

## Laser Treatment for Varicose Veins

### How can varicose veins be treated by laser?

Laser treatment of varicose veins, Endovascular Laser Ablation (known as EVLA), is a minimally invasive procedure for treating certain types of varicose veins.

Endovenous laser treatment is a method for closing off the long saphenous and short saphenous veins. These are the veins that were formerly stripped out by incision in the groin or behind the knee.

The surgeon introduces a laser fibre into the vein under ultrasound control through a single puncture wound. A laser device is passed up into position at the top of the vein. The laser is then switched on and the fibre withdrawn slowly destroying the vein.

The exact method of treatment advised for your varicose veins depends on which of the main valves are leaking and the anatomy of the veins. In most patients it is the valves at the top of the leg (groin) that will need treatment, and this is usually suitable for laser.

### What type of anaesthetic will I have?

Your operation may be carried out under local anaesthetic (you are awake) or general anaesthetic where you're asleep.

It is usually performed under local anaesthetic which means that you will be fully awake during the procedure. The inside of your leg where the vein is treated will be made numb with local anaesthetic in order that it is not painful when the laser is fired.

You may feel some pushing and pulling or mild discomfort during the procedure. If you feel anything more than this please tell the nurse.

### If I have treatment how long will I spend in hospital?

You will have your treatment performed as an outpatient. The procedure itself will take about 45 minutes.

You will be in the hospital treatment area for about 2 hours, but you should keep half a day free just in case of delays.

### What happens before the treatment?

When you arrive on the ward the nurses will measure your legs for stockings and show you where to get changed. It is best not to wear tight trousers or shoes as you may have difficulty putting them over the bandage afterwards.

The Surgeon or a member of his team will check that all necessary preparations have been made and that you have signed the consent form. He will mark your varicose veins with a pen.

## How is the laser treatment performed?

An injection of local anaesthetic is given to freeze the skin at knee level. Once the skin is numb, a needle is inserted into a vein; this is followed by a guide wire and then the laser fibre which is directed to the groin. You will not feel this.

The position of the laser is then checked using an ultrasound scanner. The area around the vein and the skin is then made numb using local anaesthetic injections from the knee to the groin. This usually requires 4-5 injections with a small needle. The laser is then fired as it is withdrawn from the vein. The heat from the laser closes (cauterises) the vein from the inside.

When the vein has sealed up, the laser is removed from the leg and a bandage is applied. This should stay on for 2 days following a light support stocking which is worn for 2 weeks 24 hours a day then a further 2 weeks during the daytime only. Lasers are powerful sources of energy so you and all the staff will wear protective goggles during the time the laser is working.

If you have large surface veins related to the veins which are treated by laser, these may be treated at the same time by removing them through very small cuts under local anaesthetic.

The veins in your calf will usually shrink following treatment but if they persist in causing symptoms they may be treated with injections in the clinic.

## How much does it hurt afterwards?

You may experience some discomfort or pulling on the inside of your thigh following the treatment. This may be noticeable at about one week after treatment, but it then settles down. People vary a lot in the amount of pain they experience after the laser, though most experience mild discomfort only.

You will be encouraged to get up and walk immediately following the laser treatment. You will be recommended to take an anti-inflammatory drug (which is also a pain killer). This normally prevents any discomfort. It is recommended that you take this drug for the full three days unless you have a stomach ulcer or haemorrhage. If this is the case please tell the doctor who is doing the laser treatment, so that an alternative may be suggested.

If any discomfort occurs after this time it will usually disappear if you take a simple painkiller such as paracetamol.

## Will I have dressings or stitches?

The small cut beside your knee where the laser fibre was inserted is closed with an adhesive strip or glue. If it comes off in the shower it does not matter. It is often not possible to wash off all traces of antiseptic or blood from your legs. This will come off when you shower.

## **What about my wounds?**

You may be aware of areas of lumpiness on the leg which may be slightly tender. This is caused by some inflammation in the varicose veins that have been treated. It is not harmful and will gradually go away, but this may take several weeks.

## **What about bandages and support stockings?**

You will have a bandage on the leg. This should be kept on continuously for 2 days. **Do not get the bandage wet.** You will find it more comfortable to wear light support stockings 24 hours a day for a further 14 days after the bandage is removed. This will be given to you at the time of your laser treatment.

## **How long will I take to recover after the laser?**

We will not arrange for a check-up routinely. If you have any new concerns relating to your varicose veins please arrange to see your GP in the first instance.

## **How far should I walk?**

You may start to walk about as soon after the laser as you are able. You will not damage anything by walking. Frequent walking is more important than walking a long distance.

## **When will I be fully back to normal?**

This varies a lot between different people. Most people are able to return to work within 2-3 days after treatment, some people go back the following day or even the same day.

## **When can I drive a car?**

You can drive as soon as you feel confident that you can make an emergency stop safely. We advise you not to drive yourself home following the laser treatment, but other than that you can drive as soon as you feel able.

## **When can I fly?**

It is the recommendation of the Vascular Surgeons that you leave a gap of 4 weeks before your surgery/procedure if you have been on a flight. Following the procedure it is recommended that you wait 4 weeks before flying either short or long haul. This is because both varicose vein surgery and flying have a small risk of deep vein thrombosis. If these two risks overlap then the overall risk is increased.

## **When can I return to work and play sports?**

You can return to work and sporting activity as soon after the operation as you feel sufficiently well and comfortable. Avoid contact sports while you are still in support stockings or bandages, and thereafter start with some gradual training, rather than

immediate competitions. Do not go swimming for at least 1 week. We suggest avoid strenuous activity like the gym for about 2 weeks after the procedure.

## What problems can occur after the laser treatment?

Serious complications are very uncommon after laser treatment for varicose veins. You will usually have one small scar next to your knee. This will fade with time.

**Bruising** Some bruising is normal, and occasionally the leg becomes very bruised. This bruising appears during the first few days after laser treatment: It will all go away over a period of weeks.

**Aches, twinges and areas of tenderness** may be felt in the legs for the first few days after the laser: These will settle down, and should not discourage you from becoming fully active as soon as you are able.

**Tender lumps** under the skin are common and caused by blood clot that has collected in the places where the vein has been treated. They are not dangerous and will gradually disappear. It may take up to 12 weeks for all the lumps to disappear. Occasionally they can be quite painful the first two weeks or so.

**Small areas of numbness** in the skin can occasionally occur at the places where varicose veins were treated. This is because tiny nerves may be damaged by heat from the laser. This will not affect the movement of your foot or your ability to walk. The numbness will usually recover over a period of several weeks.

**Deep vein thrombosis;** this causes swelling of the leg and can result in a blood clot passing to the lungs. It is a possible complication after laser treatment, an operation for varicose veins or indeed after any type of surgery. It is unlikely to occur if you start moving your legs and walking frequently soon after treatment. The risk is less than 1%. The risk of a fatal blood clot is about 1 in 10,000.

**Contraceptive pill and HRT containing oestrogen;** If you are taking either of these your risk of thrombosis is increased, and your surgeon will discuss with you the pros and cons of stopping your medications, or continuing it and taking special action to reduce your risk of thrombosis. If you start taking either of these medications whilst you are waiting for your operation you should let your surgeon know by telephoning or writing to his secretary.

## Will my varicose veins come back?

From studies so far laser treatment has the same results as conventional surgery. The results of laser treatment of varicose veins seem to be the same as traditional treatments. The predisposition to varicose veins is inherent and will always be with you. Some 15-20% of patients will develop some new varicose veins, but often over many years.

Some numbness and/or tingling around the wound site or in the leg are not uncommon; this is usually due to some bruising of the nerve, which settles down after some weeks or months. It may however be permanent. The incision, although initially very visible, will subside to become virtually invisible within 9-12 months.

These risks/complications will be explained and discussed with you when the surgeon asks you to sign the consent form for the operation.

## Going home

Before being discharged from hospital you will be given instructions about when to

visit your GP's surgery for the removal of dressings and stitches if there are any to be removed. If the Surgeon has used a dressing on the groin, this can be removed after 48 hours. The groin wound can be washed and gently dried from 48 hours

after the operation, to keep the area fresh and clean. You should not get the adhesive strips on your leg wet for 10 days. So care will be needed when washing. 10 days after the operation you can remove the strips yourself, this is often easiest in the bath or shower which helps to loosen them. After that time there is no restriction at all in taking a shower or a bath.

Your bandages will be changed to a support stocking/s 48 hours after your operation. Wear these for 14 days during the day and night and then a further 14 days during the day only, following the operation. During the first week after your operation, try to avoid prolonged standing, or sitting with the foot on the floor continuously for longer than about half an hour at a time. If you are sitting or resting for any length of time try to elevate your foot either on a stool or couch or on your bed.

The discomfort is normal which at their worst on the 8<sup>th</sup>-10<sup>th</sup> days but usually resolves 12-14 days after the operation. Occasionally, severe local twinges of pain may occur in some patients and may persist for some months. In the first week after the operation, you may need to take a mild painkiller such as paracetamol to relieve discomfort.

It is advisable not to drive for 2 days following your procedure. You should be safe to drive or as soon as you feel confident that you can make an emergency stop. However, please check with your Insurance Company, as individual policies vary with individual companies.

Regular exercise reduces the risk of developing blood clots in the deep veins. Daily exercise such as going for a walk or using an exercise bike gently to provide a gradual return to normal activity is recommended.

If you require a sick certificate for work please ask a member of staff before discharge. You can return to work when you feel sufficiently well and comfortable; this is generally within a few days. If you have had both legs operated upon at the same time and you have a number of scars on each leg, it will probably be 1-2 weeks before you are able to undertake most normal activities. If your job involves prolonged standing (without the opportunity to walk about) or driving, then you should wear the support stocking/s if you return to work within two weeks of the operation.

## When can I fly?

It is the recommendation of the Vascular Surgeons that you leave a gap of 4 weeks before your surgery/procedure if you have been on a flight.

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short or long haul.

This is because both varicose vein surgery and flying have a small risk of deep vein thrombosis. If these two risks overlap then the overall risk is increased.

### Points of contact:

#### Vascular Specialist Nurses

Norfolk & Norwich University Hospitals NHS Foundation Trust  
Tel: 01603 287844 or 01603 647971 (Monday to Friday 9am-5pm)

### Further information and support:

#### Vascular Surgeons (Secretaries):

Miss F J Meyer	01603 287136
Mr M P Armon	01603 287552
Mr D R Morrow	01603 286442
Mr R E Brightwell	01603 287394
Mr M S Delbridge	01603 286434
Mr P C Bennett	01603 286263
Mr W Al-Jundi	01603 287552
Professor P W Stather	01603 647289

NHS 111 service out of hour's advice

#### Vascular Surgical Society of Great Britain and Ireland

Tel: 020 7205 7150

Web address: [www.vascularsociety.org.uk](http://www.vascularsociety.org.uk)

#### Circulation Foundation

Tel: 020 7205 7151

Web address: [www.circulationfoundation.org.uk](http://www.circulationfoundation.org.uk)

#### For help giving up smoking

Contact your local NHS Stop Smoking Service Smoke free Norfolk on 0800 08 54113 or your GP surgery, pharmacy for local support.  
The NHS National Stop Smoking Helpline and website are a source of advice, help and support visit [www.smokefree.nhs.uk](http://www.smokefree.nhs.uk).

