

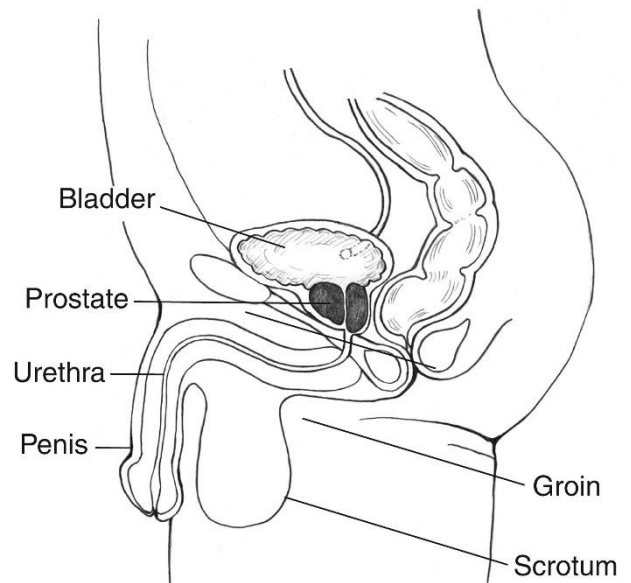
Undescended Testicles

What are the testicles (testes)?

The testicles are two oval-shaped male reproductive glands that produce sperm and the hormone testosterone. The testes, lie behind the penis in a pouch of skin called the scrotum.

How do the testicles develop in the womb?

The testicles develop in the kidney in the early stage of fetal development. By the fourth month in the womb, the testicles move down (descend) from the kidney to the groin, where they remain until around the seventh fetal month. At this point the testicles move down to take their normal position in the scrotum.



What is an undescended testicle?

Undescended testicles (also known as cryptorchidism) is where one or both of a baby boy's testicles (testes) have not moved down into their proper place in the scrotum. About 3-5 in 100 male babies have this condition, and it is more common in premature babies. 14 out of 100 babies with this condition have a relative with this condition.

There are several types of undescended testicles

1. Testicles that have not descended properly and remain within the abdominal cavity (belly). Abdominal testicles are abnormal in appearance, are not likely to be fertile, and have an increased chance of becoming malignant after puberty.
2. Testicles that did not complete their descent down and lie just outside of the scrotum.
3. Testicles that have taken a non-standard path through the body and ended up in an unusual - ectopic - location. The most common ectopic location is the space under the skin in the groin, (the superficial pouch). In this location the testicle is firmly anchored to the attached tissues. Other ectopic sites include the upper thigh (femoral region) or the area between the anus and the scrotum (perineum).
4. Testicles that move back and forth between the scrotum and the groin are called **retractile testes**. This condition can be confused with conditions #2 or #3 above, but it does not present any problems and usually requires no treatment.

In very rare cases a testicle would be missing altogether. **Congenital absence** or **agenesis** is the medical term for a condition where a testicle has never developed (sometimes the kidney on that same side of the missing testicle would be missing as well). Very rarely a testicle is lost before or just after birth due to torsion. Testicular torsion is where a blood vessel in the testicle twists and reduces the blood flow to the area. This can lead to loss of the testicle.

Why is it important for the testicles to be located in the scrotum?

There are several reasons:

1. The scrotum keeps the testicles 2-3 degrees cooler than the core body temperature. This temperature difference is important for the

development of normal testicular structure after puberty and also helps to produce fertile sperm.

2. The scrotum protects the testicles from injury.
3. The area is easily accessible for doing a physical examination. This is important because testicular cancer is the most common form of cancer in men between the ages of 15 to 35. When detected early testicular cancer is highly curable and the best way to detect this cancer early is with a monthly self-examination. This can only be done if the testes that lie within the scrotum.

How is an undescended testicle managed?

If a testicle has not descended on its own by the time a baby is 6 months old the child should be checked by a pediatric urologist. The urologist will locate the undescended testicle and in most cases will recommend surgery to place the testicle into its normal position in the scrotum.

If surgery is done, it's likely to be an orchiopexy. In this procedure, a small cut is made in the groin and the testicle is brought down into the scrotum and then fixed (or "pexed") in place. Doctors usually do this on an outpatient basis (with no overnight stay in the hospital), and most boys recover fully within a week.

When a testicle cannot be felt by a physical exam, we look for it with a special instrument (laparoscope) at the time of surgery. If possible we will do an orchiopexy and move the testicle to the scrotum, but if the testicle looks abnormal we will need to remove it. Orchiectomy is the medical name of the surgery to remove a testicle. If a boy is left with a single functioning testicle we may recommend anchoring it to minimize chances of losing it as a result of a condition called torsion. The primary causes of testicular loss during childhood are trauma and torsion. We believe that anchoring the testicle reduces the

chance developing torsion later in life. We also advise the use of a protective cup during contact sports.

What are the potential side effect of surgery to repair descendent testicles?

The short term complications of testicular surgery are bleeding and infection. Infections are uncommon and usually involve only the sutures at the skin level. Occasionally, boys will have some pain after the surgery. The overwhelming majority are eating and comfortable the day after the operation.

Long term boys and men who have undergone orchiopexy must be especially cautious to prevent a forceful injury to the groin area between the thighs (straddle injury) because it might pop the testicle out of place. They also have a higher risk for torsion that may occur in spite of the most careful anchoring procedures.

How does this condition affect fertility?

The undescended testicle - no matter how it is managed surgically - is less likely to be fertile than a normal testicle but early Orchiopexy should help to improve the chances.

What are testicle tumors?

Any male can develop a testicular tumor, and boys with undescended testes (even after orchiopexy) have a higher than average risk. Monthly self-examination of the testicles is very important because testicular cancer is usually curable with early detection. Male after puberty should learn how to do the monthly self-examination so they can learn their normal anatomy and be able to detect anything unusual such as hardening or the development of a nodule.

What is the follow-up process after surgery for undescended testicles?

We generally see orchiopey patients a few weeks after the surgery and again a few months later. If you detect anything unusual at any other time bring your child to the pediatric walk-in at Michigan Medicine Emergency Department and we will see you there. We also need to examine the patient around the time of puberty so we can assess growth of the testicle and ensure it is developing properly. Most importantly, we will use this occasion to teach the patient how to do a testicular self-exam and discuss how they can implement it in their personal routine.

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