

Patient information

Varicocele

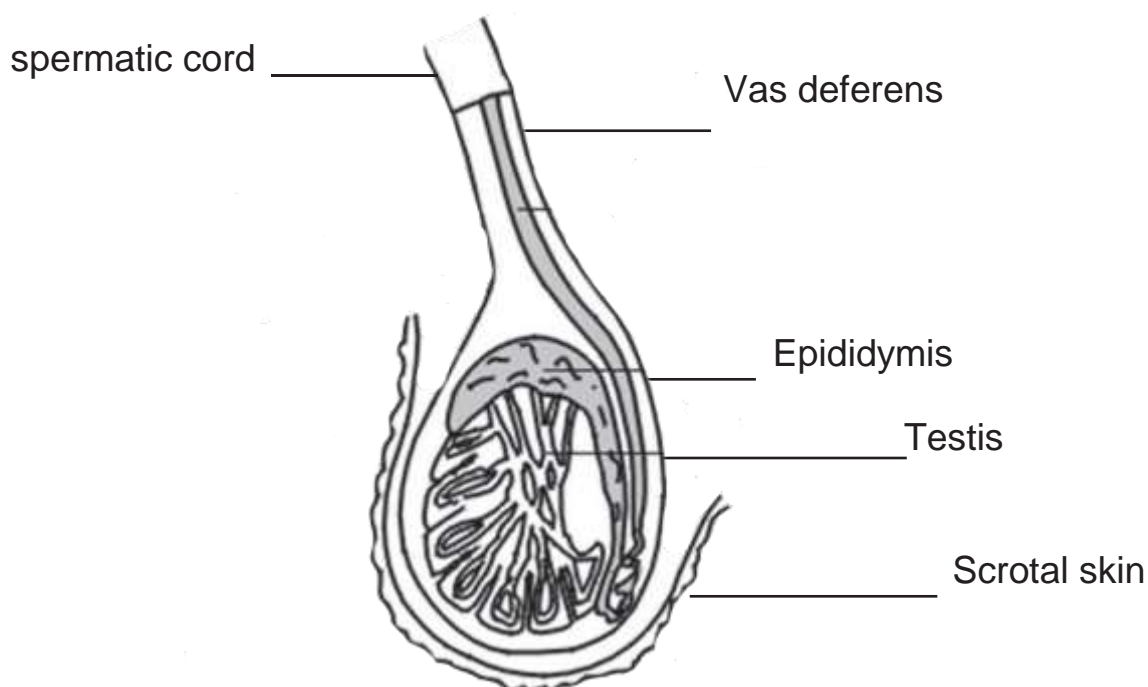
Urology Department

A varicocele is like ‘varicose veins’ of the small veins next to one or both testes. It usually causes no symptoms. It may cause discomfort in a small number of cases. Treatment is not usually needed as most men do not have any symptoms or problems caused by the varicocele. If required, an operation can clear a varicocele.

What is a varicocele?

A varicocele is a collection of enlarged (dilated) veins (blood vessels) in the scrotum. It occurs next to and above one or both of the testes (testicles).

A testis (testicle) looking from the left side



The affected veins are those that travel in the spermatic cord.

The spermatic cord is like a ‘tube’ that goes from each testis up towards the lower abdomen. You can feel the spermatic cord above each testis in the upper part of the scrotum.

The spermatic cord contains the vas deferens (the tube that carries sperm from the testes to the penis), blood vessels, lymphatic vessels, and nerves.

Normally, you cannot see or feel the veins in the spermatic cord that carry the blood from the testes. If you have a varicocele, the veins become bigger (they enlarge or dilate) and this makes them more prominent. It is similar to varicose veins of the legs. The size of a varicocele can vary. A large varicocele is sometimes said to look and feel like 'a bag of worms' in the scrotum.

Who gets a varicocele?

Varicoceles are common. About one in seven men develop a varicocele - usually between the ages of 15 and 25. In about half of cases the varicocele is on the left hand side. In just under half of cases there is one on both sides. In a small number of cases it is on the right side. The reason why most occur on the left side is because of the different route the left veins takes out of the scrotum compared to the right.

What are the symptoms?

Varicoceles are usually painless and usually cause no symptoms. Some men may notice a 'dragging' feeling or slight discomfort from their varicocele. This may only occur at the end of the day, especially if you are on your feet all day. The size of a varicocele varies from case to case.

Some cannot be seen, only felt. Some are large and can be easily seen. If you lie down, the blood from the veins drains away and the varicocele may seem to disappear. On standing, gravity will cause the blood to pool again and the varicocele reappears.

Are varicoceles serious?

In themselves they are usually harmless. Causes of concern include the following:

Possible cause of infertility

Studies have shown that there is a higher rate of infertility in men with a varicocele compared to those who did not have a varicocele. It is thought that the pooled blood causes a slightly higher temperature in the scrotum than normal.

This may reduce the number and quality of sperm made by the testis which can reduce fertility. Even if you have a varicocele only on one side, both testes can be warmed by the increased amount of blood pooled in the enlarged veins.

However, most men with varicoceles are not infertile. It is just that the chance of being infertile is increased if you have a varicocele.

Small testis

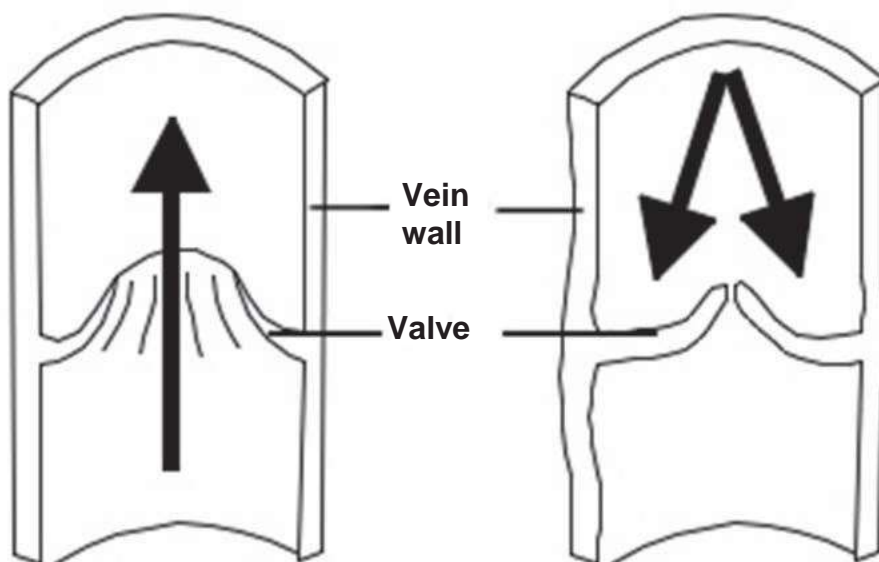
The testis on the side of the varicocele may become smaller, or not develop as much as the other side. This may contribute to infertility too.

Sudden onset of a varicocele in an older man

Rarely, a varicocele is a symptom of a blockage of a larger vein in the abdomen (see below).

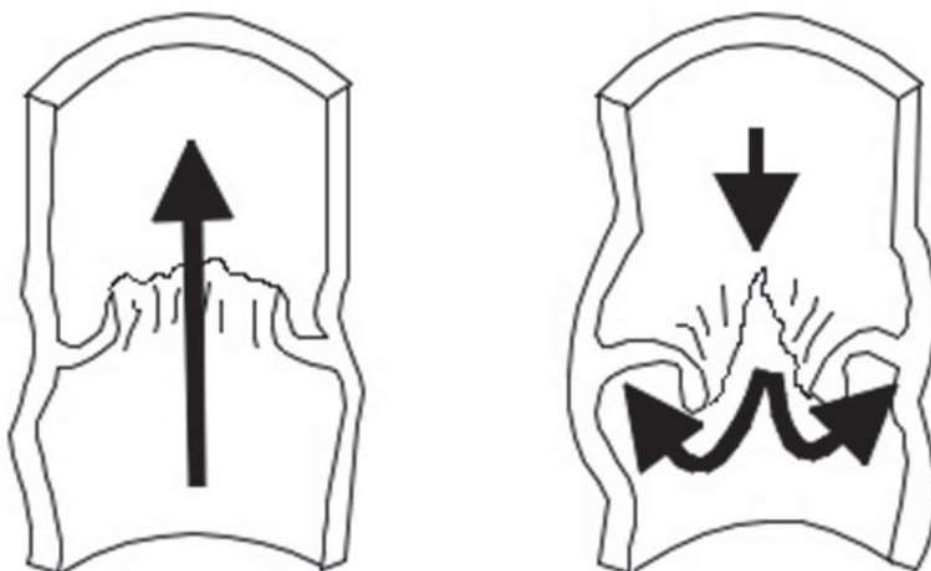
What causes varicoceles?

In most cases, the reason why the veins become larger is because the valves of the small veins in the scrotum do not function well. At intervals along the veins are one-way valves. The valves open to allow blood to flow towards the heart, but close when blood tends to flow backwards.



Healthy Venous Valves

Venous blood flows upwards against gravity and any backflow is prevented by valves that shut against the flow



Vein Varicocele

The valves do not function properly. Back-flow of blood is not prevented and pooling of blood causes the vein to enlarge

If these valves do not work well, blood can flow backwards (due to gravity) and will pool in the lowest part of the vein to form a varicocele. (This is very similar to how varicose veins form in legs.) It is not clear why the valves do not work well.

Rarely, a varicocele may develop if there is a blockage of larger veins higher in the abdomen. This puts back-pressure on the smaller veins in the scrotum which then enlarge. This is more likely to occur in older men.

For example, if a varicocele suddenly develops in an older man, it may indicate a tumour of the kidney has developed which is pressing on veins.

But, it must be stressed that most varicoceles develop in young men and are not due to a serious condition.

What is the treatment for varicoceles?

No treatment is needed in most cases. If a varicocele is causing no symptoms, then it is best left alone.

If there is just mild discomfort then supportive underpants (rather than boxer shorts) may help to ease or prevent discomfort.

Treatment may be advised if you have persistent discomfort. Treatment involves tying off the veins that are enlarged. Another method of treatment is to use a special substance injected into the veins to block them. Both methods are usually successful. Your surgeon will advise on the pros and cons of the different surgical techniques.

However, after successful treatment, some men have a recurrence of a varicocele months or years later. This is because the veins left behind to do the job of taking the blood from the testes may themselves enlarge or dilate with the extra blood they will now have to carry. A recurrence can be treated in the same way as the first time.

Is treatment for varicocele a possible cure for male infertility?

Probably not. Until recently, it was thought that treating a varicocele in an infertile man would increase the chance of becoming fertile again. Studies have shown that after treatment, the sperm count and quality often improve. This was assumed to increase the chance of fertility.

Some studies did indicate that fertility may be increased with treatment. However, a recent large analysis (meta-analysis) of studies looking at this issue found that there was no good evidence to say that fertility is increased by treatment. If you are infertile, your specialist will be able to advise you on current research related to this issue.

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Further Information

For general queries telephone the Urology Centre

Tel: 0151 282 6797 or 0151 282 6877

Text phone number: 18001 0151 282 6797 / 18001 0151 282 6877

For clinical questions specific to your case, telephone the secretary of your Urology Consultant.

<http://www.baus.org.uk/>

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