

Undescended testis

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What is an undescended testis?

In an unborn baby boy, the testicles normally form inside the abdominal cavity and gradually descend through the groin into the scrotal sac by the time the baby is born. An undescended testis is one which has not completed this normal process of descent by the time of birth. Because of this, a testicle may be located in the abdominal cavity where it cannot be felt by the examining doctor (which means it is non-palpable); it can also be in the groin where it can be felt by the examining doctor (which means palpable).

How do undescended testes present?

All newborn babies have a full physical exam by a healthcare professional before going home. If the baby has an undescended testis, it may be found at this early stage. It may also be found by your child's family doctor during a routine checkup. Of course, it's also possible that if you don't see a testis in the scrotal sac during your child's diaper changes or bath, you can bring it up with the doctor as well.

How common is an undescended testis?

Since testicular descent occurs while the baby is developing, 30% of premature infants may have an undescended testis. At full term, about 4% of baby boys will have an undescended testicle. At one year old, only 1% of boys continue to have an undescended testis. Many of these testicles will descend within the first few months of life.

What happens if an undescended testis is not treated?

There are some concerns with leaving a testicle outside of the scrotal sac. Undescended testicles are more likely to develop testicular cancer than normal testicles; this risk can be reduced by bringing them into the scrotum before puberty. A testicle outside of the scrotal sac for a long time will be less likely to produce sperm, and may lead to infertility. To maximize fertility potential, the testis should be in the scrotal sac by the time the boy is 18 months old. Also, undescended testicles are more prone to damage or trauma when located in the groin. Finally, there is the cosmetic concern as your child ages that there is no testicle in the scrotal sac. This may cause embarrassment in the locker room or when they become sexually active.

What is the treatment for undescended testis?

There are two basic treatments:

1. **Hormonal treatment:** Testosterone, the male hormone mainly produced by the testes, is likely involved in the process of testicular descent during pregnancy, when the baby is still in utero. For this reason, drugs that produce testosterone can be used to treat some cases of undescended testis. Although hormonal treatment seems to help in about 15% of cases, it has a better result if the child has some condition associated with low testosterone.
2. **Surgery:** There are basically two surgical approaches to correct undescended testes, depending on whether the testes are palpable or non-palpable.
 - Palpable testis (80% of the cases): A cut is made in the groin to find the testicle and another cut is made in the scrotum to make a pouch into which the testis is brought down and attached to the scrotum.
 - Non-palpable testis: Three small cuts are made – one in the belly button and the other two on either side of the lower abdomen. Using a camera and two forceps, the testicle is found and freed up inside the tummy. The testis is then brought to the scrotum, similar to what is done for “palpable testis” as explained above.

What are the problems if an undescended testis is left without treatment?

There is an increased risk for infertility and tumours if undescended testes are left without treatment. Doing the surgery to bring the testis down to the scrotum decreases the risks for these problems significantly, but does not completely eliminate the risk of tumour. Your child should be reminded to perform testicular self-exams through adolescence and adulthood and he should see a doctor right away if he finds a lump or hardness on his testis.

What is a retractile testis?

A normal testis should be inside the scrotal sac and be attached to a type of “cord” that comes from the abdomen through the groin. This cord is called the “spermatic cord” and it has the veins, arteries, sperm duct (vas) and nerves that go to the testis. It also has muscles that may pull the testis up and down inside the scrotum. Some normal descended testes have a strong reflex of these muscles that pulls the testis up and down from the scrotal sac to the groin. These testes are called “retractile testes.” A retractile testis does not need any treatment and most of them will stay permanently in the scrotal sac as your child approaches puberty. A retractile testis needs to be followed by your doctor because as your child grows it may become trapped in the groin, and then it is called an “ascending testis.”

What is an ascending testis?

Ascending testis is a previously retractile testis that, with time, became trapped in the groin and does not come down to the scrotum anymore. As mentioned before, retractile testes need to be followed and if it becomes an “ascending testis,” surgery is needed to bring it down to the scrotum.

Bilateral (both sides affected) undescended testes, what are the concerns?

Usually your doctor will be able to tell if your child has undescended testes that are palpable within the groin. If your child has bilateral non-palpable testes (which means that both sides are affected), then blood tests, imaging tests or even laparoscopy needs to be done to see if the testes are inside the abdomen. Laparoscopy is done in the operating room by putting a camera inside the tummy through the belly button. The concern is that some children with bilateral “non-palpable testes” may have a condition called DSD (disorder of sexual development), in which the genitalia (penis or vulva/vagina, or even internal organs) may not have developed as they should.