

Procedure information

Laparoscopic / robotic varicocele repair

What is a varicocele?

The testicular veins are blood vessels which carry blood away from your testicle (towards your heart).

A varicocele occurs when blood flows the wrong way in the testicular veins (towards your testicle, away from your heart). This causes blood to pool in the testicular veins which becomes swollen. The swollen veins are known as a 'varicocele'.

A varicocele is more common on the left side, but can occur on the right side, or both sides at the same time.

Why is a varicocele required?

Varicoceles are common, not dangerous, and often don't require any treatment.

Sometimes varicoceles can cause:

- A visible mass/lump in the scrotum, which is often described as feeling like a 'bag of worms'.
- Pain in the scrotum.
- Reduced fertility, due to impaired sperm production (Oligospermia).
- Slow growth of the testicle during puberty (Testicular hypoplasia).

A varicocele repair may be considered if a varicocele is causing one or more of these issues.

What does a varicocele involve?

A varicocele repair (also called a varicocele ligation or a varicocelectomy) is an operation to ligate (tie off) the testicular veins where they enter your abdomen. This stops blood from flowing the wrong way and pooling in the testicular veins.

Varicocele repair is performed in hospital under a general anaesthetic (completely asleep). It is performed as a minimally invasive 'keyhole' procedure using laparoscopic or robotic surgical equipment.

We inflated your abdominal cavity with carbon dioxide gas to create space to perform the operation. We make 3 – 5 keyhole incisions in your abdomen through which we insert the laparoscopic/robotic surgical instruments.

The testicular veins are located and clipped or cauterised.

After a varicocele repair, your body will divert blood away from your testicle via an alternative vein, so the blood supply to your testicle will not be affected.

The operation is usually performed as day surgery – you can go home on the same day if you are accompanied by a responsible adult. Sometimes a one-night hospital stay is required.

What is the recovery after a varicocele?

It is common to have a few days of mild to moderate pain in the wounds, your scrotum, and your shoulder/neck (from the gas in your abdomen) after the operation. This can usually be well controlled with tablet pain relief.

You will need to rest for the first day or two after the operation.



Procedure information

Laparoscopic / robotic varicocele repair

You will need to wear tight fitting scrotal support (such as speedos, a jock strap, or two pairs of tight underwear) for at least one week after the operation.

You can usually return to sedentary work two to four days after the operation.

You can usually return to gentle exercise approximately four days after the operation.

You will need to avoid strenuous exercise, cycling, and heavy lifting for at least three-four weeks after the operation.

You will not be able to swim for two weeks after the operation.

You can usually start driving two to four days after the operation.

You can resume sexual activity when you feel comfortable doing so. For most men this will be approximately two weeks after the operation.

What is the chance of a successful outcome with a varicocele repair?

Varicocele repair successfully stops blood pooling in the testicular veins in 90-95% of cases. Occasionally the varicocele can recur in the future.

After varicocele repair, the size of the mass in your scrotum should reduce, but it usually won't go away completely.

If the operation is performed for pain, varicocele repair should improve or resolve your pain. However, there are many different causes for scrotal pain. If the varicocele isn't the cause of your pain, it may not improve after the operation.

If the operation is performed to improve fertility, it can take 3 – 12 months for your sperm quality to improve. 50-70% of men who have a varicocele repair will have improvement in sperm quality on testing. However, infertility is often due to multiple factors, so improved sperm quality doesn't always increase your chance of having a pregnancy.

If you have a small testicle due to a varicocele, varicocele repair can lead to 'catch up' growth of the testicle in teenagers, but usually doesn't result in increased testicular size in adult men.

What are the risks of a varicocele?

The risks of this procedure include (but are not limited to):

Occasional risks (1/10 to 1/50):

- Problems with the wounds, including infection, the wounds splitting open, or developing a hernia.
- Developing a collection of fluid around your testicle (a hydrocoele), which may require further surgery to correct.

Rare risks (1/50 to 1/250):

- Bleeding in the abdomen, requiring a blood transfusion or another operation to correct.
- Infection in the abdomen, requiring antibiotics or another operation to correct.
- Damage to the blood supply to your testicle, causing your testicle to shrink or die.

Very rare risks (<1/250):

- Damage to another organ inside the abdomen, such as the bowel, requiring another operation to correct.
- Needing to convert from a keyhole operation to an open operation via a bigger incision.

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Procedure information

Laparoscopic / robotic varicocele repair

Other uncommon or very uncommon risks of surgery and anaesthesia include:

- Blood clots in the legs (Deep vein thrombosis (DVT)) or lungs (Pulmonary embolus).
- Chest infection (Pneumonia).
- Heart attack.
- Stroke.
- A serious allergic reaction (Anaphylaxis).
- Death.

What are the alternative treatment options?

- No treatment.
- Conservative management - tight fitting scrotal support, pain relief.
- Radiological embolisation of the varicocele - inserting metal coils into the testicular vein by accessing it through a vein in your leg.
- Open repair of the varicocele - ligating the testicular vein through a single larger incision.

This is general information only. Please consult your doctor for more information and treatment options.

For appointments and enquiries please contact 07 3830 3300.