PROCEDURE

Undescended testicle repair

Surgery that moves an undescended testicle into the scrotum and secures it there.

PURPOSE
Move and secure an undescended testicle in the scrotum

PROCEDURE TYPE
Therapeutic surgery, performed through open or laparoscopic techniques

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General

HOW LONG IT TAKES
Usually 45-90 minutes; longer for complex or bilateral surgery

PREPARATION
Fasting and medication instructions from the surgical team

RECOVERY
Usually same day; no driving for 24 hours after anaesthesia

MAIN RISKS
Bleeding, infection, testicular shrinkage, or testicle moving upward again

RESULTS
Position known immediately; pathology takes days if tissue is removed

Overview

Undescended testicle repair is surgery to move a testicle into the scrotum, the sac of skin below the penis, and secure it there. The operation is most often performed in babies and young children. Older children, teenagers, and adults may also need treatment.

The usual operation is called an orchiopexy or orchidopexy . If the testicle can be felt in the groin, the surgeon generally operates through small cuts in the groin or scrotum. If it cannot be felt, keyhole surgery called laparoscopy may be used to look inside the abdomen.

A high testicle may need two operations several months apart. If the testicle is absent, severely underdeveloped, or no longer healthy, the surgeon may recommend removing the remaining tissue instead of moving it.

Why the procedure is performed

Before birth, the testicles normally move from the abdomen into the scrotum. Surgery may be offered when one or both testicles have not moved down on their own, or when a testicle that was previously in the scrotum has moved upward.

Placing the testicle in the scrotum may:

An undescended testicle has a higher long-term risk of testicular cancer. Surgery, particularly before puberty, may reduce this risk but does not remove it completely.

Guidelines generally support treatment after six months of corrected age, meaning age adjusted for premature birth, with surgery usually completed during early childhood. Timing may be different for an older child or adult.

- Support its growth and future sperm-producing function
- Make examination for lumps or other changes easier
- Correct an associated groin hernia
- Lower the chance of twisting or injury
- Improve the appearance and symmetry of the scrotum

Who should and should not have it

The procedure may be recommended when a testicle remains undescended after the early months of life, can be felt in the groin, is located inside the abdomen, or has moved upward after previously reaching the scrotum.

A retractile testicle usually does not need surgery. This is a testicle that can be gently moved into the scrotum and stays there temporarily. It should still be checked over time because it can later become an ascending testicle.

Surgery may be delayed if you or your child has:

In some people after puberty, especially when an abdominal testicle is very small or unhealthy, removal may be more appropriate than orchiopexy. The choice considers testicular health, cancer risk, fertility goals, hormone function, and the condition of the other testicle.

- A fever, chest infection, stomach illness, or other acute illness
- An infection or irritated skin near the planned surgical area
- A bleeding problem that has not been assessed

- A medical condition that makes general anaesthesia temporarily unsafe

How to prepare

The treating facility's own instructions take priority because fasting and medication rules can differ.

You will be told when to stop food, milk, breast milk, formula, and clear liquids before general anaesthesia. Not following these instructions may mean the operation has to be postponed.

Give the surgical team a current list of medicines, vitamins, and supplements. Mention blood thinners like warfarin or apixaban , bleeding disorders, allergies, previous reactions to anaesthesia, and any recent illness. Do not stop a prescribed medicine unless the treating team tells you to.

Arrange transport home and an adult to provide supervision after surgery. Follow instructions about bathing and what to bring to the hospital.

What happens during the procedure

General anaesthesia keeps you or your child unconscious and free of pain during the operation. The anaesthesia team may also use local anaesthetic around the wound to reduce pain afterward.

For a testicle that can be felt, the surgeon makes a small cut in the groin or scrotum. The testicle and its blood vessels are carefully freed so they can reach the scrotum without tension. A small pocket is created in the scrotum, and the testicle is secured inside it. Any associated groin hernia is usually repaired at the same time.

If the testicle cannot be felt, the surgeon may insert a small camera through the abdomen. This can show whether the testicle is inside the abdomen, absent, or only a small remnant.

A high abdominal testicle may not reach the scrotum safely in one operation because its blood vessels are short. A staged operation can allow another blood supply to develop before the testicle is moved.

The cuts are closed with stitches, often dissolvable ones. Tissue may be sent to a laboratory if an unhealthy testicle or remnant is removed.

Recovery and what to expect afterward

Pain: Mild to moderate soreness, swelling, and bruising around the groin or scrotum are common. Pain usually improves over several days. Use pain medicine only as directed by the treating team.

Eating: Nausea can occur after general anaesthesia. Clear fluids and light food are often offered first, followed by a usual diet as tolerated.

Activity: Quiet activity is encouraged at first. Avoid rough play, sports, cycling, straddle toys, and heavy lifting until the surgeon says they are safe. Follow the wound instructions about bathing, swimming, dressings, and supportive underwear.

Driving: An adult who has received general anaesthesia should not drive for at least 24 hours or while taking medicine that causes drowsiness. A child must be driven home and supervised by a responsible adult.

Work or school: Many children return to school or childcare within several days, once comfortable and no longer needing frequent pain relief. Adults may need several days to a week away from work, with longer recovery for physical jobs or more complex surgery.

Risks and possible complications

Most people recover without a serious problem, but possible complications include:

A testicle that was high in the abdomen or already poorly developed may have a greater chance of shrinking after surgery. Further surgery is sometimes needed.

- Bleeding, bruising, or a collection of blood in the scrotum
- Infection of the wound
- Damage to the testicle, sperm-carrying tube, or nearby structures
- Reduced blood flow causing the testicle to shrink or stop functioning
- The testicle moving upward again
- An unsatisfactory position or appearance
- A groin hernia returning
- Risks related to general anaesthesia

Results and follow up

The surgeon usually knows immediately whether the testicle reached a suitable position. If

tissue was removed, laboratory results generally take several days.

A routine follow-up appointment checks wound healing, testicle position, and blood supply. Later examinations may assess whether the testicle is growing and remains in the scrotum.

Orchiopexy does not guarantee normal fertility, particularly when both testicles were undescended. It also does not eliminate the increased risk of testicular cancer. After puberty, learning how the testicles normally feel can make it easier to notice a new lump or change.

Alternatives

The realistic alternatives depend on age, testicle position, and testicular health.

- Observation: Appropriate for some young babies while spontaneous descent is still possible, and for retractile testicles. Waiting longer than advised may reduce the benefits of early treatment.
- Hormone treatment: Injections or nasal hormones have been used to encourage descent, but success is limited and the testicle may move upward again. Major urology guidelines generally do not recommend hormones as the main treatment.
- Removal of the testicle: May be considered for a severely damaged or very small testicle, particularly after puberty. This avoids preserving unhealthy tissue but permanently removes that testicle.
- No treatment: Avoids surgery and anaesthesia, but leaves concerns about examination, twisting, hernia, fertility potential, appearance, and cancer risk.
- Testicular prosthesis: A cosmetic implant can fill an empty scrotum but does not produce sperm or hormones. Placement may be delayed until later growth.

When to call your healthcare team

Contact the surgical team promptly for:

A small amount of bruising and swelling is often expected. Routine questions about dressings, bathing, activity, pathology results, or follow-up can usually wait for office hours.

Seek emergency care for difficulty breathing, inability to wake normally, severe uncontrolled bleeding, collapse, or rapidly worsening swelling with severe pain.

- Fever or worsening illness
- Increasing redness, warmth, swelling, or discharge from the wound

- Pain that is worsening or not controlled as instructed
- Repeated vomiting or difficulty keeping fluids down
- Trouble passing urine
- A wound that opens
- A testicle that seems to have moved out of the scrotum

Common questions

Will I or my child be asleep?

Yes. Undescended testicle repair is normally performed under general anaesthesia. Local anaesthetic may also be used around the wound for pain control.

Can I drive home afterward?

No. Arrange for someone else to drive. An adult should not drive for at least 24 hours after general anaesthesia, or longer if still drowsy or taking sedating pain medicine.

How painful is it?

Soreness, swelling, and bruising are expected, but pain is usually manageable with the plan provided by the surgical team. Pain should gradually improve rather than worsen.

When will we know whether it worked?

The surgeon can usually confirm the testicle's position immediately. Follow-up examinations show whether it remains in place and continues to grow.

Will another operation be needed?

Most repairs are completed in one operation. A high abdominal testicle may require a planned two-stage repair. Another procedure may also be needed if the testicle moves upward or loses its blood supply.

Will fertility be normal afterward?

Surgery can improve the conditions for testicular development, but it cannot guarantee fertility. Future fertility is more likely to be affected when both testicles were undescended or when treatment occurred later.

Sources

- American Urological Association. Evaluation and Treatment of Cryptorchidism Guideline



- European Association of Urology. EAU Guidelines on Paediatric Urology: Management of Undescended Testes
- NHS. Undescended testicles
- British Association of Urological Surgeons. Orchidopexy in Children
- Kurz D, Tasian G. Current Management of Undescended Testes. Current Treatment Options in Pediatrics. 2016;2:43-51