

# Undescended Testis

## What is an undescended testis (cryptorchidism)?

During the unborn male's development, the testicles (testes) are located in the abdomen and gradually move down into the scrotum. When they descend, they pass through a small passageway that runs along the abdomen near the groin called the inguinal canal. Once through the inguinal canal, the testes reside in the scrotal sac. Since the scrotal sac is cooler than the body temperature, it is the ideal location for the testicles because they function better at this cooler temperature.

Undescended testis and cryptorchidism refer to a condition in which the testicle has not descended and cannot be brought into the scrotum with external manipulation. This occurs in 3% of newborn males and up to 21% in premature male newborns. Nearly three quarters of these move down on their own by the child's first birthday.

The undescended testis can be located in the abdomen, the inguinal canal or other more unusual locations, but most are located in the inguinal canal (80%). About 10-15% of all cases are bilateral (involve both testicles).

There is a genetic association with this condition. About 14% of boys with this condition come from families in which another male is affected also. Six percent of fathers of males with undescended testis have also had this problem.

It is very important to clarify that "**retractile testicles**" are not undescended testicles. If a testicle can be brought down into the scrotal sac, even if it retracts again upon release, it is a retractile testis. A reflex pulls the testicle up to protect it when the boy is cold or frightened. These retractile testicles are in the scrotum at other times and **do not usually require treatment**.

## Diagnosis

The discovery of an undescended testicle may be noticed by a child's parents or by a pediatrician during a physical examination. Often, no testicle can be felt; this condition is called a **non-palpable testicle** (unable to be felt on examination of the scrotal sac). Frequently, the exam shows an inguinal hernia (an area in the lower abdominal wall or inguinal canal where the intestines may protrude) as well.

## Cause

It is unknown why the testicles failed to descend. It may have been because the testicles were never normal at development or that there was a problem that leads the testicles in the wrong direction.

## Symptoms

The undescended testicle does not cause pain. The scrotal sac may look smoother, smaller, or more flat than the unaffected side.

## Complications

If an undescended testicle is not corrected, the following complications may occur as the male child grows and matures:

### Infertility

The exposure of the testicle to the higher temperature of the body, when it is not in the scrotum, may impair the sperm production. This is the most important concern and this risk increases when both testicles are undescended and orchidopexy is not performed during early childhood.

### Malignancy

An undescended testicle increases the risk of testicular cancer in adulthood. While the correction of the undescended testicle does not decrease the risk of cancer, it allows for the testicle to be properly examined in the future and early detection of cancer if it develops.

### Trauma

A testicle that is trapped in abnormal position is more likely to be injured from trauma during ordinary activity.

### Testicular Torsion

Testicular torsion is a painful condition where the testicle can twist and decrease its blood supply and eventually lead to testicular loss. This can occur more often in an undescended testicle.

## Treatment

There are two treatment options hormonal and surgical.

### Hormonal

In cases in which both sides are undescended, hormonal treatment may aid the testicles' descent into the scrotum. The hormone human chorionic gonadotropin (hcg) is given as injections over several weeks. Although it is safe and successful in proving that retractile testes are down in the scrotum, it only cures undescended testes 10-15% of the time. Later, surgery may still be indicated. Therefore, most parents prefer surgical treatment.

### Surgery

There are several possible procedures to correct this condition depending upon the **location of the testicle and the distance to the scrotal sac**.

1. **The Orchidopexy** is an outpatient (patient does not need to stay in hospital) procedure which requires general anesthesia. This is performed when the surgeon can palpate (feel) the testicle in the groin. A small incision (cut) is made in the groin (area where the leg attaches to the body); the testicle is located, freed from restrictive tissues, positioned and anchored in the scrotum. The passageway is then stitched closed to prevent the testicle from moving out of the scrotum.