PROCEDURE

Hydrocele repair

Hydrocele repair is surgery to remove or close the fluid-filled sac around a testicle.

PURPOSE
Remove fluid and reduce scrotal swelling or discomfort

PROCEDURE TYPE
Therapeutic - surgical repair of the fluid-filled sac

WHERE IT IS DONE
Operating theatre, usually as day surgery

ANAESTHESIA
General, or local anaesthesia in selected adults

HOW LONG IT TAKES
About 30 to 90 minutes

PREPARATION
Fasting and medication review, especially blood thinners

RECOVERY
Same day usually; no driving home after anaesthesia

MAIN RISKS
Bleeding, infection, persistent swelling, recurrence

RESULTS
Repair is immediate; swelling settles over several weeks

Overview

Hydrocele repair, also called hydrocelectomy, is surgery for a hydrocele. A hydrocele is a collection of fluid around a testicle that causes swelling in the scrotum.

During the operation, the surgeon drains the fluid and removes, folds, or turns back the tissue that produced or contained it. In babies and children, the surgeon may instead close an open passage between the abdomen and scrotum.

The operation is usually planned in advance and completed as day surgery. Most people go home after recovering from the anaesthetic.

Why the procedure is performed

A hydrocele does not always need treatment. Surgery may be offered when the swelling:

Before recommending surgery, your healthcare team may examine the scrotum and use an ultrasound scan. This helps confirm that the swelling is fluid and checks the testicle and surrounding tissues.

In an adult, a new hydrocele can occasionally develop alongside inflammation, injury, or another testicular condition. The cause may need to be assessed before repair is planned.

- Causes pain, heaviness, irritation, or difficulty walking
- Is large or continues to grow
- Interferes with exercise, work, sex, or daily activities
- Makes it difficult to examine the testicle
- Persists or is linked to an open passage in a child
- Returns after another treatment

Who should and should not have it

Hydrocele repair may be appropriate if you have a confirmed hydrocele that is uncomfortable, troublesome, persistent, or increasing in size. Your preferences matter because a small hydrocele that is not causing problems can often be watched.

Surgery may be avoided or delayed if:

Do not stop a prescribed blood thinner like warfarin or apixaban on your own. Your surgical team will decide whether it should be continued, paused, or changed.

Hydroceles in babies often improve as the passage between the abdomen and scrotum closes naturally. Observation may therefore be appropriate. Earlier surgery may be considered if there is a suspected groin hernia, another testicular problem, or persistent swelling that is unlikely to settle.

- The diagnosis is uncertain or the testicle has not been fully assessed
- There is an active skin, urinary, or scrotal infection
- Another condition causing the swelling needs treatment first
- Bleeding risk is unusually high
- A medical condition makes anaesthesia unsafe until it is better controlled
- The hydrocele is small and not causing meaningful problems

How to prepare

Your treating facility's own instructions take priority because fasting rules, medication plans, and arrival times differ.

Tell the team about all prescription medicines, over-the-counter products, vitamins, and supplements you use. Make sure they know if you take medicines that affect clotting, such as anticoagulants or antiplatelet medicines.

You may be asked to:

Tell the facility if you develop a fever, infection, new rash, or other illness before the operation. They will tell you whether the procedure should go ahead.

- Stop eating and drinking for a set time before anaesthesia
- Shower before arriving and avoid creams on the surgical area
- Arrange for an adult to take you home
- Arrange help at home for the first day
- Bring supportive underwear for the journey home

What happens during the procedure

The anaesthesia team checks you before surgery. Most repairs are performed under general anaesthesia, meaning you are unconscious. Selected adults may have local anaesthesia to numb the area, sometimes with medicine that makes them relaxed or sleepy.

For a typical adult repair, the surgeon makes a small cut in the scrotum. The fluid is drained, and the hydrocele sac is opened. The surgeon may remove part of the sac, fold it, or turn it behind the testicle to reduce the chance of fluid collecting again.

The tissues are checked for bleeding and the incision is closed, usually with dissolving stitches. A dressing and scrotal support may be applied. A temporary drain is sometimes used if the surgeon expects fluid or blood to collect.

In a child with an open connection to the abdomen, the incision is commonly made in the groin. The surgeon closes the connection and deals with the fluid around the testicle.

The procedure usually takes about 30 to 90 minutes. You then move to a recovery area while the anaesthetic wears off.

Recovery and what to expect afterward

Pain: Mild to moderate soreness, bruising, and a pulling sensation are common. The scrotum may look more swollen at first than it did before surgery. Use pain relief according to your discharge instructions. A wrapped cold pack and supportive underwear may help if your team recommends them.

Eating: You can usually drink and then eat when you are awake and not feeling sick. Start with light food if anaesthesia has unsettled your stomach.

Activity: Gentle walking is encouraged, but rest when needed. Avoid strenuous exercise, heavy lifting, cycling, swimming, and sex until your surgeon says the wound has healed enough. Keep the incision clean and follow the facility's bathing instructions.

Driving: You cannot drive yourself home. Do not drive while affected by anaesthesia, strong pain medicine, pain, or restricted movement. Your discharge instructions will explain the minimum waiting period and any insurance requirements.

Work: People with desk-based jobs may return sooner than those whose work involves lifting, climbing, driving, or prolonged standing. Some need several days away; physically demanding work can require longer.

Swelling and firmness can last for several weeks. This does not necessarily mean the hydrocele has returned.

Risks and possible complications

Hydrocele repair is established surgery, but complications are possible. These include:

Some swelling is expected after surgery. A large haematoma or infection may require further treatment, and occasionally another procedure.

Ask your surgeon how these risks apply to you, particularly if you have had previous groin or scrotal surgery, take blood-thinning medicine, or have other health conditions.

- Bleeding or a collection of blood called a haematoma
- Wound or deeper infection
- Ongoing bruising, swelling, or fluid collection
- The hydrocele returning
- Persistent scrotal or testicular pain
- An obvious scar or altered scrotal shape

- Injury to the testicle, its blood supply, or the sperm-carrying tube
- Reactions to anaesthesia or blood clots

Results and follow up

The fluid is removed during the operation, but swelling can hide the final result at first. The scrotum generally becomes softer and smaller as healing progresses over the following weeks.

Your team will tell you whether you need a routine wound check or surgical appointment. Dissolving stitches usually disappear on their own. If non-dissolving stitches or a drain were used, you will be given a removal plan.

Hydrocele tissue is not always sent to a laboratory. If tissue is examined, the report usually takes several days or longer. Your team should explain how and when you will receive the result.

Attend routine follow-up if swelling is not steadily improving, the wound is slow to heal, or you are concerned that the hydrocele has returned.

Alternatives

The main alternatives depend on the hydrocele's size, its effects on you, and why it developed.

Observation avoids surgery and anaesthesia. It is reasonable for a small or comfortable hydrocele, but the swelling may remain or enlarge. It does not provide a tissue sample or correct an open abdominal connection.

Aspiration uses a needle to drain the fluid. It avoids an incision and may suit someone who cannot undergo surgery, but fluid commonly builds up again. Aspiration can also cause bleeding or infection.

Aspiration with sclerotherapy drains the fluid and injects a substance intended to seal the sac. Recovery may be shorter than after surgery, but pain, inflammation, recurrence, and repeat treatments are possible. Availability differs between centres.

Treating an underlying problem may be appropriate when swelling is related to infection, inflammation, injury, or another condition. This may not remove a hydrocele that has already become persistent.

There is no medicine that reliably removes a typical established hydrocele.

When to call your healthcare team

For routine advice, contact your surgical team if swelling is not gradually settling, discomfort continues longer than expected, or you have questions about returning to work, exercise, or sex.

Seek urgent same-day medical advice for:

Seek emergency care for sudden severe testicular pain, heavy bleeding, fainting, chest pain, or difficulty breathing. Sudden testicular pain needs prompt assessment because it may have a cause unrelated to the recent hydrocele repair.

- Increasing redness, warmth, or pus from the wound
- Fever or feeling increasingly unwell
- Pain that is worsening or not controlled as instructed
- Rapidly increasing swelling or extensive bruising
- Persistent bleeding or the wound opening
- Difficulty passing urine
- A drain that falls out or suddenly stops working

Common questions

Will I be asleep for hydrocele repair?

Most people have general anaesthesia and are unconscious. Some adults can have local anaesthesia, with or without sedation. Your anaesthesia plan will be discussed before surgery.

Can I drive home afterward?

No. Arrange for another adult to take you home. Do not drive again until the anaesthetic restrictions have passed and you can comfortably perform an emergency stop.

How painful is hydrocele surgery?

Soreness, bruising, and swelling are expected, especially during the first few days. Pain should gradually improve. Worsening or severe pain needs medical advice.

When will I know if it worked?

The fluid is removed immediately, but postoperative swelling may take several weeks to settle. Your final result is easier to judge after healing.

Will the hydrocele come back?

It can recur, although surgery is intended to provide a lasting repair. New or increasing swelling should be examined rather than assumed to be another hydrocele.

Will it affect fertility or sexual function?

The operation does not usually affect erections or fertility. Injury to the testicle or sperm-carrying structures is possible but uncommon and should be discussed before consent.

Sources

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