PATIENT INFORMATION

Laser treatment for varicose veins

Please read this information carefully. It will help you to understand the cause of varicose veins and what is involved in their treatment.

Endovenous laser therapy or ablation, EVLA for short, is a relatively new, minimally invasive method for treating varicose veins. It was first approved in 2004 by the National Institute for Clinical Excellence (NICE) which is the government body who assesses the safety and effectiveness of treatments used within the NHS. In July 2013 NICE issued new Guidelines stating that EVLA is now a first choice for treating symptomatic varicose veins at a dedicated vein treatment clinic.

Which type of varicose veins are suitable for EVLA laser treatment?
EVLA is used to treat patients with lumpy varicose veins in the legs. It is not used to treat tiny veins that are often described as "flare veins", "spider veins" or "broken veins". About 80 – 90% of patients who have not had a previous varicose vein operation are suitable for EVLA laser treatment. After previous varicose vein surgery, EVLA is only possible in 40 – 50% of recurrent varicose veins.

How does EVLA laser vein treatment work ?
Blood in the veins normally flows up the legs, back to the heart. It is under low pressure and gravity tends to push it back down the leg. This is normally prevented by one-way valves inside the veins which allow the blood flow up, but prevent it from flowing back the wrong way.

Most varicose veins are caused by a faulty valve in the groin or behind the knee. This faulty valve allows blood to be forced out into the veins under the skin *(the superficial veins)* from the main veins inside the leg muscles *(the deep veins)*. This leads to the valves in the superficial veins becoming faulty and the increased pressure in the veins causes them to enlarge (dilate) and give rise to varicose veins.

The principle behind EVLA is that the laser is used to obliterate the superficial vein (either the long or short saphenous vein), above or below the knee respectively. This stops the faulty valve in the groin or behind the knee having any effect. It achieves exactly the same as conventional surgery when a wound is made in the groin or behind the knee to put a ligature around the top of the vein which is then removed by stripping. EVLA is therefore used to treat the underlying cause of your varicose veins.

How can we tell if your varicose veins are suitable for EVLA?
You will be asked a series of questions about any symptoms that your varicose veins are causing and any other health problems that you may have had. We will examine your legs and perform an ultrasound, called Doppler ultrasound. This is a form of scan that can check blood flow and direction. It will identify which faulty valves have caused your varicose veins. Scanning is done in a standing position and takes about 10 minutes per leg. It is done at an initial assessment, and is also repeated at the time of EVLA laser vein treatment. If the main faulty vein valve is in the groin or behind the knee, your varicose veins should be suitable for EVLA. We do not treat people during pregnancy, and will also take account of other medical conditions.

What does laser treatment involve ?

- The procedure begins with an ultrasound scan to mark the vein in your leg to be treated.

- An injection of local anaesthetic is given to freeze the skin over the vein (at 4 or 5 points along it's course).

- A small needle is inserted into the varicose vein (at knee level or upper calf level). This is followed by passage of a short fine tube 15cm into the vein. Through this tube the laser fibre is passed with ultrasound guidance up the vein towards the groin (or back of knee) More local anaesthetic in very dilute cool saline is injected along the course of the saphenous vein to protect the surrounding tissues.

- Once the entire length of vein to be treated is numbed-up, the tip of the laser fibre position is checked using ultrasound to make sure it is exactly in the correct position before the laser machine is turned on.

- The laser vein treatment works by shrinking the incompetent varicose vein and closing it up from the inside all along it's length. The laser machine is set to pulse as the fibre is withdrawn.

- Lasers are powerful sources of energy and you and the staff will wear protective glasses whilst the laser is being used, only as an extra safety precaution. The laser light is never exposed externally.

- When the vein has been sealed up, the laser is removed. No stitch is needed. A bandage and a graduated compression stocking are applied to the leg. You should keep these on for 7 days and nights, then the stocking only during the day for 7 further days.

What happens after the treatment?

- After EVLA you will be asked to walk around for 5 minutes, have a drink, and relax for a short while, before going home. You should not drive yourself and exercise for 5 minutes every hour.
- During the first few days you may feel some discomfort or tightness over the treated vein. To minimise this we recommend you take an anti-inflammatory drug, such as Nurofen, which contains ibuprofen. This is also a good painkiller. The adult dose is 400mg (either 1 or 2 tablets depending on type, please check packet) to be taken 8 hourly up to a maximum dose of 1200mg in any 24 hour period. We recommend that you take this for up to 3 days, as required. If you have a history of stomach ulcers, we advise you try paracetamol instead.
- If any discomfort remains after 3 days you can take paracetamol. The adult dose of paracetamol is 500mg (1 tablet) or 1000mg (2 tablets)every 4 to 6 hours up to a maximum of 4000mg (8 tablets) in 24 hours. Always read the package instructions carefully.
- Normal activity, including work, can be resumed as soon as you like, although we suggest avoiding contact sports, the gym and swimming for 2 weeks after EVLA laser vein treatment.
- The compression stocking is specially measured to fit. If it is uncomfortable please contact us for advice. It can be rolled down for skin cleaning or changed (one pair supplied per leg) and washed. But it must be worn 24 hours per day during the first week and during the day during the second week.
- We will arrange to see you about 4-6 weeks after the procedure. By then most of your varicose veins will have shrunk and many may have disappeared. If some remain these can be treated by injection. This is an outpatient treatment that we use to treat less severe and left-over varicose veins. The injection treatment replaces the multiple small wounds that are made in the leg to remove the lumpy veins during surgery.

What are the advantages of EVLA laser vein treatment to surgery?

- It is performed under local anaesthetic.
- The procedure can normally be done as an outpatient, taking 45 minutes for 1 leg, 60 minutes for 2 legs.
- You should be able to resume your normal activities straight away and return to work within a few days.
- It avoids the incisions (scars) required for a normal operation and therefore complications such as wound infection.
- Patches of numbness on the skin (5% of patients having conventional surgery) are rare.
- There is very little discomfort or pain after the procedure.
- Evidence is now fairly conclusive that EVLA laser treatment will give better results than surgery in the longer term, at 3 to 5 years. At the worst some veins may come back. If this happens, then the use of sclerotherapy injection techniques are suitable to fix this.
- EVLA laser treatment is a fairly new method of treating varicose veins but the evidence now shows that in patients who had EVLA, more than 3 years previously, the chances of the vein re-opening and causing problems is less than 3%.

Are there any complications from laser treatment?

- Complications following EVLA are uncommon. Those of which you should be aware of are :
- Failure to obliterate the vein being treated. This occurs in about 3% of patients. We have had none knowingly in 10 years.
- Excessive bruising or tenderness is seen in about 5% of patients. If it occurs, it may be helpful to continue taking anti-inflammatory drugs for a little longer, with the agreement of your GP.
- About 1% of patients may experience some numbness in the lower leg after EVLA. This is almost always temporary.
- Some isolated cases of deep vein thrombosis (DVT) and pulmonary embolus (PE) have been reported, but these are very rare.

Emergency contact number

For any post-operative problem directly related to your treatment you may call the SVC number on: **07366591367**

We will have a trained member of staff to deal with your query. We also advise that for any non-urgent queries you first consult your own GP.