culture is a laboratory test for bacteria in fluid from the urethra. The urethra is the tube that carries urine out of the body.

A healthcare professional collects discharge with a small swab. The laboratory places the sample in conditions that allow bacteria to grow. If bacteria grow, the laboratory can identify them. It may also test which antibiotics like amoxicillin or doxycycline are likely to work, known as antibiotic susceptibility testing.

This test is often used when gonorrhoea is suspected, particularly when antibiotic resistance or treatment failure is a concern. However, a molecular test called a nucleic acid amplification test, or NAAT, is usually better at detecting gonorrhoea and chlamydia in an initial sample. Routine bacterial culture does not reliably detect chlamydia.

Why the test is ordered

The test may help find the bacterial cause of urethral discharge, burning during urination, or irritation at the urethral opening. These symptoms can have several causes, so the culture is considered alongside your examination, sexual history, and other tests.

A culture may be especially useful when:

You may also have a urine NAAT or swabs from the throat, vagina, cervix, or rectum. The sites tested should reflect your anatomy and types of sexual contact because an infection at one site may not appear in a urethral sample.

- Gonorrhoea is suspected and antibiotic susceptibility results are needed
- Symptoms continue after treatment
- A previous gonorrhoea test remains positive or infection returns
- Local health authorities are monitoring antibiotic-resistant gonorrhoea
- A molecular test is unavailable or needs confirmation in a specific situation

Who should have the test

You may be offered this test if you have visible urethral discharge or symptoms suggesting inflammation of the urethra. It may also be considered after sexual contact with someone who has a confirmed sexually transmitted infection.

Culture is not usually the main screening test for someone without symptoms. NAAT testing is generally more likely to detect gonorrhoea or chlamydia and can often use urine or a self-collected swab.

The right tests vary with your symptoms, sexual exposure, previous results, pregnancy status, and local laboratory services. Testing should be discussed confidentially and without assumptions about your relationships or sexual practices.

How to prepare

You do not need to fast. Food, water, coffee, and usual daily activity do not directly affect the culture.

The clinic may ask you not to urinate for an hour or more before collection. Urination can temporarily wash away visible discharge and reduce the amount available to sample. Follow the instructions from the testing service because collection methods differ.

Before the appointment:

If treatment is needed promptly, sample collection should not cause an unsafe delay.

- Do not apply antiseptics, creams, or medicines around the urethral opening unless instructed
- Tell the clinic about antibiotics taken recently or currently
- Do not stop prescribed antibiotics without medical advice
- Ask whether other samples, such as first-catch urine, will be collected

What happens during the test

You will usually be asked to uncover the genital area in a private room. A clinician may first examine the urethral opening.

If discharge is visible, it can be collected by touching it with a sterile swab. If there is no visible discharge, a thin swab may be placed a short distance into the urethra and gently rotated. This can feel briefly uncomfortable or cause a stinging sensation.

The swab is placed into a transport container and sent promptly to the laboratory. Gonorrhoea bacteria are fragile outside the body, so correct storage and rapid transport are important.

Collection usually takes only a few minutes. Depending on your exposure and symptoms, urine, blood, or swabs from other body sites may be collected during the same visit.

Understanding your results

Culture results are usually reported as positive or negative rather than as a number.

A positive result means the laboratory grew and identified a bacterium from the sample. If gonorrhoea bacteria are found, the report may include antibiotic susceptibility results. These show whether the bacteria were susceptible or resistant to the antibiotics tested.

A negative result means the targeted bacteria did not grow. It does not always rule out infection. There may have been too few bacteria, the sample may have been collected after antibiotics, or the organism may not grow in routine culture.

A report may mention mixed or normal genital bacteria. This can reflect contamination from nearby skin or genital surfaces and does not automatically mean those bacteria are causing symptoms.

Laboratory methods and reporting differ. Interpretation also varies with age, sex and anatomy, pregnancy status, medicines, symptoms, sample site, and clinical context. There is no useful

universal reference range for this test.

What affects the results

Several factors can produce a negative or unclear culture even when symptoms have a bacterial cause:

Age and pregnancy do not usually change whether bacteria can grow, but they can affect which tests are chosen and how results are managed. Medicines other than antibiotics usually have little direct effect. A recent blood transfusion does not affect this culture.

- Recent antibiotics: Even one or more doses may stop bacteria growing in culture
- Delay in transport: Gonorrhoea bacteria can die if the sample is not processed promptly
- Incorrect temperature or atmosphere: The organism needs specific transport and growth conditions
- Too little discharge: A small or poorly collected sample may not contain enough bacteria
- Recent urination or cleaning: This can temporarily reduce discharge at the urethral opening
- Wrong sample site: A urethral culture will not reliably find an infection limited to the throat or rectum
- An organism that does not grow routinely: Chlamydia and some other causes of urethritis need molecular or specialised tests
- Contamination: Bacteria from nearby skin or genital tissue may grow and complicate interpretation

Accuracy and limitations

When gonorrhoea bacteria grow and are correctly identified, a positive culture is generally strong evidence that the organism was in the sample. Incorrect positive results are uncommon, but sample contamination, mislabelling, or laboratory identification errors can occur.

Culture misses more gonorrhoea infections than NAAT. It is particularly likely to miss infection when there are few bacteria or when collection, transport, or growth conditions are not ideal. A negative culture therefore cannot always exclude gonorrhoea.

NAAT is usually the better test for initially detecting gonorrhoea and chlamydia because it can

find small amounts of bacterial genetic material. Culture has a different advantage: it provides live bacteria that can be tested against antibiotics. Molecular tests do not always provide the same detailed resistance information.

No single urethral test excludes infection at every body site or identifies every cause of discharge.

Risks and complications

The swab can cause brief discomfort, stinging, or mild irritation. A small spot of blood may occur, especially if the urethra is already inflamed, but lasting complications are unusual.

Tell the person collecting the sample if you feel faint or need the procedure paused.

What happens next

Your testing service will explain how and when results will be provided. Do not assume that no message means a negative result; make sure you know how to check.

If bacteria are found, treatment is selected using the organism, susceptibility report, allergies, pregnancy status, and current local recommendations. Sexual partners may need testing or treatment, depending on the infection. You may be advised to avoid sexual contact until treatment and any recommended waiting period are complete.

A negative result may be followed by a NAAT, repeat culture, urine testing, or testing from another body site if symptoms continue. Persistent discharge needs routine follow-up even after an initial negative result.

Seek urgent medical care for severe or rapidly worsening testicular pain or swelling, severe pelvic or lower abdominal pain, fever with significant illness, or inability to urinate. These symptoms require assessment rather than waiting for a routine culture result.

Common questions

Can I drink coffee before the test?

Yes. Coffee and food do not affect bacterial growth from a urethral swab. If urine or blood tests are also planned, follow any separate instructions for those tests.

Can I urinate before the appointment?

The clinic may ask you not to urinate for at least an hour beforehand. Urination can reduce the

discharge available for collection, but instructions vary by sampling method.

Does the time of day matter?

Usually not. The timing of recent urination, cleaning, or antibiotic use matters more than whether the sample is collected in the morning or afternoon.

Can I exercise beforehand?

Yes. Exercise does not normally affect the result. You may want to avoid applying powders, creams, or antiseptic products around the urethral opening before collection.

Will this test find chlamydia?

A routine bacterial culture will not reliably find chlamydia. A NAAT from urine or a swab is usually used for chlamydia testing.

Can the test be done during a menstrual period?

Usually, yes. Menstrual bleeding does not prevent collection from the urethra, although it may make sample collection or interpretation more difficult in some circumstances. Tell the clinic when you arrive.

Sources

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