Undescended testicles
Summary

- About five per cent of boys are born with undescended testicles.
- Premature and low birth weight babies are at increased risk.
- Undescended testicles are linked to a range of health problems and conditions, including hernia, testicular cancer and infertility.

Testicles (testes) are male sex glands that produce sperm and sex hormones. Usually, both testicles are located in the scrotum. Undescended testicles means that either one or both testicles are missing from the scrotum and are situated in the groin or inside the lower abdomen.

About five per cent of all boys are born with this condition. Premature and low birth weight babies are at increased risk. In about half the babies with undescended testicles at birth, the testicle will reach the scrotum in the first three months of life. If the testicle is still undescended at three months of age the baby needs to see a paediatric surgeon.

Undescended testicles should not be confused with retractile or retractable testicles. Retractable testicles are housed inside the scrotum, but they tend to tuck back inside the body under certain conditions – for example, if the boy is cold. Treatment isn’t necessary as long as the retractile testicles stay put inside the scrotum most of the time before the onset of puberty.

Other terms for undescended testicles include empty scrotum, monorchism and cryptorchidism.

Symptoms of undescended testicles

A boy with undescended testicles will have an empty scrotum on one or both sides. The condition is painless, and urination is not affected.

The development of the testicles

The testicles form inside the abdomen of the male fetus. Between 25 and 35 weeks gestation (pregnancy), the baby’s testicles migrate down slender channels in the lower abdomen (inguinal canals) and settle into the scrotum. In most cases of undescended testicles, only one testicle (testis) is affected. In around one in ten cases, both testicles are missing from the scrotum (bilateral undescended testes).

Premature babies are at increased risk of undescended testicles because the migration of the testicles hasn’t had time to occur during development in the womb. Low birth weight babies also have a higher rate of undescended testicles.

Around 17 per cent of male newborns that weigh under 2.3 kg have undescended testicles. The lower the birth weight, the higher the risk; nearly 100 per cent of male babies weighing under 907 g are born with the condition.

Problems associated with undescended testicles

Undescended testicles are linked to a range of health problems and conditions, including:

- poor self-image – abnormal testicles can have a negative impact on the boy’s confidence and self-esteem
- hernia – a boy with undescended testicles is at increased risk of inguinal hernia (abnormal bulging in the groin area)
- trauma – an undescended testicle is at higher risk of injury
- infertility – testicles are housed in the scrotum because sperm production requires a temperature a few degrees lower than the body. Undescended testicles that are not brought into the scrotum from a young age will not produce sperm. Even with surgical correction, there are higher rates of infertility in men who had undescended testicles when they were young
- testosterone (androgen) deficiency – having two undescended testes increases the risk of developing testosterone deficiency
- cancer – the risk of testicular cancer is five to 10 times higher for males with undescended testicles than for the general male population. This risk may remain even after corrective surgery, particularly if surgery is delayed to later in childhood. Testicular cancer usually occurs between the ages of 25 and 40 years.

Acquired undescended testicles

Occasionally, a boy’s testicles migrate back inside the body even though they were properly housed in the scrotum at birth. The suspected cause is that the spermatic cords, which attach each testicle to the body, fail to grow at the same rate as the rest of the child. The comparatively short spermatic cords gradually pull the testicles out of the scrotum and into the groin. This condition is known as acquired undescended testicles, or acquired cryptorchidism. It can occur when the boy is aged between one and 10 years.

Acquired undescended testis may also occur in boys who were treated for undescended testis at birth. Up to 50 per cent of boys who are treated for undescended testis as a small infant, will develop acquired undescended testes later in childhood.

Diagnosis of undescended testicles

Undescended testicles are diagnosed at three months of age if the testicle has failed to descend into the scrotum by that time. Undescended testicles are diagnosed by
physical examination. In some cases, the missing testicle can be felt in the lower abdomen.

Your child’s GP should check him for acquired undescended testicles around the time that he starts school. However, this condition can occur later in childhood, up to around 10 years of age. If you think that your child’s testes may have moved back into his groin (for example, if you cannot see his testes in his scrotum when he is in a warm bath, or if he cannot detect them himself), see a GP.

Treatment for undescended testicles

Surgery is the best treatment for undescended testicles. Ideally, the child should be aged between six months and one year at the time of surgery.

Research suggests that future sperm quality in the affected testicle is compromised if the condition is corrected after the child is two years old. However, the operation is still possible at a later age – for example, if the child developed acquired undescended testicles.

About 10 per cent of males who undergo surgical correction experience reduced fertility later in life.

Surgical repair of undescended testicles

Surgery to relocate the testicles inside the scrotum is called orchidopexy. The operation procedure generally includes:

- A general anaesthetic is given.
- An incision is made in the groin to access the testicle inside the inguinal canal (lower abdomen).
- The testicle is taken out of the inguinal canal.
- The spermatic cord that links the testicle to the body is ‘unkinked’ and gently stretched to its full length. Obstructive tissue may have to be cut away to achieve this.
- An incision is made in the scrotum.
- The testicle is placed inside the scrotum and stitched securely.
- All incisions are closed.

Vanished testicle

In about five per cent of cases of undescended testicles, surgeons can’t find the missing testicle. It is thought that the developing testicle may have died during development in the womb because of an interrupted blood flow.

Vanished (or absent) testicle is also associated with other birth defects of the urinary system, such as abnormal blood vessel networks to the tubes that carry sperm (vas deferens).

Where to get help

- Your GP (doctor)
- Maternal and child health nurse
- Paediatrician

References

- Undescended testicle, 2017, Medline Plus, National Library of Medicine and the National Institutes of Health, USA.

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betterhealth.vic.gov.au
• Men's health checks (video)
  Many men put off going to the doctor, including nutritionist, Shane Bilsborough.

• Puberty
  Adjusting to the many changes that happen around puberty can be difficult for both parents and young people.

• Reproductive system
  New life begins when a male sex cell (sperm) fertilises a female egg (ovum) within the female reproductive system.

• Safe sex
  Safe sex is sexual contact that doesn't involve the exchange of semen, vaginal fluids or blood between partners.

• Sexually transmitted infections (STIs)
  It is not difficult to avoid catching sexually transmitted infections (STIs).

Fertility and contraception

• Assisted reproductive technology – IVF and ICSI
  IVF (in-vitro-fertilization) and ICSI (intracytoplasmic sperm injection) are assisted reproductive treatment (ART) procedures in which fertilisation of an egg occurs outside the body.

• Contraception - choices
  The method of contraception you choose will depend on your general health, lifestyle and relationships.

• Contraception - condoms for men
  Condoms are the most effective way to reduce your risk of contracting a sexually transmissible infection (STI) during sex.

• Contraception - injections for men
  Contraceptive injections for men are not yet available in Australia, but clinical studies suggest that they may provide a safe, effective and reversible method of male contraception in the future.

• Contraception - vasectomy
  Having a vasectomy does not affect a man's ability to produce male sex hormones, enjoy sex or reach orgasm.

• Infertility in men
  A couple isn't suspected of fertility problems until they have tried and failed to conceive for one year.

• Klinefelter syndrome
  Klinefelter syndrome is often diagnosed at puberty, when the expected physical changes don't occur.

Penis

• Cosmetic genital surgery - labiaplasty and phalloplasty
  Cosmetic genital surgery involves reshaping the labia, vulva or penis to alter their size or shape.

• Diabetes and erectile dysfunction
  Men with diabetes are more prone to problems with erectile dysfunction or impotence.

• Erectile dysfunction
  Common causes of erectile dysfunction include physical illness, anxiety and too much alcohol.

• Foreskin care
  Regular cleaning under the foreskin is essential to prevent infection.

• Male Circumcision
  Male circumcision involves the surgical removal of the foreskin of the penis.

• Peyronie's disease
  Peyronie's disease causes abnormal fibrous lumps that make an erect penis curve.

• Premature ejaculation
  Premature ejaculation is only a problem if it happens frequently.
Prostate

- Non-specific urethritis (NSU)
  Non-specific urethritis (NSU) means any inflammation of a man's urethra that is not caused by gonorrhoea.

- Prostate cancer
  Prostate cancer can be treated in a variety of ways, so discuss treatment options with your doctor.

- Prostate cancer - androgen deprivation therapy
  One of the treatments for prostate cancer is androgen deprivation therapy (previously called hormone therapy).

- Prostate cancer testing
  Men with a family history of prostate cancer, or men who have had a raised test result in the past, will benefit most from regular testing.

- Prostatectomy - for cancer
  The aim of a radical prostatectomy is to remove the cancer before it spreads to other parts of the body.

- Prostate disease
  The prostate gland produces fluids that protect and feed sperm cells.

- Prostate gland and urinary problems
  Many men experience urinary changes as they age, which may be caused by inflammation or enlargement of the prostate gland.

- Transurethral resection of the prostate (TURP) - for benign prostate disease
  Surgery on the prostate gland can have many side effects, including erectile problems and urinary incontinence.

Testicles

- Androgen deficiency in men
  The effects of androgen deficiency depend on how severe the deficiency is, its cause and the age at which the deficiency begins.

- Contraception - vasectomy
  Having a vasectomy does not affect a man's ability to produce male sex hormones, enjoy sex or reach orgasm.

- Epididymitis
  Epididymitis is an infection that causes inflammation of the epididymis.

- Infertility in men
  A couple isn't suspected of fertility problems until they have tried and failed to conceive for one year.

- Klinefelter syndrome
  Klinefelter syndrome is often diagnosed at puberty, when the expected physical changes don't occur.

- Testicular cancer
  Early diagnosis and treatment can cure almost all cases of testicular cancer.

- Testicular self examination
  Men with an increased risk of testicular cancer should regularly examine their testicles for unusual lumps or swellings.

- Undescended testicles
  Undescended testicles means that one or both testicles are missing from the scrotum.

Hormones and men

- Ambiguous genitalia
  The causes of ambiguous genitalia include genetic variations, hormonal imbalances and malformations of the fetal tissues that are supposed to evolve into genitals.

- Androgen deficiency in men
  The effects of androgen deficiency depend on how severe the deficiency is, its cause and the age at which the deficiency begins.

- Infertility in men
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- **Reproductive system**
  
  New life begins when a male sex cell (sperm) fertilises a female egg (ovum) within the female reproductive system...

**Related Information**

- **Testicle injuries and conditions**
  
  If you injure your testicles, always seek urgent medical advice...

- **Testicular cancer**
  
  Early diagnosis and treatment can cure almost all cases of testicular cancer...

- **Testicular self examination**
  
  Men with an increased risk of testicular cancer should regularly examine their testicles for unusual lumps or swellings...

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- **Transurethral resection of the prostate (TURP) - for benign prostate disease**
  
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**Related information on other websites**

- Andrology Australia.
- KidsHealth – Nemours Foundation (USA).

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