

Epididymitis and Orchitis

A plain-English guide for you and your family

WHAT IS HAPPENING

The epididymis is a tightly coiled tube sitting behind each testicle. Sperm made in the testicle travel into the epididymis, where they mature and wait until ejaculation moves them out through the vas deferens (the sperm highway) and urethra (the tube that carries pee and semen). Normally bacteria stay far away. But when bacteria from a bladder infection, a sexually transmitted infection, or even the skin around the urethra start climbing backward up the tubes, they can reach the epididymis and multiply there. The epididymis swells with fluid and immune cells rushing in to fight the invaders. You feel one-sided scrotal pain and swelling that builds over hours to days—not the sudden twist-and-scream pain of testicular torsion. Fever may arrive as your body turns up its thermostat to slow the bacteria. The back of the scrotum becomes tender and thick. A classic clue: lifting the scrotum gently (Prehn sign) eases the ache because it takes tension off the swollen tissue—torsion pain does not improve with a lift. Doctors confirm the diagnosis with a urine test for bacteria or STI swabs, and ultrasound shows increased blood flow to the epididymis (infection brings extra blood; torsion cuts it off). Antibiotics matched to your age and risk kill the bacteria, while ice, scrotal support, and pain medicine calm the swelling. Untreated infection can spread to the testicle itself (orchitis), form an abscess (a pocket of pus), or scar the tubes and harm fertility. Caught early and treated right, epididymitis clears completely.

What you might feel

- Pain and swelling in one testicle or the back part of the testicle
- The scrotum feels warm and looks red
- Pain when you pee or a frequent urge to pee
- Discharge (fluid dripping) from the penis
- Fever and chills
- Tenderness in the lower belly or pelvis
- A lump or firmness you can feel in the testicle
- Blood in the semen

Call the doctor right away if...

- Sudden, severe testicle pain that comes on in minutes — may be testicular torsion (the testicle twisted on its cord and is losing blood supply), a surgical emergency.
- Fever above 101°F (38.3°C) with shaking chills — suggests infection is spreading into the bloodstream or forming an abscess (a pocket of pus).
- Unable to pee or very little urine comes out — may mean severe swelling is blocking the urethra or infection has spread to the bladder and kidneys.
- Testicle feels extremely hard, does not get better with antibiotics after 48 hours, or you see pus draining from the scrotum — may be an abscess that needs draining or a different diagnosis like cancer.
- Nausea, vomiting, or confusion along with testicle pain and fever — signs the infection may be severe (sepsis, meaning bacteria in the blood poisoning the whole body) and affecting your organs.

What the care team will do

- Give the first dose of ceftriaxone 500 mg intramuscular injection and doxycycline 100 mg by mouth in the clinic or emergency department before discharge.
- Teach the patient to elevate the scrotum on a rolled towel or wear a snug athletic supporter continuously for the first 48 hours.
- Administer ibuprofen 400–600 mg by mouth with food and teach the patient to take it every 8 hours for at least 3 days.
- Check temperature, heart rate, and blood pressure; notify the provider immediately if temperature is above 101°F (38.3°C) or heart rate is above 100.
- Teach the patient to finish all 10 days of doxycycline even when pain improves, and to avoid sexual contact until both he and his partner complete treatment.
- Document the size and firmness of the swollen epididymis by gently palpating (feeling) behind the testicle, and compare both sides.
- Ask about drug allergies before giving ceftriaxone, especially previous severe reactions to penicillin or cephalosporin antibiotics like hives or throat swelling.
- Provide written instructions for the patient to return immediately if pain worsens, the testicle changes color to blue or black, or he cannot urinate.

Medicines you may be given — and why

Ceftriaxone 500 mg intramuscular (IM) single dose

Ceftriaxone kills gonorrhea bacteria (*Neisseria gonorrhoeae*) by punching holes in the bacterial cell wall. Without a sturdy wall, the bacteria burst and die. It is given as a shot because gonorrhea has grown resistant to pills and the injection delivers a high, reliable dose directly into the bloodstream.

Doxycycline 100 mg by mouth twice daily for 10 days

Doxycycline kills chlamydia bacteria (*Chlamydia trachomatis*) by jamming their protein-making machinery. Bacteria need to make new proteins to grow and divide. When doxycycline locks onto the ribosome (the tiny factory inside bacteria that builds proteins), the bacteria cannot make the building blocks they need, so they stop multiplying and eventually die.

Levofloxacin 500 mg by mouth once daily for 10 days (alternative for men ≥ 35 or if urinary bacteria suspected)

Levofloxacin kills urinary-tract bacteria (*E. coli*, *Klebsiella*, *Proteus*, *Pseudomonas*) by breaking their DNA. Bacteria must copy their DNA to divide. Levofloxacin blocks the enzymes (DNA gyrase and topoisomerase IV) that unzip and repair bacterial DNA. When these enzymes are jammed, the DNA snaps and the bacteria die.

Trimethoprim-sulfamethoxazole (TMP-SMX) double-strength (160/800 mg) by mouth twice daily for 10 days (alternative for urinary bacteria)

TMP-SMX is a two-drug team that kills urinary-tract bacteria (*E. coli*, *Klebsiella*, *Proteus*) by blocking two steps in a row that bacteria need to make folic acid. Folic acid is essential for building DNA. Sulfamethoxazole blocks the first enzyme, trimethoprim blocks the second. Without folic acid, bacteria cannot copy their DNA or divide, so they die.

NSAIDs (e.g. ibuprofen 400-600 mg by mouth every 6-8 hours, or naproxen 500 mg twice daily)

NSAIDs reduce pain and swelling by blocking an enzyme called COX (cyclooxygenase). COX makes prostaglandins, which are chemical signals that turn on inflammation, make tissue swell, and sensitize nerve endings to hurt more. When you block COX, you make fewer prostaglandins, so swelling and pain both go down.

Where this information comes from

- CDC Sexually Transmitted Infections Treatment Guidelines 2021
- American Urological Association

- UpToDate Clinical Reference
- Cochrane Library

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