CONDITION

Epididymitis

Epididymitis is inflammation of the coiled tube behind a testicle, usually caused by infection.

WHAT IT IS
Inflammation of the tube behind a testicle

BODY SYSTEM
Male reproductive and urinary systems

MAIN SYMPTOMS
One-sided scrotal pain, swelling, tenderness, painful urination

WHAT CAUSES IT
Usually bacterial infection; sometimes noninfectious inflammation

HOW IT IS DIAGNOSED
Examination, urine and STI tests; ultrasound when needed

MAIN TREATMENT
Antibiotics when bacterial, plus pain and swelling care

CAN IT BE CURED?
Sometimes - infections clear, but chronic pain may persist

IS IT AN EMERGENCY?
Sometimes - sudden severe pain may be testicular torsion

LONG-TERM OUTLOOK
Most acute infections recover; some cause lasting discomfort

Overview

Epididymitis is inflammation of the epididymis. This is a soft, tightly coiled tube behind each testicle that stores and carries sperm.

The inflammation usually affects one side of the scrotum. It commonly causes pain, tenderness, and swelling. If inflammation also involves the testicle, it may be called epididymo-orchitis.

Many cases are caused by bacteria. These may be bacteria passed through sexual contact, or bacteria from the urinary tract. Less often, the epididymis becomes inflamed without a bacterial infection.

Epididymitis matters because its symptoms can resemble testicular torsion. Torsion happens

when a testicle twists and loses its blood supply. It requires emergency treatment. New scrotal pain should therefore be assessed promptly, especially when it begins suddenly or is severe.

Acute epididymitis develops over days and usually lasts less than six weeks. Chronic epididymitis describes pain or discomfort lasting six weeks or longer. Chronic symptoms may follow an infection, but sometimes no clear cause is found.

Symptoms

Pain usually develops on one side and may build gradually over several hours or days. The epididymis can feel especially tender behind or above the testicle.

Symptoms may include:

A collection of fluid around the testicle, called a hydrocele, may make the scrotum look larger. Nearby lymph nodes in the groin may also become tender.

Symptoms alone cannot reliably show whether the cause is an STI, a urinary infection, or another condition. Some people with an STI have few urinary symptoms.

Sudden severe pain, particularly with nausea or vomiting, is less typical of epididymitis and raises concern for testicular torsion. Do not wait to see whether this improves.

- Scrotal pain, warmth, redness, or swelling
- Pain that spreads into the groin or lower abdomen
- Burning or pain when urinating
- Needing to urinate more often or urgently
- Discharge from the penis
- Blood in semen
- Pain during sex or ejaculation
- Fever or feeling unwell

Causes and risk factors

In sexually active people, epididymitis may be caused by bacteria that cause sexually transmitted infections, especially chlamydia or gonorrhoea. An infection can be present even without discharge or other obvious STI symptoms.

Bacteria from the bowel can also enter the urinary tract and travel to the epididymis. This is

more likely when urine flow is obstructed or after a urinary procedure. Possible risk factors include:

Insertive anal sex can expose the urethra to bowel bacteria, which may affect the choice of testing and treatment.

In children, epididymitis is not automatically evidence of sexual transmission. Possible causes include inflammation following a viral illness, urine flowing backwards into nearby ducts, or a urinary tract difference. Repeated episodes may lead to further investigation.

Less common noninfectious causes include an injury, inflammation associated with another medical condition, or a reaction to certain medicines. The heart medicine amiodarone is a recognised but uncommon example. In chronic epididymitis, testing may not identify a specific cause.

Epididymitis itself is not inherited.

- An enlarged prostate or difficulty emptying the bladder
- A urinary catheter
- Recent surgery or an instrument placed in the urinary tract
- Structural differences affecting the urinary tract
- Recurrent urinary infections

Diagnosis

A healthcare professional will ask how the pain began, whether you have urinary symptoms, and about recent sexual contact, procedures, injuries, and medicines. These questions help identify the likely cause and choose appropriate tests.

The examination usually includes the abdomen, groin, scrotum, testicles, and epididymis. The main early priority is to consider testicular torsion and other causes of acute scrotal pain.

Tests may include:

A scrotal ultrasound uses sound waves to examine the testicle and its blood flow. It is mainly used when torsion cannot be confidently excluded or another condition is suspected. Ultrasound findings can support a diagnosis of epididymitis, but a normal scan does not always exclude it.

In persistent or unusual cases, further assessment may look for an abscess, tuberculosis, a structural urinary problem, a tumour, or another cause of scrotal pain. A lump that remains after treatment needs reassessment rather than being assumed to be ongoing infection.

- A urine test for inflammation and bacteria
- A urine culture to identify urinary bacteria
- A urine or swab test for chlamydia and gonorrhoea
- Blood tests if you appear significantly unwell

Treatment and management

When bacterial epididymitis is likely, treatment usually starts with antibiotics like amoxicillin or doxycycline before every test result is available. The antibiotic category is chosen according to the likely source of infection, local resistance patterns, test results, allergies, and other health factors. Complete the course exactly as prescribed, even if the pain improves sooner.

Measures that may reduce discomfort include rest, supporting the scrotum with close-fitting underwear, and applying a wrapped cold pack for short periods. Non-prescription pain medicines may help, but they are not suitable for everyone. Follow the label and check with a pharmacist or clinician if you have kidney disease, stomach ulcers, take blood thinners like warfarin or apixaban , or are unsure what is safe.

If an STI is suspected or confirmed, recent sexual partners may need testing and treatment. Avoid sex until treatment has been completed, partners have been treated when necessary, and symptoms have settled. This lowers the chance of passing the infection or getting it again.

Severe illness, uncontrolled pain, vomiting, or concern about an abscess may require hospital care. An abscess is a pocket of infected fluid and sometimes needs drainage or surgery.

Chronic epididymitis is treated according to the suspected cause. Management may involve pain control, scrotal support, and assessment by a urologist, a specialist in the urinary and male reproductive systems. Repeated antibiotics are not helpful when there is no evidence of bacterial infection. Surgery is considered only in selected persistent cases.

Complications

Most people treated for acute epididymitis recover without a serious complication. Possible complications include:

Fertility problems are not the expected outcome of a straightforward, treated episode. The risk may be greater if both sides are affected, treatment is delayed, or the infection damages the tubes that carry sperm.

Persistent swelling does not necessarily mean treatment has failed because inflammation can

take time to settle. However, swelling or a lump that does not improve should be examined to rule out an abscess, tumour, or another condition.

- An abscess in the epididymis or testicle
- Infection spreading to nearby tissue or, rarely, the bloodstream
- Reduced blood flow and damage to testicular tissue
- Ongoing scrotal pain or tenderness
- Repeated episodes
- Fertility problems, particularly after severe or two-sided inflammation

Prevention

Not every case can be prevented. This is especially true when inflammation has no identified cause or is linked to a urinary tract problem.

Some infection-related cases can be prevented. Condoms lower the risk of chlamydia, gonorrhoea, and other sexually transmitted infections, although they do not remove all risk. STI testing is useful after a possible exposure and when starting a new sexual relationship.

If an STI is diagnosed, completing treatment and ensuring relevant partners receive care can prevent reinfection. Avoiding sex until the advised treatment period is complete is also important.

People with difficulty emptying the bladder, repeated urinary infections, or recurrent epididymitis may need assessment for an underlying urinary problem. Necessary catheters and urinary procedures cannot always be avoided, but careful catheter and procedure practices help reduce infection risk.

Living with it and what to expect

With effective treatment, fever and severe pain often begin to ease within a few days. Swelling and tenderness usually improve more slowly and can take several weeks to disappear. Activity may remain uncomfortable during this period.

Follow the advice you receive about work, exercise, lifting, and sex. Activities that increase pain may need to be reduced temporarily. Scrotal support can make walking and daily tasks more comfortable while swelling settles.

If symptoms are not clearly improving within about three days of starting antibiotics, seek

reassessment. The bacteria may not be covered by the antibiotic, the diagnosis may be different, or a complication may have developed. Do not start leftover antibiotics or extend treatment without medical advice.

Chronic epididymitis can be less predictable. Symptoms may be constant or may come and go over months. Some people notice discomfort with sitting, exercise, sex, or ejaculation. The condition does not always cause visible swelling, and tests may be normal even when pain is real.

Long-term care focuses on identifying treatable causes and reducing the effect of pain on daily life. Most people can continue usual work, relationships, and family life, although persistent symptoms may require specialist pain or urology support.

When to get medical help

Seek emergency care now for sudden, severe testicular or scrotal pain, especially if it comes with nausea, vomiting, an unusually high or sideways testicle, or rapid swelling. These can be signs of testicular torsion. Treatment is most effective when blood flow is restored quickly.

Get urgent same-day medical assessment for any new testicular pain or swelling, even if it developed gradually. Other urgent reasons include:

Arrange follow-up promptly if symptoms are not improving within about three days of treatment, return after treatment, or last longer than expected. A persistent lump, firm area, swelling, or heaviness also needs examination.

Routine follow-up may include reviewing test results, adjusting antibiotics, arranging STI partner care, or investigating repeated episodes. Chronic discomfort lasting six weeks or more is another reason to request further assessment.

- Fever with worsening scrotal pain or redness
- Severe pain that is difficult to control
- Vomiting or inability to take prescribed medicine
- Rapidly spreading redness or marked swelling
- Feeling faint, confused, or seriously unwell
- Scrotal pain after a significant injury

Common questions

Is epididymitis always an STI?

No. Chlamydia and gonorrhoea are important causes, but urinary bacteria can also cause epididymitis. Some cases follow a procedure or occur without a clear infection. Testing is the only reliable way to identify an STI-related cause.

Can epididymitis go away without antibiotics?

Noninfectious inflammation may improve without antibiotics, but bacterial epididymitis needs appropriate treatment. Because it is difficult to tell the cause from symptoms alone-and because torsion can look similar-new scrotal pain should be assessed rather than watched at home.

How long does epididymitis take to clear?

Pain and fever may begin improving within a few days of effective treatment. Tenderness and swelling can continue for several weeks. Symptoms that worsen or fail to start improving within about three days need reassessment.

Is epididymitis contagious?

The inflammation itself is not contagious. However, chlamydia, gonorrhoea, and other infections that cause it can pass through sexual contact. Partners may need testing and treatment if an STI is found or suspected.

Can I have sex or masturbate with epididymitis?

Ejaculation or sexual activity may worsen pain while the area is inflamed. If an STI may be involved, avoid sex until treatment is complete, relevant partners have been treated, and symptoms have resolved. Follow any specific advice given with your treatment.

Can epididymitis affect fertility?

Most treated, uncomplicated cases do not cause infertility. Fertility problems are possible after severe infection, repeated episodes, or inflammation affecting both sides. If you have continuing concerns about fertility after recovery, testing can assess sperm health.

Sources

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