



Vascular Surgery

# RADIOFREQUENCY ABLATION

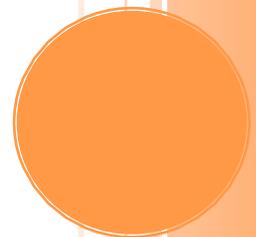
This minimally invasive treatment involves “closing” the faulty veins using a keyhole approach thereby avoiding the larger cuts and avoiding “stripping” of the veins.

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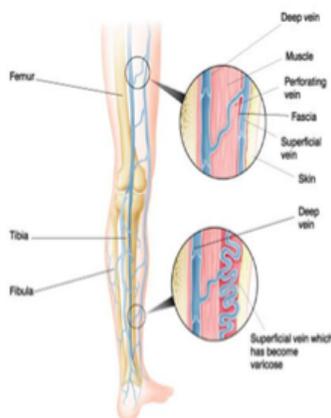


# Radiofrequency ablation

## *What are varicose veins?*

Varicose veins are "dilated tortuous veins associated with incompetent venous valves" They are very common and predominately affect the legs although they can affect any part of the body. They are more pronounced when you stand up and often described by patients as being "unsightly".

## *Why do we get them*



In short, people with varicose veins often have a genetic tendency to developing them. This is further affected by factors such as occupation (standing for long periods) or during pregnancy. All veins in the legs have valves to ensure blood travels in one direction only (upwards) each time the calf muscle squeezes. Failure of either the valves or the calf muscle pump system results in patients being susceptible to having varicose veins. The result is the development of a pressurised venous system. This manifests itself as varicose veins over the course of time.

The main sites of valvular incompetence arise in the groin (in the groin crease) or behind the knee where the large superficial veins drain back into the larger deep veins. There can be other sites of incompetence throughout the leg but in the vast majority of individuals these 2 sites are their main problem.

## *Symptoms*

Varicose veins are very common and in some people causes very little in the way of symptoms. However, the following are symptoms described by patients who do suffer with varicose veins:

- Aching, heavy legs usually worse at the end of the day
- Ankle swelling
- Discolouration around the veins, usually a brownish colour (Haemosiderin deposits)



- Skin over the veins may become dry, itchy and thin, resulting in venous eczema
- The skin above the ankle may shrink because the fat underneath the skin becomes hard and scarred (Lipodermatosclerosis)
- Patients may suffer with phlebitis which is a painful inflammatory condition of the varicose veins
- Bleeding which can be quite significant (sometimes caused by a minor injury)
- Venous leg ulcers (if skin changes start occurring, such as discoloration above the ankle, itching dry skin or scarring, then there is a risk for future skin breakdown and leg ulcer development)

### ***What is RFA?***

This is a minimally invasive procedure, which closes the faulty vein but leaves minimal scarring. The varicose veins may be removed through tiny cuts at the same time. It is usually carried out under local anaesthetic, sometimes requiring sedation and you will need to lie still for about 30 minutes, as this is approximately how long the procedure can last. Some patients prefer to have a general anaesthetic for the procedure and this is recommended if both legs require treatment at the same time. The whole procedure is guided by ultrasound.

A good guide as to whether you will be able to tolerate the procedure is if you can tolerate injections at the dentist, as you will have several injections of local anaesthetic administered along the line of your vein to numb it.

If you decide on RFA; an ultrasound scan of your leg will be done to confirm that you are suitable for this treatment.

### ***What happens before the operation?***

You may be called for a pre-admission visit before your operation, to ensure you are fit for RFA. If you are having a general anaesthetic or sedation, you should not eat for six hours prior to your treatment. However, you may drink “clear fluids” like water up to two hours before.

### ***Coming into hospital***

On admission to the day unit, a nurse will take your details and record your temperature, pulse and blood pressure. The surgeon or varicose vein nurse practitioner, will see you and your varicose veins will be marked whilst you are standing.

### ***Procedure***

You will be taken into theatre by a nurse and asked to lie on the operating table. The table will be tilted with your feet down and head raised. Your leg will be “painted” with antiseptic solution and covered with green sterile drapes. Your whole procedure from now will be carried out with the aid of an ultrasound.

A succession of local anaesthetic injections along the line of your vein will be administered. These will numb your leg. After your local anaesthetic, you will feel touching, but nothing sharp. You might feel a tightening of you leg; this is normal.

If visible veins are also to be removed at the same time, tiny cuts will be made over the veins to remove them.

At the end of the procedure, paper strips (plasters) will be used for the tiny cuts. You will have a cotton wool bandage and crepe bandage on your leg(s). (It is wise to bring baggy trousers or loose clothing with you as there will be a lot of padding on your leg). You will be allowed something to eat and drink and you can walk about straight away and go home soon afterwards.



### ***Going home***

You will need to apply the elastic stockings yourself, 48 hours after your procedure. Unwrap the crepe bandage and wool bandage (do not worry if any of the paper strips come off your leg). Replace the bandages with the elastic stocking that has been given to you. This stocking is to be kept on day and night for the first week.



If you would like to take a shower, this is fine after two days once the wounds have settled. Take the stockings off (do not worry if the paper strips come off), shower then reapply the stocking. There may be tenderness, lumpiness and bruising over the inner thigh about a week after your procedure. This is normal. However in the unlikely event that swollen, red and painful lumps appear at the site of the tiny cuts, you should see your GP in case there is an infection.

If bleeding occurs from any of the puncture sites lie down, raise the leg, and over the bleeding point apply pressure for seven minutes with a towel or handkerchief. Bleeding is always easy to stop.

Aching in the thigh one week after the procedure can occur, this is normal. Paracetamol is often sufficient. Occasionally some people need Ibuprofen or Codeine preparations which can be purchased over the counter without prescription.

### ***Return to normal activities***

You can drive as soon as you feel comfortable to perform an emergency brake without hesitating. Some people manage after 2-3 days but others may take 1-2 weeks.

You can return to work when you feel sufficiently well and comfortable. Depending on your occupation, you may find you can return after 2-3 days. Some people need up to two weeks. It is important that you can walk and keep mobile at work in the first two weeks post treatment. At least 15 minutes every hour should involve walking around.

Swimming and cycling are allowed after adhesive strips have been removed. (5-7 days).

You can fly six weeks after your procedure.

### ***Benefits and risks***

Not all leg symptoms in patients with varicose veins are caused by these veins. Aching, itching and swelling may be improved after this procedure but not in every case. The cosmetic result is usually very good but the tiny incisions are often red over the first 3-6 months. The redness then fades. Wound infections are unusual but may occur in approximately 1 in 50 patients.

You may experience numbness and tingling in the skin near the tiny cuts. This often relates to damage to tiny skin nerves, these symptoms often last 2-3 weeks but some areas of numbness



can be permanent but does not affect limb function. Very rarely, pain associated with the skin nerves may persist.

Some varicose veins will remain despite treatment and there is a recurrence rate of around 5-10%. Deep vein thrombosis is quite rare and recognized to be around 0.5%.

If you had previous skin pigmentation, it will not disappear with treatment. But the aim of treatment in that situation is to try and prevent this area from worsening and developing into ulceration in the future.

### ***Follow up Appointment***

An appointment will be made at around 3 weeks post procedure to discuss your treatment and assess your recovery.

### ***Summary***

Varicose veins are a common problem and may lead to complications if not treated. RFA is a safe and effective treatment option. However complications may happen and you need to be aware of these to make an informed decision about having treatment. Hopefully this information leaflet has answered your questions.