

# VARICOSE VEINS

## Information Booklet



## Introduction

A varicose vein is a vein that has become larger, more visible and more tortuous (wiggly) than normal. Varicose veins are common and can occur at any time in life in both men and women. Often there is no obvious cause, however, they are often exacerbated by pregnancy, may run in families, and are worsened by occupations that involve prolonged standing. Once established, they do not go away but will tend to slowly worsen over time.

The underlying cause of varicose veins is a failure of the valves that exist to ensure that the blood only travels in one direction, i.e. from the feet upwards to the heart. If those valves become “leaky” blood can run back into, and pool within, the legs. This pooling leads to a build-up of pressure within the veins and over time results in them stretching and becoming “varicose”. According to which valves fail, three broad types of varicose veins occur.



**Telangiectasia (Spider veins)** are small, hair-like blue-red lines that form web like shapes on the legs. They may occur alone or along with larger “true” varicose veins. They are more common in women and run in families. They may start following episodes of trauma but often have no apparent cause at all. They are best treated with microsclerotherapy injections.



**Reticular veins** are dark blue in colour and between 1mm and 3mm in size. Reticular veins commonly co-exist with both telangiectasia and “true” varicose veins and are also best treated with sclerotherapy.



**“True” varicose veins** are veins greater than 3 mm in diameter. They commonly arise directly from the long or short saphenous veins and result from leakage in a major valve located either in the groin or behind the knee. The options for treatment are surgical removal, Endovenous Ablation (Laser/RFA), foam sclerotherapy or glue.

## Symptoms of varicose veins

Although Varicose veins cause no symptoms or serious harm in most people, the increased pressure in the veins can result in discomfort in some.

Various sensations may be experienced ranging from aching and heaviness to itching, pins and needles or restless legs. Ankle swelling may also occur, particularly at the end of the day and following flights or long drives.

More serious complications may occur but are rare. Examples are:

- **Thrombophlebitis** – is clot and inflammation of the surface veins. It is not as serious as a Deep Vein Thrombosis (DVT) but can be very uncomfortable and may need treatment.
- **Skin changes and Ulcers** - In more severe cases of varicose veins, the skin of calf and ankle can become permanently dry and discoloured and ultimately, a skin ulcer can form which can be very hard to treat.
- **Bleeding** from varicose veins can be distressing. If it occurs, direct pressure with a finger should be applied to the bleeding point and the leg elevated. If this keeps occurring treatment is required.

# What are the Treatment options for veins and which is best?

## THE OPTIONS ARE:

- **Conservative management** (leg elevation and wearing compression stockings)
- **Open surgical treatment** (High ligation and stripping)
- **Endo venous ablation (EVA)** with either Laser, Radiofrequency, Glue or mechanical systems
- **Sclerotherapy**

Regardless of what friends, or even “specialists” might tell you, there is no one “best” treatment for **all people** and **all types** of veins.

Please read the enclosed information and discuss your situation with the VASC doctors who are trained in every technique and will ensure you get the best option for your personal pattern of veins and circumstances.

## Open Surgery (aka High ligation and strip and avulsions or “stripping”)

The traditional method of surgical “high ligation and stripping”, is still the best choice for many patients. Some people suggest that stripping is out of date, traumatic or barbaric. However, these descriptions are emotive and non-factual. It is the only treatment that completely removes the main vein that is responsible for the varicose vein development as well as targeting the valves responsible for the formation of varicose veins.

Surgery is often referred to as “High tie and stripping” or just “stripping” since the main valve in the affected vein is **tied** off at the groin (**High** in the leg) and then most of the vein is then removed in one go (ie. **stripped**). After the main vein is removed the operation is completed by removing any prominent remaining veins through number of tiny (1-2mm) cuts (“avulsions or phlebectomies”). The groin wound will have stitches that dissolve, whereas the others are too small to require a stitch and just have a “steristrip” plaster applied.

The surgery is performed in hospital and requires a general (asleep) anesthetic. Some patients will go home the same day and some may require a single night stay depending on whether one or two legs are treated and the time of day of surgery.

## Advantages of open surgical treatment.

- Established “tried and tested”. Completely removes the “problem” vein.
- Long term results, when done by a vascular specialist, are at least as good if not better than any other treatment.
- It may be the only option for patients who, for a number of possible reasons are not suitable for EVA.
- It is the only treatment that can potentially be fully covered by private insurance. When gaps occur they are in the range of \$200-\$800 per leg as opposed to closer to \$3000 for EVA (‘laser’) therapy.

## Potential side effects, complications or disadvantages of varicose vein surgery

- The procedure requires a general anesthetic. Although this is well tolerated by most, some people prefer to avoid this.
- Bruising- Some degree of bruising will occur in all people undergoing vein surgery but can vary in severity. It tends to get better within two to three weeks but can last up to 6 weeks in some people.
- Discomfort- This may persist for several days to a 1-2 weeks but is usually controlled by simple pain killers like Paracetamol or Ibuprofen. Although it is usually more uncomfortable than EVA most people feel it is not nearly as bad as they expected and this is due specific techniques used by the team at VASC.
- Scarring - All surgical procedures leave a scar. A single 2-3 cm scar is left in the groin or behind the knee which is cosmetically masked by its position. The very small scars from the tiny cuts in the lower leg fade over time but sometimes remain just visible, particularly after gaining a sun tan.
- Discolouration, pigmentation and tender lumps- Hard lumps can often be felt at, or near, the sights where vein has been removed. These may be tender initially but become non-tender after 1-2 weeks. The lumps may remain for anything up to a few months.
- There is a risk of Deep Vein Thrombosis (DVT) of 1:400. This risk is reduced by various precautions. The risk is the probably about the same as for EVA (laser).
- Vein persistence or re-occurrence after surgery. The results of surgery are very good. However, especially in cases of extensive varicose veins, isolated visible veins might remain. These will usually shrink away over time but occasionally require a secondary treatment with an injection.

It is also important to realise that surgery does not remove the spider veins and small “reticular” veins which are best treated with Sclerotherapy. No matter what treatment is used, varicose veins have a rate of recurrence up to 20%. But correct treatment using appropriate methods will reduce the chance as much as possible.

- Major nerve or artery injury can theoretically occur but is extremely rare and is equal to risk in EVA.

- DOWN TIME is greatest with open surgery compared with other treatments:
  - > Walking and daily activities of living can be done from the first day. However, sport, swimming and vigorous exercise, should be avoided for 10 days to 2 weeks.
  - > Time off work. Some time is almost always needed. If a physical job then 10 days.
  - > Full length compression stockings need to be worn for 10 days.
  - > Flying needs to be avoided for 4 weeks.

## Endovenous Ablation (EVA) using LASER (EVLA) of Radiofrequency Ablation (RFA)

EVA is an alternative to surgical stripping of the saphenous veins. A fine wire is inserted into the main vein through a needle close to the knee and a laser or microwave tip on the end then destroys the vein without having to remove it. After the main vein has been destroyed with the laser, the branches are treated with either sclerotherapy or phlebectomy (local excision) for larger varicose veins. Small veins may be observed initially and may spontaneously resolve.

### What to expect:

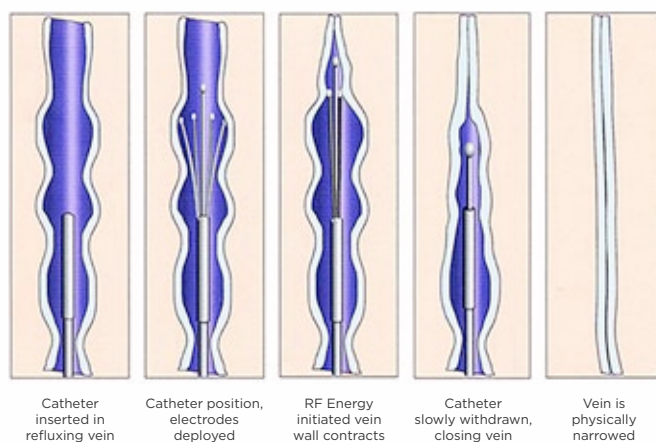
EVA takes 1-2 hours to complete and is usually carried out in the East Fremantle VASC office. It is described as a “walk in-walk out” procedure since no sedation is required and there is no need to stay and “recover” afterwards.

After being consented for treatment, the patient lies on a bed and their leg is prepared with an antiseptic solution and draped. Using ultrasound, the saphenous vein can be seen and accessed with a needle and wire. The laser/RFA fibre is then inserted into the vein and positioned by ultrasound. Local anesthetic is injected into the thigh around the vein and takes about 10 minutes to apply. It is the one part of the procedure where a little discomfort may be felt as several fine needle injections are required. The laser is then activated and withdrawn down along the saphenous vein, causing it to close.

After the main veins are treated with EVA, remaining veins may be treated with injection sclerotherapy or occasional removed through tiny incisions under local anesthesia. A compression stocking is applied. This stocking must be worn for the next 10 days.

Immediately at the end of the procedure a gentle 20 minute walk is encouraged. Discharge is then possible with an adult companion but driving should be avoided until the following day. A follow-up ultrasound examination is arranged 1-2 weeks after the procedure to ensure that the laser treatment has been effective and to monitor the progress of the healing.

Further sclerotherapy treatment sessions may be required to treat any small veins that remain but usually this is not required.



### Advantages vs open surgery:

- As effective and safe as open surgery.
- Performed under Local Anesthesia.
- Day Case (walk in – walk out) treatment.
- Less post-op pain and bruising than open surgery.
- Less bruising.
- Minimal or no scars.
- Reduced time off work. Fly within two weeks.

### Disadvantages vs open surgery:

- EVA is not possible in all patients for various reasons. Your VASC specialist will explain why if it is not an option.
- EVA is performed awake which appeals to some people but equally might make others uncomfortable.
- EVA is more expensive than open surgery. There will usually be a gap of over \$2000 per leg.
- As the thigh vein is not removed, it can sometimes be felt as a band under the skin. This is rarely a concern but some people find the sensation unpleasant. It will usually go away over a number of months.
- Although down time is less than open surgery, it is still necessary to wear a stocking and avoid vigorous exercise, work or flying for 10 days after the procedure.

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## Sclerotherapy (vein injections)

**Microsclerotherapy** is the best treatment for spider veins which are the hair-like red or blue veins which are commonly found upon the thighs and inner knees. If the larger "true" varicose veins are also affected, we recommend they are treated by surgery or laser first since spider veins will tend to reappear quicker if not. For this reason, all patients receive an ultrasound scan to assess the main veins in the legs before progressing with microsclerotherapy.

Microsclerotherapy involves injecting a solution directly into each vein with very fine needles. The solution irritates the inside of the veins and causes them to block. Once they have blocked, they are re-absorbed by the body over a few months. The main solution used at The VASC Clinic is Polidocanol (Aethoxysclerol) which has been shown to have a good effect with minimal unwanted effects.

**Foam sclerotherapy** is very similar to microsclerotherapy and is often carried out at the same time. Whereas microsclerotherapy is used specifically for spider veins, foam sclerotherapy is used to treat larger veins. It involves injecting small amounts of air into the same chemical (polidocanol) to make it into a foam. This is then injected via several points on the leg.

The foam makes the solution work over a larger area. Using the product in the foam format (rather than liquid) is an off-label use of the product but international experience and research shows that it is safer and a more effective option when compared to liquid. There may be a higher risk of migraine and visual disturbances with foam compared to liquid. These will be explained before any treatment.

### What to expect:

A sclerotherapy session takes between 15 and 45 minutes. The patient lies down on a treatment couch and extremely fine needles are used to inject a solution into the spider veins. The number of injections varies from 1-2 to 30 depending on the response of the veins to the therapy and the number of veins requiring treatment. It is normal to feel the needle as a mild sting for each injection.

Compression stockings are applied immediately after the procedure and a 20 minute walk is encouraged before a brief review.

Afterwards it is possible to maintain normal daily activities and there is usually no need to take time off work. It is advisable to avoid standing still for long periods, hot baths and **strenuous physical activity such as running or weight lifting for 10 days after treatment** since this increases the risk of blood flow returning into the treated veins. Flying and sun exposure should be avoided for 2-3 weeks after the treatment.

### Advantages of sclerotherapy

- It is the only effective treatment for spider and reticular veins.
- It is quicker and cheaper than other modalities of treatment when used for appropriate true veins.
- Very quick recovery - It is a walk in - walk out procedure and immediate return to work is possible.

### Disadvantages of sclerotherapy

- The results are not immediate. The veins may look worse for several weeks before they get better. A brown discolouration can persist around larger veins for several months after treatment.
- Mild pain/discomfort- Some pain and discomfort is to be expected after sclerotherapy. This may persist for several days to a week. Please call the VASC clinic or your own GP if you have any concerns.
- Although some result will occur after the first treatment Depending on the extent of the veins **multiple treatment sessions may be required** (1-6) as there is a limit to the total dose of sclerosant that can be safely given at any single session.
- Persistence of veins- Most patients can expect at least a 70 percent improvement in the appearance of their legs. However, it may take up to 3 months to see maximum benefit and perfection cannot be guaranteed. In fact, the legs **may appear worse for a month or two** whilst the veins start to close up. Multiple treatment sessions may be required. Between 1 and 6.
- Stockings have to be worn, exercise, flying.
- Complications such as allergic reaction, DVT, skin ulceration and others are extremely rare, but can occur.