

DEFINITIVE GUIDE TO VARICOSE VEIN TREATMENT

Contents

1. What are varicose veins?
2. What causes varicose veins?
3. Prevention
4. How do you treat varicose veins?

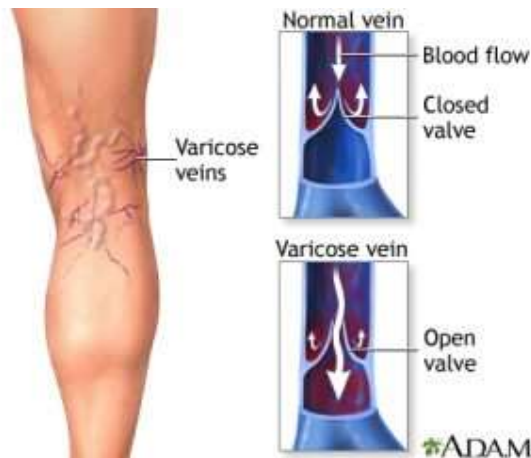
What are varicose veins?

The veins in your body have small one-way valves that push the blood back to your heart. When these valves become damaged, weakened, or otherwise affected, they fail to effectively pump the blood efficiently.

When the veins are damaged, blood pools and causes them to twist, elongate and bulge.

Blood can also pool into the smaller surround blood vessels (known as capillaries) causing spider veins.

How to identify the difference? Varicose veins appear as twisted bulging veins under the skin, often a blueish colour, while spider veins are smaller thin scatterings of purple and red.



What are the symptoms of varicose veins?

While varicose veins normally occur along the legs, in less common cases they can appear in other parts of the body including the groin, hips, pelvis and arms.

While some people do not notice any associated symptoms, it is not unusual for some or all of the following symptoms to be experienced:

- Swelling in the ankles and lower legs.
- Aching and throbbing pain, sometimes a burning sensation.
- Darkening of the skin around the veins, often to a brownish tone.
- A heavy feeling in the legs, sometimes leading to a restlessness or cramping sensation.
- Itchiness and irritation (known as varicose eczema).

Varicose veins themselves generally pose much of a risk, but in some cases, they can be symptomatic of more serious underlying health issues. If left untreated, they may lead to more worrying health issues, including blood clots, ulcers and burst veins.

The physical appearance of varicose veins can also be of concern to the person affected. Twisting and bulging veins that tend to rope across the legs can leave people feeling self-conscious and uncomfortable in their appearance.

When there is a physical change that you have very little control over, it's understandable why many people have the veins removed for aesthetic reasons.

What causes varicose veins?

Varicose veins are generally caused by one core issue, weakness, or damage to the vein valves. However, there are a range of issues that can trigger and aggravate varicose veins. These include:

Gender: Women are twice as likely to develop varicose veins as men are. This is because of the hormones which are released during pregnancy, menopause and pre-menstruation tend to relax the vein walls in your blood vessels. For the same reason, birth control pills and hormone replacement therapy may also increase your risk of developing varicose veins.

Pregnancy: It is not only the hormones released during pregnancy that increase your chances. During the term of your pregnancy, the amount of blood in your body increases to support the growing child. This can also lead to enlarged veins in your legs and pelvis, which often means the valves are not as effective.

Genetics: Varicose veins are much more likely to develop if you have a family history. If your parents, grandparents, or other relatives have varicose veins then it is advised to act proactively and take steps to support healthy veins.

Age: As we get older, the risk of varicose veins developing increases, especially past the age of 60. Gradual wear and tear on the body means that veins do not function as effectively as they used to, and varicose develops much easier.

Weight: If you are obese or excessively overweight, the pressure on your veins is greatly increased, meaning that the valves have to work harder to push blood up the legs.

Extended periods of sitting or standing: Whether it is working at a desk all day, sitting on a long flight, or standing for an extended period of time, remaining motionless slows down the blood flow in your legs, as your muscles are not moving enough to pump blood.

How to prevent varicose veins

Unfortunately, varicose veins are not completely preventable and as you get older the risk inevitably increases. However, there are still a number of ways that you can reduce the risk of them developing and minimise the uncomfortable symptoms.

A few lifestyle changes can do wonders for vein health. To reduce the likelihood of varicose veins developing, try the below:

Keep active: Inactivity and weak muscles can put additional pressure on the vein valves. To keep the blood flowing it's important to:

- Get up and move every 30 minutes when you're seated for longer periods of time.
- Go for regular walks or runs, especially at the end of the day.
- When you are standing for long periods, stretch your legs at regular intervals to make sure the muscles are moving.

Weight management: Excess weight can put an additional strain on your veins, especially in the lower legs. By maintaining a healthy body weight, you can relieve pressure on the veins themselves, as well as boost the circulation with more regular movement.

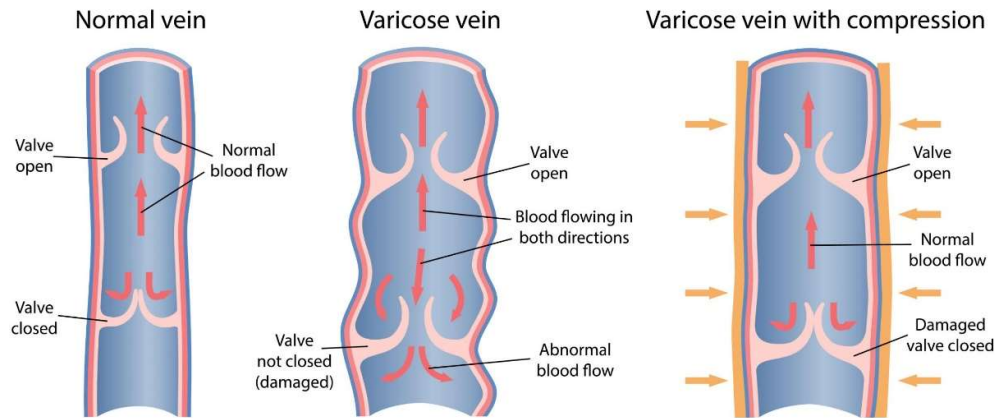
Diet: High levels of salt, fat and sugar all have a detrimental impact on your veins, causing weakness in the valves, fluid retention and a build-up of plaque that can cause blockages. Changing your diet to cut these out and increasing the intake of fibre and flavonoids will improve vein health.

Clothing: Tight or constrictive clothing, especially around your legs and waist, can put excess pressure on the blood-flow coming back to your heart. This can lead to the development of varicose veins. It is best to wear more loose-fitting clothing that doesn't restrict your circulation at all.

Footwear: High heels might look good, but the contorted angle of your foot and ankle mean that the veins and calves are put under extra pressure. Minimise the frequency of wearing high heels and wear stable footwear for day-to-day work instead.

Compression Stockings: Wearing compression stockings in situations where extended periods of sitting or standing is unavoidable (air travel, long car trips, working in hospitality etc) can help boost the blood-flow in your legs and make up for the lack of regular circulation. These are especially helpful for people who are predisposed due to a family history or other lifestyle factors.

While these actions will not completely prevent varicose veins occurring, they will help minimise the severity and will also have positive health effects on the rest of your body.



Treatment options for varicose veins

While there are conservative measures to treat varicose veins, once they have developed, the only effective way to remove them is through medical procedure, either minor or major surgery.

Treatment options vary depending on the nature of the vein, including how big it is, how close to the skin it is located and any pre-existing health factors of the patient themselves.

In the majority of cases, a short procedure that involves localised treatment of the vein is the recommended course of action. However, in more severe cases, the patient may need to go to hospital and undergo a procedure for removal.

When considering which option to go for, it's best to speak to a vein doctor who'll be able to help you find the best treatment plan for you.

Option 1: Sclerotherapy

This option is one of the oldest and most tested ways of treating varicose veins, having been practised for over 150 years. It has been well refined and improved since then, using the most up to date technology available.

Sclerotherapy closes the damaged vein by injecting a special sclerosing solution, causing the vein to scar and collapse. The treated vein is reabsorbed into the surrounding tissue, fading visually from the legs.

This solution is inserted with the help of an ultrasound and is done at intervals of 2 to 3 centimetres along the whole vein.

The advantages of this treatment include:

- Low risk and minimally invasive.
- Usually less than 30 minutes for a treatment.
- Some mild discomfort is experienced, but little to no pain is felt.
- You can walk straight out after the procedure with no need for downtime to recover.
- Success rate of 75-90%
- No general or local anaesthetic required.

Sclerotherapy is effective in the treatment spider veins, for varicose veins The Vein Institute will often combine sclerotherapy with EVLA or RFA to get the best results.

Option 2: Endovenous Laser ablation (EVLA)

EVLA is one of the more recent methods of vein treatment. First pioneered in 1999, the past decade has seen it emerge as the gold standard for treatment of varicose veins. Minimally invasive with a short recovery period, its success rate is 95-98%, making it ideal for most patients.

The treatment starts with a mild anaesthetic. Once this has been administered, a catheter is inserted into the vein and with the guidance of an ultrasound is pushed through to the other end of the vein where it will be sealed off.

At this point, the doctor injects a special solution around the vein, it is known as tumescent anaesthetic and the solution acts to numb the vein and prevent the surrounding tissue from being damaged by the heat of the laser.

Once this has been done, the main part of the procedure (which is actually the quickest) begins. The catheter in the vein has a special laser fibre at the tip it is turned on and slowly pulled back out of the vein, causing the blood to clot and the vein to seal off. This should not be felt by the patient at all.

After the procedure is complete, the patient can go home and can return to normal, non-strenuous activities. Some of the key advantages of EVLA include:

- Gold standard in varicose vein treatment.
- Quick procedure (30-60 minutes) with patient able to go home straight away.
- Minimally invasive with no visible scarring.
- Exceptional success results.
- Very little pain or discomfort.
- Very safe with minimal side-effects or risks.

The Vein Institute often uses EVLA for larger veins or blood clots, while RFA is used for smaller simpler veins. One of our vein doctors will advise which is the best choice and help guide you through this process. Extensive aftercare including complimentary compression stockings and tailored treatment plans make the process a smooth one.

BEFORE



AFTER



Option 3: Radiofrequency ablation (RFA)

RFA is incredibly similar to EVLA with only a few differences.

Where EVLA clots the blood to seal the vein with a heated laser fibre, RFA uses intermittent bursts of radiofrequency energy that causes the vein to shrink and stop the flow of blood. Which is not felt by the patient during the process.

The ultrasound imagery used to guide the fibre through the vein allows for pinpoint accuracy and exceptional results.

The advantages of RFA include:

- Gold standard in varicose vein treatment.
- Quick procedure (30-60 minutes) with patient able to go home straight away.
- Minimally invasive with no visible scarring.
- Exceptional success results.
- Very little pain or discomfort.
- Very safe with minimal side-effects or risks.

Option 4: VenaSeal (Medical superglue)

VenaSeal is a relatively new process for the treatment of varicose veins, but the results and success of the procedure have proven very effective.

The procedure starts with the insertion of a catheter into the vein, after a local anaesthetic has been administered to the entry point. From here, a fibre is inserted into the vein and guided with an ultrasound device.

Once the fibre is fully inserted, the doctor uses it to slowly administer tiny amounts of medical adhesive into the vein, applying pressure as they work their way back through the vein.

When the process is finished, the doctor withdraws the catheter fully and bandages the point of insertion. You can head right home and resume most normal activities, though strenuous exercise like running, jumping and heavy lifting should be avoided for the first week.

VenaSeal has many advantages, including:

- Very low risk and minimally invasive.
- No downtime with immediate return to regular activities.
- Quick and simple procedure.
- No general anaesthetic needed.
- Virtually pain-free, with some mild discomfort during the procedure.
- No compression stockings or detailed aftercare needed.

The Vein Institute offers VenaSeal as one of our treatment options, and in some cases will combine it with sclerotherapy for a more comprehensive, long-lasting, and effective treatment for the patient.

Option 5: Surgery

For a very long time, surgery has been the main way varicose veins have been treated, and many people will be familiar with the term “vein stripping”.

While surgical procedures have proven to be effective in treating the veins, it brings with it a unique set of risks as well as an extended and painful recovery period.

There are several different types of surgery to remove varicose veins, and these can be used in conjunction with each other. They include stripping, ligation and phlebectomy, all of which are performed under general anaesthetic.

This is a brief overview of each:

Ligation: This procedure involves making an incision at the top of bottom of the vein on the leg, and then cutting and tying off the vein on both ends to redirect the blood through healthier veins.

Stripping: This involves an incision being made at each end of the vein, and a fine wire being inserted through the vein out to the other end. From there the surgeon pulls the vein out and stitches the incision points.

Phlebectomy: This is a smaller process, focusing instead on making incisions along the vein to remove shorter lengths (3-5 cm) at a time, and is often used to remove smaller branches from the vein.

While it can involve more risk and a longer recovery time, surgery does have some of its own advantages, including:

- Effective at removing extensive and very large varicose veins.
- Helpful in treating thrombosis and certain other complications.
- Part of venous ulcer treatment.

The Vein Institute does not perform surgery on varicose veins due to the extended recovery time and inherent risks. Normal ablation and treatment of the veins is more effective and safer to practice in the majority of cases.

See the next page for a comparative breakdown of each treatment option, including the pain level, success rate, recovery time, and more.

EVLA/RFA	SCLERO	VENASEAL	SURGERY	SELFCARE
To Treat Big Straight Veins	To Treat Small Veins	To Treat Medium Sized Straight Veins	To Treat Big Veins	To Treat All
Pain Level Similar To An Injection	Pain Level Similar To An Injection Or Blood Test	Pain Level Similar To An Injection	Pain Level None during treatment due to general anaesthetic. Significantly more post treatment.	Pain Level No pain associated with self care
Success Rate 95 - 98%	Success Rate 65 - 80%	Success Rate 92 - 95%	Success Rate 80 - 90%	Success Rate Used to minimise symptoms not to fix the issue
Down Time Period Usually None	Down Time Period Usually None	Down Time Period None	Down Time Period 2 - 4 Weeks	Down Time Period N/A
Anaesthetic Local at incision point	Anaesthetic None	Anaesthetic Local at incision point	Anaesthetic General anaesthetic or spinal anaesthetic	Anaesthetic N/A
Appearance 60-80% shrinkage post treatment. Bruising <1 weeks. No visible scars.	Appearance Immediate bruising before improving in 6 weeks. No visible scars.	Appearance Improvement usually within fortnight	Appearance Bruising < 6 weeks. Pain intense for 2 weeks. Minor scaring at each incision point.	Appearance Appearance will not change
Aftercare Compression Stockings for 5 days. 30 mins walk a day for 2 weeks.	Aftercare Compression Stockings 5 days. 30 mins walk a day for 2 weeks.	Aftercare 30 mins walk a day for 2 weeks	Aftercare Compression stockings for 2 weeks, 30 mins walk a day for 2 weeks, bed rest, high fiber diet, avoid driving for minimum of 2 days.	Aftercare N/A
No of treatments required 1 Per Leg	No of treatments required 2 - 3 Per Leg on Average	No of treatments required 1 Per Leg	No of treatments required 1 Per Leg	No of treatments required Use as needed
Recurrence Rate after 5years <5%	Recurrence Rate after 5years 28%	Recurrence Rate after 5years 10%	Recurrence Rate after 5years 35%	Recurrence Rate after 5years N/A
Risks Pigmentation, Nerve Damage, DVT (<1%), Pulmonary Embolism (<1%)	Risks Pigmentation, Allergic Reaction to solution	Risks Allergic reaction to glue, phlebitis, thrombosis, pulmonary embolism, hematoma or infection	Risks Allergic reaction to anaesthesia, infection at the incision sites, nerve injury, heavy bleeding, blood clots.	Risks Risks associated with not treating varicose veins include: bleeding, venous ulcers, blood clots and DVTs.
Remove/Close Close	Remove/Close Close	Remove/Close Close	Remove/Close Remove	Remove/Close N/A

The Vein Institute

Ph: 1300 535 017

Locations: Sydney, Melbourne, Brisbane, Adelaide, and Canberra.

Visit the Locations page for full details.