



Endovenous Laser Ablation for Varicose Veins

Endovenous laser therapy for varicose veins has been used in the USA and Europe for over 15 years. The procedure was introduced into Australia about 10 years ago and I have in 2015 performed about 200 of these procedures. Published results show the procedure to be safe, with a low rate of complications and excellent medium term results.

The technique involves passing a laser catheter into the vein via a puncture needle under anaesthetic under ultrasound control. The procedure can be completely performed under local anaesthetic with or without sedation (depending on your preference).

Both legs can be treated at the same time, although if you have a large amount of varicose veins, you may require a further treatment session where a chemical (sclerosant) is injected (extra costs may apply) to treat some of these veins. Remember, the laser is used to treat the main veins which are feeding the varicose veins, the varicose veins themselves if very extensive may require subsequent sclerosant treatment(s).

Before the Procedure

- Please shave your leg and groin the day prior to the operation, which will facilitate surgery and minimise infection. Prior to the surgery your legs will be marked with a texta by the surgeon.
- Your normal medications should be taken on the morning of your procedure, along with your normal breakfast.
- You should not take any blood thinners for 7 days prior to the procedure (i.e. Aspirin, Plavix, Iscover). Please check with the doctor who prescribed the medication prior to stopping it.
- Bring with you the compression stockings Mr Condous has prescribed (our practice nurse will contact you about these stockings) prior to your procedure.

During the Procedure

The procedure is performed within the operating theatre (you can chose to be asleep or not (in other words an anaesthetist will be present to ensure you are comfortable). Some local anaesthetic is injected into the skin and a needle is then placed into the vein under ultrasound control. A wire, then a fine tube is passed up into the vein, followed by the laser probe. Local anaesthetic is infiltrated around the vein at several levels directed by ultrasound using a fine needle. The laser tip is precisely positioned just below the end of the saphenous vein using ultrasound guidance. The probe is activated and slowly withdrawn destroying the full length of the vein. If required the varicose veins will be treated with avulsions, that is they are plucked out. A stocking and a bandage will be applied after treatment.

Following the Procedure

Every day walk for about 30 minutes with the stocking on and keep the leg elevated as much as possible. Maintain normal daytime activities and avoid standing still for long periods. Avoid strenuous physical activities such as gym or aerobics as this may lead to early return of blood flow to the varicose veins. Swimming however is allowed from the fourth day following the procedure. We recommend that you avoid flights of greater than 2-4 hours for 2 weeks following the procedure and any flights longer than 4 hours for 4 weeks. If travel is essential and unavoidable, please discuss this with Mr Condous as further preventative measures may need to be taken to decrease the risk of a travel DVT developing.

Please keep the bandage on until reviewed in the rooms two days following the procedure. Wear the stocking only during the day for a further 11 days (ie for 2 weeks total post procedure) or until clinical review. Postoperative pain is best managed with panadol or panadiene. Sometimes, if this does not control the pain, a short course of non-steroidal anti-inflammatory agents such as Nurofen or Voltaren may be required. This is available "over the counter" at chemists. Also the use of a "vein ointment" such as hirudoid or Iasonil may be helpful.

You will be reviewed approximately 1 week following the procedure when you will have an ultrasound. This will assess that the treated vein is occluded as planned, help in assessment of whether the surface veins require treatment and exclude the small risk of deep venous thrombosis. Mr Condous will ring you to discuss the results from this ultrasound and to arrange follow-up.

You may require some "tidy up" of residual varicose veins once things have settled. This can be performed using a technique called sclerotherapy where fine injections of a chemical (this may be performed under ultrasound control) are put into these residual veins in the rooms. For this reason please do not discard your compression stockings after the initial 2 week period is finished, i.e. if sclerotherapy is necessary they will be needed again.

What you can expect following the Procedure

The following features are often seen, not cause for concern and you do not need to notify us. These include:

- **Bruising** down the length of the treated vein is often seen and represents that the vein has been destroyed to the point that it is disintegrated in parts.
- **Mild to moderate pain** invariably occurs commencing a day or two after treatment.
- **Aching in the leg** persists for up to two weeks and suggests that the procedure is working.
- **Discolouration of the Skin** is usual early on and is not a cause for concern. Raised red areas can develop over branches, but they usually disappear within 2 to 3 weeks.
- **Phlebitis or inflammation** of the treated veins can occur. It is treated with non-steroidal anti-inflammatory agents, compression and walking.

What are the possible complications from this procedure?

Like any procedures, complication can occur even with perfect technique.

- **Deep Venous Thrombosis**

Clots extending into the deep veins can occur with this procedure. Fortunately this serious complication is very uncommon, and almost certainly less common than following conventional open varicose vein surgery. When this occurs it is usually in the small veins below the knee and rarely causes symptoms. It may require a period of treatment with injections to thin the blood.

- **Nerve damage**

The adjacent sensory nerves can suffer heat damage causing some numbness. Fortunately, in the majority of cases this is mild and rarely lasts for more than a few weeks.

- **Procedure Failure**

Like all medical procedures, the laser procedure may be unsuccessful in closing off the vein or the vein may reopen following treatment. This is infrequent (studies suggest about 8%) and there are reports that this happens less commonly than failure following open varicose vein surgery.



Before



After