

Testicle injuries and conditions

There are various non-cancerous conditions that can affect the testicles, such as testicular torsion. The testicles are also prone to injury because they are not protected by muscle or bone. It is important to seek prompt medical attention for any testicular complaint. Testicles are also known as testes (one is a testis) or 'balls'.

Testicles explained

The testicles are two small, oval-shaped male sex glands that produce sex hormones and sperm. Each testicle is housed in a fibrous outer covering called the tunica albuginea. Sperm production needs a temperature that is around 2°C lower than the body, which is why the testicles are located outside the body in a sack of skin (scrotum).

Trauma to the testicles

Testicles are easily injured because they are not protected by muscle or bone. The type of injury could include ruptured blood vessels or tearing of the testicle. Possible injuries include:

- Penetrating (for example, stab wound)
- Impact from a moving object (for example, a kick to the testicles)
- Impact from hitting an immovable object (for example, a fall onto a hard surface).

Injuries to the testicles can be assessed by physical examination, ultrasound and MRI scan. If the testicles seem normal, the doctor may prescribe pain-killing medication. Any damage to the testicles must be surgically repaired. This is usually performed under general anaesthesia.

In severe cases of trauma, the testicle may be damaged beyond repair and must be removed. Fertility is not affected if one functioning testicle remains.

Testicular torsion

The testicle is attached to the body by the spermatic cord. Testicular torsion occurs when the spermatic cord twists and cuts off the blood supply to the testicle. This condition can occur at any age, but tends to be more common between the onset of puberty and the mid 20s. It requires urgent medical attention.

Hard physical activity can cause this twisting of the cord. In most cases, however, it is caused by abnormalities in a male's anatomy (body structure and organs) that make it easier for the testicle to twist or rotate around the cord.

Symptoms of testicular torsion

Symptoms include:

- Severe pain
- Scrotal swelling
- Nausea and vomiting.

These symptoms can often be confused with an infection of the testicles. An infection should not be diagnosed until torsion is ruled out.

Urgent medical attention is needed to save the testicle when torsion is diagnosed. Surgery must untwist the spermatic cord and restore blood flow to the testicle. Physical examination and ultrasound scans are used to make the diagnosis. Sometimes, the diagnosis can only be made conclusively at the time of surgical exploration.

The survival rate of the affected testicle is poor unless surgery is performed within four to six hours. Unnecessary investigations should not take place if the diagnosis is suspected, as delays to surgery can affect the viability of the testis. If the blood supply has been disrupted for an excessive period of time, the testis may not be viable or salvageable and may need to be removed at surgery. In many cases, the spermatic cord on the unaffected side is also secured during the same operation to prevent future torsion of the other testicle.

Torsion of the appendix testicle

The appendix testicle is a small structure located at the upper third of the testicle. Torsion of the appendix testicle means that the structure has twisted and cut off its blood supply.

This condition is easily confused with testicular torsion because the symptoms are so similar. However, the onset of pain is slower and the condition often presents with a noticeable blue dot on the surface of the scrotum. This blue dot is the darkened appendix testicle. Surgery is needed to correct the problem.

Other testicular conditions

Some other conditions that can affect the testicles include:

- **Epididymitis** – the epididymis is a collection of small tubes located at the back of each testicle. They collect and store sperm. Epididymitis is infection and inflammation of these tubes. Causes include urinary tract infections and sexually transmissible infections (STIs). Treatment includes antibiotics.
- **Epididymo-orchitis** – infection of the epididymis and testicle that causes inflammation and pain. Treatment includes antibiotics.
- **Varicocele or varicose veins** – 10 to 15 per cent of men have a varicocele, where veins draw blood from the testicle. This blood has to rise against gravity when men stand up. Valves in the veins help this process. If the valves don't work, blood pools in the veins. This swells the veins and gives the appearance of 'varicose veins'. Varicoceles usually don't require treatment, unless the varicocele is severe enough to cause discomfort or impair fertility. The links between varicocele and infertility are complex and research is ongoing. Treatment includes surgery or radiological techniques that can block the testicular veins.
- **Haematocoele** – a blood clot caused by trauma or injury to the testicles or scrotum. In some cases, the body is able to reabsorb the blood. If not, surgery is needed to remove the clot.
- **Hydrocele** – abnormal build-up of fluid that causes the affected testicle to swell. In some cases, the body can reabsorb the fluid. Even though the condition is painless, the hydrocele may become so large that surgery is needed to remove it.
- **Spermatocele** – an abnormal build-up of sperm-filled fluid next to the epididymis that feels like a separate lump on the testicle. This is harmless, but can be removed surgically if it becomes large or bothersome.
- **Undescended testicles** – either one or both testicles are missing from the scrotum and are lodged instead inside the lower abdomen. Premature and low-weight newborn boys are most prone to undescended testicles. This condition is a known risk factor for testicular cancer and strongly related to infertility. Unless the testicle is brought down into the scrotum by 12 months of age, the risk of damage to sperm production in later life is high.
- **Testicular cancer** – an abnormal growth or tumour that usually appears as a hard, and sometimes painful or tender, lump in either testicle. In most cases, testicular cancer is curable if medical treatment is sought early. Surgical removal of the affected testicle (orchidectomy) is usually the first treatment for all testicular cancer.

Reducing the risk

Suggestions on how to reduce the risk of testicular problems include:

- Take all reasonable precautions to prevent accidents; for example, drive safely and always wear a seatbelt.
- Protect yourself from sexually transmissible infections (STIs) by wearing a condom.
- Always use protective equipment such as a jockstrap or hard cup while playing sports.

- If you injure your testicles, always seek urgent medical advice.
- Perform testicular self-examination (TSE) once every month. Regular TSE helps you become familiar with the look, feel and shape of your testicles so you will notice any abnormalities. See your doctor for further information on how to perform TSE.
- Always see your doctor if you experience any scrotal or testicular pain or unusual symptoms, or if you find a lump or swelling.

Where to get help

- In an emergency, call triple zero (000)
- Your doctor
- Urologist
- Your nearest hospital emergency department

Things to remember

- If you injure your testicles (during sport, for example), always seek urgent medical advice.
- Perform testicular self-examination (TSE) once every month.
- See your doctor if you experience any pain or unusual symptoms, or if you find a lump or swelling.

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