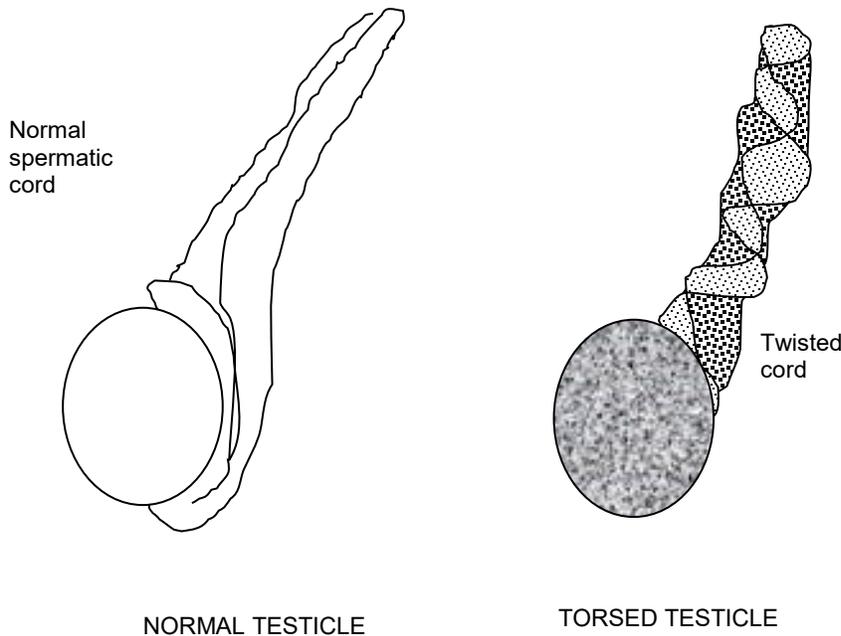


# Torsion of the Testicle

## What is torsion of the testicle?

Torsion of the testicle is the most common pediatric urologic emergency. It occurs when blood cannot flow to the testicle because the blood vessels have been twisted shut. This usually happens because the testicle itself has been twisted or turned (torted). The twisting or torsion blocks the vessels which supply the testicle with oxygen and other nutrients. When torsion has occurred and is unrelieved, the testicle dies and rots.



When babies develop in utero (in the womb) the testicles develop near the kidney and move down to the scrotum between the fourth to seventh month of gestation. Trailing behind the testicle like a leash are blood vessels that supply it with oxygen and nourishment. In the scrotum the testicle is located inside a smooth sac called the tunica vaginalis. The testicle can spin and move about

within the sac. As males grow and age the testicle develops adhesions or connections with the sack making it harder for the testicle to spin or twist. This is why torsion is usually seen in younger men, adolescents, and children.

### **What are the common symptoms?**

The most common symptom of testicular torsion is a sudden pain in the scrotum. The pain is usually on one side, but it can spread and be felt in the groin, abdomen, and flank (the area between the ribs and hip). About 1 in 4 patients have nausea and vomiting and some have difficulty urinating. The pain can come during activity, such as sports, or after minor accidents. It can come on at rest or even during sleep. Children, particularly teenage boys, are often reluctant to report testicular or scrotal pain. Hours and sometimes days can pass before they are seen by a doctor. The diagnosis of torsion can be difficult to make. Other illnesses can appear like torsion, but any acute scrotal pain should be treated as torsion until proven otherwise because if the torsion is left untreated, the patient may lose the testicle.

### **What are the options for treatment?**

The only treatment of testicular torsion is to immediately untwist the testicle and attach it to the scrotal wall. Occasionally it is possible to manually untwist the testicle, but the safest and surest course of action is surgery to explore the area.

The surgery is done under general anesthesia. The surgeon makes a small incision through the scrotum that enables them to examine the testicle. If the testicle has already died it is removed. If it has twisted, the surgeon untwists it and observes to see that the return of normal blood supply to the area changes it's color back to normal. If the testicle fails to "pink up" and appear normal, it is usually removed. If it looks normal and healthy the surgeon sews it to the scrotal wall to secure it and prevent any further twisting. When torsion is found on one side, the other side is also explored and its testicle is sewn down as well. Experience has shown that if one testicle can twist the other one can as well.

The surgery usually takes about 1 hour to perform and most children are able to go home afterwards.

Occasionally the testicle is found to be fine, but another structure is found to be twisted. There are several small normally occurring growths that can be found coming off the testicle and epididymis, the tube which carries the sperm from the testicle. These growths are the remnants of the female reproductive ducts in males. They can have small outgrowths called the appendix testis and the appendix epididymis. When they twist they can cause severe pain that mimics testicular torsion. There is often a characteristic blue-black dot visible under the scrotal skin. The dot marks the spot where the appendix testis or epididymis has twisted. Though this condition is benign and will gradually get better on its own, surgery is usually recommended in order to explore the area and confirm the diagnosis.

### **Will the condition improve?**

Damage to torsed testicles may occur even if they are de-torsed. The key factor is the length of time between torsion and detorsion. If the torsion is relieved within 6 hours or less there are usually no lasting effects. After 6 hours the risk of testicle death and damage increases. Even if successfully de-torsed, research has shown that after 6 hours of torsion the testicle is vulnerable to lasting injuries. These injuries can cause decreased sperm production and decreased fertility.

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