



## Endothermal ablation for varicose veins

### Introduction

Endothermal ablation includes two treatments for varicose veins: radiofrequency ablation (RFA) and endovenous laser treatment (EVLT). RFA and EVLT are both minimally invasive procedures suitable for treating trunk varicose veins – the thick, lumpy veins visible below the surface of the skin. RFA involves the use of radiofrequency energy, while EVLT uses laser energy.

This leaflet explains the treatment aims for RFA and EVLT and what the treatments involve. It also provides guidance on recommendations and what to expect after both treatments as well as an outline of possible side-effects.

If you would like general information and advice on varicose veins, see leaflet:

- Varicose veins and their treatment.

### Radiofrequency ablation

#### Treatment aims

RFA aims to treat trunk varicose veins to relieve major symptoms (such as heaviness and pain in the leg and skin irritation) and to improve their appearance, while leaving minimal scarring, bruising and swelling.

#### What does the treatment involve?

RFA is a walk-in, walk-out, outpatient procedure, performed under local anaesthetic. RFA using Venefit® involves the use of radiofrequency energy to heat the wall of the vein so that it collapses. The vein will then close and seal up.

Using ultrasound for precision guidance, a thin plastic tube is inserted into the vein being treated. A fine wire with the heating element at its tip is passed through the tube. Treatment results in the vein collapsing and changing from a tube-like to a string-like structure. Eventually your body absorbs this dead tissue.

The treated area is then bandaged and a full-length compression stocking is applied to your leg.

### Endovenous laser treatment

#### Treatment aims

EVLT aims to relieve the major symptoms of trunk varicose veins (such as leg pain and skin irritation) and to improve their appearance, while leaving minimal scarring.

#### What does the treatment involve?

EVLT is a walk-in, walk-out, outpatient procedure, performed under local anaesthetic and using ultrasound guidance. It usually takes less than an hour. Treatment focuses on closing the affected vein by heating with a laser. The heat kills the walls of the vein, and the dead vein tissue is slowly absorbed by the body and disappears.

Treatment starts with an ultrasound scan to mark the position of the vein to be treated. Local anaesthetic is used to numb the skin over the vein. A needle is inserted into the vein and a flexible wire is passed up the vein towards the groin. A special flexible tube is passed over the wire into the vein and the laser fibre is then threaded up this tube. Ultrasound is used to check the position of the laser fibre.

As lasers are a powerful source of energy, you and your specialist will wear protective glasses when the laser is being used. The laser is turned on and, as it moves, the laser fibre closes up the vein from the inside.

Once the whole vein has been sealed up, the laser fibre is removed, the entry point is closed with a special strip or stitch and your leg is firmly bandaged and fitted with a compression stocking.



## After treatment: recommendations and what to expect

You can return home soon after treatment but you should make arrangements to be driven home. Depending on the extent of the veins treated, you may need to keep the bandage on for up to 7 days and then continue wearing the compression stocking for a further 7 days. You will be given full written post-treatment instructions for your particular case. Regular walking is important. Aim to walk for 5–10 minutes every hour you are awake for the next 24 hours.

## Returning to normal activities

These are guidelines on some everyday activities after RFA or EVLT; you can discuss any specific issues with your specialist.

**Back to work** You should be able to return to work within 1–2 days. Avoid prolonged standing for 1–2 weeks.

**Driving** You can drive as soon as you feel confident about making an emergency stop, often after 1 or 2 days.

**Walking and running** Walking encourages the blood circulation in your legs and promotes healing. Avoid vigorous exercise such as jogging until after your follow-up appointment.

**Swimming and cycling** Swimming is fine once the stocking does not need to be worn during the day. Return to cycling but avoid strenuous cycling until after your follow-up appointment.

### Follow-up appointment

We will arrange to see you in clinic approximately 4 weeks after treatment.



## Treatment side-effects

We hope you will not have any problems after RFA or EVLT, but if you do, then get in touch; we are here to help you.

**Pain** Most patients experience discomfort only; if necessary this can be relieved with simple pain relief.

**Bruising** Some bruising is usual during the first few days but will disappear within a few weeks.

**Bleeding** During the first 24 hours after your operation there may be a little bleeding onto the stocking. This should be very small and usually stops on its own.

**Pigmentation** Brown streaks (pigmentation) may occur over the area where the varicose veins existed but should fade over 6–12 months.

**Numbness** A few patients may experience a feeling of numbness in the skin area where the vein has been treated. This is rare but can be permanent.

**Lumps** Some tender lumps may be felt under the skin over areas where the veins were removed. They will gradually be absorbed by the body during the next few weeks.

**Thrombophlebitis** Where the varicose veins have been lumpy, a painful red lump may develop over the position of one or more of those veins. This is called superficial thrombophlebitis. It can be treated with an anti-inflammatory such as ibuprofen, and will settle down after 1 or 2 weeks.

**Thrombosis** The risk of developing a deep vein thrombosis is small – 1 in 200 or 0.5%. Very rarely a piece of thrombus may travel to the lungs causing a pulmonary embolus.

## For more information

These accompanying leaflets provide general information and advice about varicose veins and details on other treatments available.

- **Varicose veins and their treatment**
- **Foam sclerotherapy for varicose veins**
- **Surgery for varicose veins**

For additional information and guidance see  
NICE: National Institute for Health and Care Excellence  
[www.nice.org.uk](http://www.nice.org.uk)

## Contact us

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**Edgbaston** BMI Priory & Edgbaston Hospitals

**Sutton Coldfield** Spire Little Aston Hospital

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