

What is Radiofrequency Ablation?

Radiofrequency ablation is a minimally-invasive procedure used in the treatment of varicose veins and is an alternative to the traditional stripping operation. Results suggest that it is as good as a surgical operation for the treatment of varicose veins and it is recommended by the National Institute of Clinical Excellence (NICE) as the first line treatment for varicose veins.

It has a number of advantages over the standard operation. These include:

- It is performed using local anaesthetic.
- It is quick.
- You are able to return to work either the same or following day.
- It avoids most of the incisions (scars) resultant from a surgical operation.
- There is typically very little discomfort or pain after the procedure.

What does Radiofrequency Ablation of Varicose Veins Treatment involve?

1. The procedure begins with an ultrasound scan to mark the vein to be treated.
2. An injection of local anaesthetic is given to freeze the skin at just above, or below, the knee.
3. A small needle is inserted into the vein (the long saphenous vein).
4. The ablation catheter is passed over the wire into the vein.
5. The position of the catheter is checked using the ultrasound scan. More local anaesthetic agent is injected into the thigh.
6. The catheter is activated and works by closing up the vein from the inside. The procedure of actually sealing the vein should not be painful.
7. When the vein has been sealed, the ablation catheter is removed from the leg and a light support stocking is applied.

A single leg treatment typically takes 15-20 minutes.

It is possible to treat both legs if needed at the same time.

What happens after the treatment?

Sometimes you will have a stocking applied. Wear this without removing for 2 days. If you want a shower or bath cover the stocking e.g. with a plastic bag.

After that you can remove the stocking and have a luke-warm shower (if you wish) and then wear the stocking as much as possible for the next 7 days after that (9 days in total). Remove the stocking for a luke-warm shower or bath during this time.

As soon as the procedure has been completed you can leave the department and return to normal physical activity including work.

It is not advisable to drive for 24 hours after the procedure.

During the first few days any discomfort in the leg can be treated with simple painkillers such as paracetamol. Gentle walking every day is recommended. Three or four walks for 15 minutes will help. Avoid strenuous activity such as running, jogging, Pilates, weight training or swimming for 2 weeks after treatment.

You will be reviewed about 6-12 weeks after the procedure, by which time most of the varicose veins in your leg will have shrunk. If there are any left these may be managed with injection treatment. You should not fly at all for 2 weeks and not long haul for 4 weeks after the procedure as there is an increased risk of deep venous thrombosis (blood clots in veins). Please discuss with the team if you are planning a trip.

Very recent COVID-19 infections (within 8 weeks) mean you should probably delay treatment to reduce risk of blood clots.



If you experience increasing pain, swelling or blueness of the toes or increased calf pain, remove the stocking, elevate your leg and contact your GP or the team at the clinic or attend your local emergency department.

Complications/Consent

RECURRENCE: no vein treatment can prevent recurrent veins in all patients. We know that the risk of this is lowest with this technique. The risk is probably 20% (1 in 5). This can happen months or many years later.

PHLEBITIS: A small proportion of patients may develop phlebitis or inflammation of the vein. This can occur with any form of vein treatment and can be quite painful. It is usually a hard lump with redness over a vein. If this occurs you can be treated with tablets known as non-steroidal anti-inflammatory drugs, e.g. ibuprofen, Nurofen. These can be bought over the counter. Take 200mgs (one tablet) three times a day. If you are taking other medication or have asthma or kidney disease, please discuss with your GP first. Ibuprofen gel applied to the inflamed area can also help.

DEEP VEIN THROMBOSIS: Rarely deep venous thrombosis may occur (clots in the deep veins). The risk is probably 0.5-1% of all patients treated (about 1 in 200). This may travel to the lungs (pulmonary embolism risk 0.2% or 1 in 500 patients). You may be given extra treatment to reduce the risk of this if we consider you at higher risk. You may be given 10-14 days of injection treatment or a tablet.

NERVE DAMAGE: can occur because the skin nerves are attached to the veins below the knee. The risk is uncertain but nerve damage causing persistent numbness or tingling is unusual (1:100). This can resolve but may take up to 18 months. Patients can experience lesser degrees or patches of numbness of this lasting 6-12 months.

OTHER COMPLICATIONS: Staining of the skin along treated vein, burns (rare), bruising and the development of spider veins.