

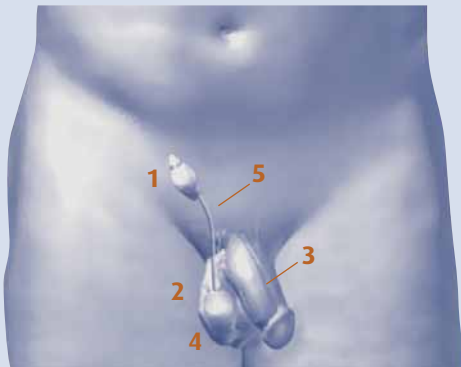


# Undescended Testes

## What are undescended testes?

Testes (testis, singular), commonly known as the testicles, are male sex glands that are responsible for producing sperm and sex hormones. Both testes are usually located inside the scrotum, next to the penis. In most boys, the testes initially grow in the abdomen and then move down into the scrotum before or just after birth.

Undescended testes (or cryptorchidism) is a condition at birth when one or both of the testes are not lowered into the scrotum, but stay in the abdomen or only move part way down into the scrotum. In many cases, the testis will descend on its own before the child is three months old. If a testis is not in the scrotum by six months of age, it is unlikely that it will descend by itself and will need to be treated.



- 1 undescended testis
- 2 normal testis position
- 3 penis
- 4 scrotum
- 5 inguinal canal

## What causes undescended testes?

Undescended testes can be unilateral (one) or bilateral (both), and are often found in babies with hormonal disorders. Physical abnormalities at birth and genetic disorders such as Klinefelter's Syndrome can also lead to undescended testes. It has been found that babies born with spina bifida and Down Syndrome are more likely to have this condition as well.

For many babies born with undescended testes, the cause is unknown.

## How common is it?

About five per cent of all boys are born with undescended testes. This number drops to around two to three per cent by six months of age because the testes often descend into the scrotum on their own during this time. Undescended testes are more common in premature male babies because the testes do not descend from the abdomen into the scrotum until the eighth month of pregnancy.

In some countries, the prevalence of cryptorchidism is thought to be increasing for reasons unknown<sup>1</sup>.

## How are undescended testes diagnosed?

Undescended testes are diagnosed through a physical examination by a qualified medical practitioner. In some cases, a missing testis can be felt in the lower abdomen. Avoiding cold temperatures during the examination is preferable, as retraction of the testes may happen.

## What are retractile testes?

Undescended testes should not be confused with retractile testes. Retractable testes are when, on occasion, the muscle attached to the testis (the cremasteric muscle) pulls the testis up into the groin so that it cannot be felt or seen. If the testis can be moved back down to the scrotum, then no further treatment is needed. Retractable testes can stay higher in the scrotum over the years, but this usually corrects itself by puberty.

## What are acquired undescended testes?

When a boy is born with testes located in the scrotum, they can occasionally move back out of the scrotum and into the groin. This is a condition called acquired undescended testes, or acquired cryptorchidism, which can happen between one and 10 years of age. The cause is thought to be that the spermatic cords attaching each testis to the body, fail to grow at the same pace as the rest of the body. The short spermatic cords slowly pull the testes out of the scrotum and inside the groin.

## What is an absent testicle?

In about five per cent of cases, there is a complete absence of the testis. It is thought with failure of testicular descent, that an interrupted blood flow may cause the developing testis to die in utero. Absent (or vanished) testis can also be associated with other birth defects of the urinary system, such as abnormal blood vessel networks to the tubes that carry sperm (vas deferens).

## Why should undescended testes be corrected?

Undescended testes are linked to a range of health problems and conditions later in life, which is why it is important to place an undescended testis back in the scrotum.

## Fertility

The temperature in the scrotum is lower than in the abdomen, and sperm-producing tubes in the testes function better at a cooler temperature. If a testis is exposed to higher temperatures than when it is in the scrotum, it can harm the production of sperm. Bringing the testis down into the scrotum between six to 12 months of age can improve semen quality and fertility later in life. Men born with bilateral undescended testes usually have very poor sperm quality, even if corrected by surgery.

## Cancer

The risk of developing testicular cancer is up to ten times greater than the general male population. This risk of testicular cancer may remain even after early placement of the testis in the scrotum. The normally descended testis opposite the undescended one is also at increased risk for cancer.

## Trauma

When a testis is trapped in an abnormal position, it is at higher risk of injury or torsion (twisting and cutting off its blood supply). A testis in the scrotum has more mobility and is less likely to be injured in ordinary activity.

## Hernia

A hernia sac, which is a lump that appears when tissue breaks through a weakened area of the abdominal wall, is almost always associated with an undescended testis. If an operation is conducted to bring the testis into the scrotum, the hernia is identified and fixed at this time.

## Poor self image

As boys age, body image becomes more important, especially during teenage years. Abnormal testes can have a negative impact on the boy's confidence and self-esteem. Placing the testis in the scrotum makes the scrotum look normal.

## How are undescended testes treated?

Undescended testes can be treated in two ways:

- An operation (orchidopexy)
- Hormone injections

The most common and preferred treatment is an operation called an orchidopexy. Surgery involves locating the testis in the abdomen or higher in the scrotum, then bringing it down into the scrotum.

In some cases, hormone injections can help the testis move down into the scrotum. The hormone injected is called human chorionic gonadotrophin (hCG), which helps the testes make male hormones. A greater amount of male hormone can move the testis down, although if it does not come down then an operation is needed. Hormone injections work best if the testis is already very close to the scrotum.

## When should surgery (orchidopexy) be performed?

As testes that are not descended at birth often come down in the first six months, it is best to wait until this age before deciding on surgery. If at six months of age the testis cannot be felt or is very high, it is unlikely that it will come down without treatment.

Occasionally the testes are too severely damaged to be brought down. They may have twisted in utero and lost their blood supply, resulting in irreversible damage and formation of scar tissue and unable to function. The testes are removed if this happens.

## What happens during surgery?

The child is put under a general anaesthetic. A cut is made in the groin to access the testis inside the passage where the testes descend into the scrotum (inguinal canal). The testis is then taken out of the inguinal canal and the spermatic cord that links the testis to the body is 'unkinked' and gently stretched to its full length. Obstructive tissue may have to be cut away to achieve this. A cut is then made in the scrotum and the testis moved down into the scrotum. Stitches are then put in place once the testis is in position to make sure the testis does not pull back out. All cuts are then closed and in most cases, the child will go home on the same day the surgery is performed.

## Are there any complications with surgery?

There are usually few complications with this surgery. Wound infection or bleeding may happen, as with any operation. It is possible to injure the testicular blood vessels or the vas deferens as these structures are very delicate. Rarely, some testes do not reach the scrotum after the first surgery and need a second surgery about a year later, to bring them into their normal position. After surgery, regular checks of the testes are needed.

## What if an adult finds he has an undescended testis?

If an adult discovers that he has an undescended testis, moving the testis into the scrotum at this point will not improve fertility levels. In adult men, an undescended testis is usually taken out. Often, if over the age of 40, nothing is done.

## Can undescended testes be prevented?

Doctors do not know how undescended testes can be prevented.

## Why must boys be told if they had undescended testes at birth?

Even though undescended testes are usually corrected in the boy's first year of life, he is at a higher risk of experiencing reproductive health problems later in life. Problems with fertility and an increased risk of getting testicular cancer are important health problems to be aware of as they grow older. Regular testicular self examination (TSE) is recommended for men born with undescended testes, especially to check for lumps or swellings that could be a sign of testicular cancer.

Reference:

- <sup>1</sup> N.E.Skakkebaek, E.Rajpert-De Meyts and K.M.Main. Testicular dysgenesis syndrome: an increasingly common developmental disorder with environmental aspects. *Human Reproduction* July 2001. 5:972-978.

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