

Patient information from BMJ

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Varicocele

A varicocele is a soft lump in your scrotum caused by swollen veins. It's usually harmless, but it can sometimes cause problems and need treatment.

You can use our patient information to talk to your doctor and decide whether treatment is right for you.

What is a varicocele?

A varicocele happens if some of the veins in your testicles swell up with blood. You can think of it as having varicose veins in your testicles. About 15 in every 100 healthy men and teenage boys get a varicocele.^[1]

Most varicoceles don't cause any problems, but they can in some people. For example, if you're a teenager, it may stop the growth of your testicles. And if you're an adult, a varicocele could make it harder for you to have children.

It's not clear what the exact cause of a varicocele is. But most doctors believe it has something to do with the valves in the veins that drain blood away from the testicles. Valves are flaps of tissue that help to control the flow of blood in a vein.

What are the symptoms of a varicocele?

Varicoceles don't usually cause any symptoms. Most men and boys won't even know they have one until they visit a doctor for other reasons.

But larger varicoceles may cause a visible swelling at the top of your scrotum. Because a varicocele is caused by swollen veins, people often say it feels like a "bag of worms". Sometimes people with a varicocele also get a dull pain or ache in their testicles, although this is uncommon.

Varicoceles almost always affect the left side, but you can sometimes get it on both sides. It's very rare to have a varicocele on the right side alone.

Diagnosing a varicocele is usually simple as your doctor will just do a physical exam. But in some cases an ultrasound scan might also be needed. Your doctor might also suggest further testing of your sperm and hormone levels if you're finding it hard to have children.

What are the treatment options for a varicocele?

If your varicocele isn't causing any problems, you may not need treatment. Your doctor may simply monitor your varicocele for any changes during regular checkups.

But a surgeon may recommend a repair of your varicocele in certain situations. For example, if:

- it's causing you pain;
- you're a teenager and it is affecting the growth of your testicles; or
- it is affecting your fertility.

There are a few different types of repair, but they all involve closing off the affected veins in the scrotum. Doing this allows the healthy veins to take over instead, so the blood flow in your testicles goes back to normal.

If you're offered treatment, you can talk to your surgeon about which option is best for you.

Varicocele repair

Surgical repair

An operation to **tie off the swollen veins** in your scrotum can treat a varicocele. This will be with a general anesthetic, so you won't be awake during the operation.

The repair can be done as keyhole surgery, through several small cuts in your lower abdomen. Or it can be done as open surgery, through one larger cut in your lower abdomen.

Not many people get problems after this type of surgery. But having any kind of operation will mean there's a risk of pain or infection afterward. Other risks of surgery are:

- If your surgeon accidentally damages the artery that takes blood to the affected testicle, it could cause your testicle to shrink.
- A condition called hydrocele, which is a build-up of fluid around one or both testicles. Usually this goes away without treatment.

Embolisation and sclerotherapy

There are other procedures for varicocele that focus on **blocking the swollen veins** instead. You'll be given a local anesthetic to numb your groin in this case.

Your surgeon will insert a needle into a vein in your groin. A fine tube will then be passed through the needle into the swollen veins. The surgeon can then:

- Use metal coils to block the veins (known as embolisation).
- Inject a chemical that causes the veins to collapse (known as sclerotherapy).

Problems from this type of repair aren't common, but some people may get a bruise where the needle was put in and some discomfort afterward. It's also possible for a coil blocking a vein to move out of place, although this is fairly uncommon.

What happens next?

Most people don't get any problems from their varicocele and won't need treatment. But if your varicocele is causing problems, treatment may help. Treatment usually relieves the pain you might be getting from a varicocele too.

If you do have a repair, it will usually be as a day-case. This means you'll go into hospital for treatment and then go home on the same day.

Your surgeon will give you specific advice about how to look after yourself after your repair. This might include:

- taking painkillers and wearing supportive underwear to help with pain and discomfort; or
- avoiding strenuous activities for a few weeks.

You will also need to have regular check-ups with your surgeon in the first year after treatment.

About 75 in every 100 teenage boys who've had their testicle growth affected by a varicocele will see their testicle 'catch up' in size after surgery.^[2] And almost all men with a varicocele will see the quality of their sperm get better after any type of repair.

It's possible for a varicocele to come back after treatment, but this is uncommon. Always see your doctor if you do notice any new lumps or swellings in your testicles. Your doctor will want to make sure that it's not anything serious and rare, like testicular cancer.

Even if you don't need any treatment for your varicocele, your doctor will still want to monitor you.

If you're a teenager, this will usually be done yearly to see if your testicles are growing as normal. And if you're an adult, your sperm will probably be tested every 1 to 2 years to check they're healthy.

1. Alsaikhan B, Alrabeeah K, Delouya G, et al. Epidemiology of varicocele. *Asian J Androl*. 2016 Mar-Apr;18(2):179-81.
2. Li F, Chiba K, Yamaguchi K, et al. Effect of varicocelectomy on testicular volume in children and adolescents: a meta-analysis. *Urology*. 2012 Jun;79(6):1340-5.

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