

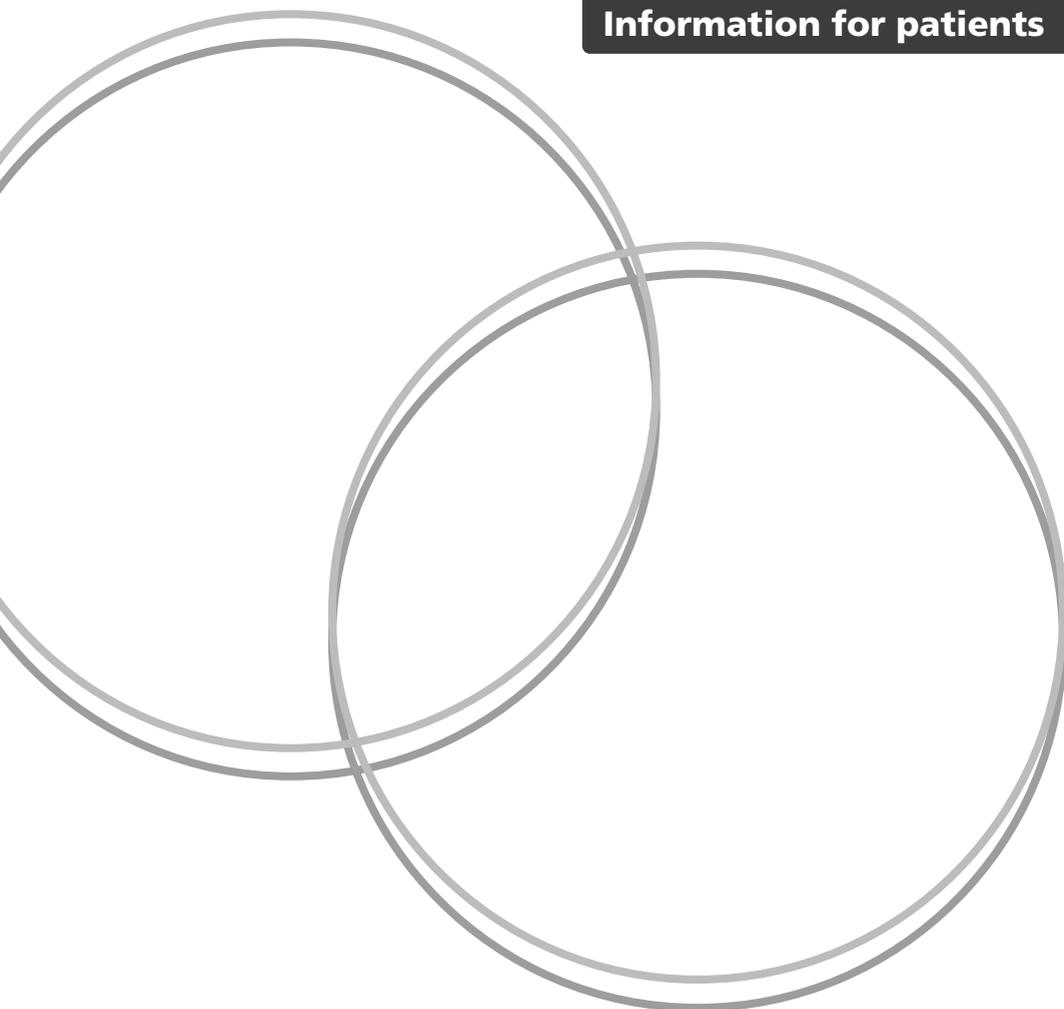


Oxford University Hospitals
NHS Foundation Trust

Varicose Vein Treatment

Radiofrequency Ablation (ClosureFast)

Information for patients



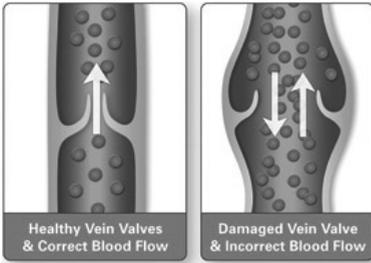
Your consultant has recommended that we treat your varicose veins with a procedure known as radio frequency ablation (RFA). This is a specialised treatment which uses a tiny catheter (tube) to deliver heat to the wall of the vein that is damaged, to shrink and seal it.

Compared to other treatments for varicose veins, this procedure is minimally invasive, and doesn't require large cuts to your skin.

What are varicose veins?

Healthy leg veins have valves that open and shut to allow blood to flow in one direction round your body and back to your heart.

Varicose veins develop when these valves become damaged or diseased. This means that the valves cannot close properly, causing the blood to flow in both directions.



This increases the pressure in the vein and causes:

- varicose veins (raised large veins)
- pain
- swollen legs
- heavy, tired legs
- changes to the skin on your legs
- ulcers.

These symptoms can get worse over time.

There are many reasons why you may develop varicose veins, these include:

- increasing age
- female sex
- family history of varicose veins
- heavy lifting
- pregnancy (especially more than one pregnancy)
- being overweight
- long periods of time standing up
- history of deep vein thrombosis.

How are varicose veins usually treated?

The traditional method of treatment is to remove the damaged vein in an operation, called 'vein stripping'. This takes place with you either asleep under a general anaesthetic or with your leg made numb (local anaesthetic). If you were to have this operation you would need to stay in hospital overnight. It can take a few weeks for you to recover from the operation and get back to moving around normally. The operation would also mean that you have stitches from the wounds on your leg where the vein was removed, as well as bruising. This procedure is very rarely done now.

How can the RFA procedure help?

The RFA uses heat to shrink and seal the damaged vein. This heat is generated using radio frequency, which is an electrical current produced by radio waves.

The blood that would have been carried through the vein then re-routes itself to another healthier vein. Most veins affected by this type of damage are only used to carry small amounts of blood. This means that sealing them off and stopping them from carrying blood won't cause damage to the blood flow around your body.

The main benefit from this type of treatment is that the doctor will only need to make small cut (two millimetres) long over the varicose vein. You won't normally need to have any stitches, as we will apply pressure to the area after the operation, to stop any bleeding. You may have a small amount of bruising around the area where your vein has been treated.

You will be able to go home on the same day as the procedure and should be able to return to your normal activities within a few days. Most people report a noticeable improvement in their symptoms within two weeks of the procedure.

How do I prepare for the procedure?

Before you come to the hospital for your procedure, you may need to stop taking certain medicines:

- If you are taking aspirin and/or clopidogrel do not stop them for this procedure.
- If you are on warfarin and having just one leg treated do not stop it for this procedure.
- If you are on warfarin and having both legs treated, you may be asked to stop taking the warfarin three days before the procedure. This will be discussed with you beforehand.

If you are uncertain about whether to take a medicine, or have any concerns before the procedure after your discussion with your consultant in clinic, please call your consultant's secretary who will be able to help you.

Telephone: **0300 304 7777**

How is the procedure carried out?

The RFA procedure can be carried out in our outpatient clinic. This means that you should not need to stay overnight in hospital. When you come for your treatment please wear flat sensible footwear and loose clothing for your safety and comfort.

When you come in for your outpatient appointment, you will be seen by the surgeon who will explain the procedure to you. You will then be asked to sign a consent for treatment form (this may not be done until you go in for the actual treatment). If there is anything you do not understand or would like to know more about, please ask before signing the consent form.

You will be asked to change into a hospital gown to allow us to be able to get to your legs and to prevent your own clothes from being damaged. Your surgeon may mark the vein (or veins) to be treated with a pen.

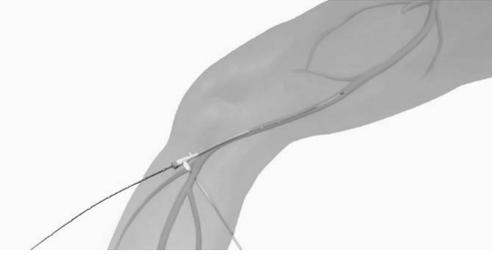
You will be asked to lie on a trolley which can be tilted up and down during the procedure. This allows the surgeon easier access to your veins by filling and emptying them of blood.

Your leg will then be painted with a disinfectant solution and covered with sterile drapes. These will be placed under your leg (or legs if both are being treated) and over your body to keep the procedure as clean as possible. The surgeon and assistant will be wearing sterile operating gowns for the same reason.

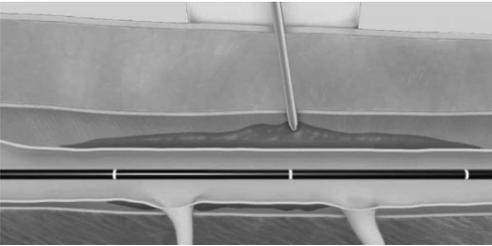
The surgeon will inject a little local anaesthetic into your skin, near to the vein that is to be treated. The surgeon will then insert a needle into the vein being treated, through which they will thread the catheter. If there is more than one vein to be treated they will do one at a time, but may partly prepare the other vein before they start the heat treatment on the first one.

The surgeon will inject a liquid called 'tumescence solution' around the vein, using a very fine needle. This anaesthetises the vein. They will do this along the entire length of the vein to be treated.

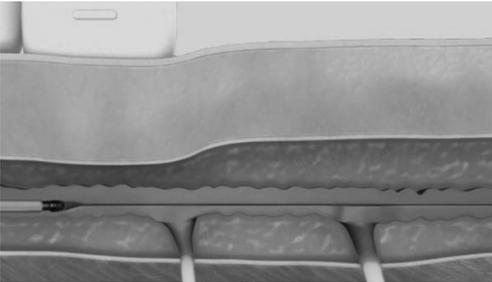
Step 1: Thermal Catheter is placed



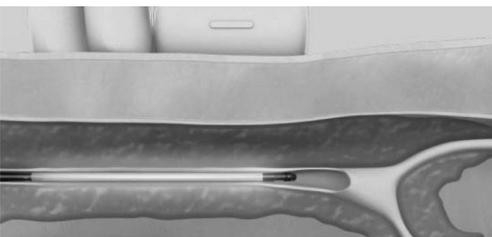
Step 2: Local Anaesthetic (Tumescence solution) is applied



Step 3: Heat is delivered to vein wall



Step 4: Vein is closed



When the whole length of the affected vein that is to be treated has been numbed with the solution, the surgeon will activate the electrical current. As the catheter is withdrawn the vein will shrink along its length and close up. You will hear a noise as the machine is working.

You may feel some pressure whilst the treatment is being carried out but you should not feel any pain. You may experience a small amount of discomfort, but if you tell the surgeon they will be able to use some more tumescence solution to numb the area.

What happens after the procedure?

A small dry dressing will be applied over the cut. This may be held in place with a small roll of gauze to apply some pressure to help reduce any bleeding. We will also fit you with an elasticated compression stocking on the leg that has been treated. This will be either a long leg stocking or a below knee sock, depending on which vein/s you have had treated.

You will need to wear this for three to five days and nights. It is important that you wear it continuously without taking it off, as it will help reduce swelling and help your leg to heal. You will not be able to have a shower or bathe, but may be able to have a wash with a slightly damp flannel. However, you must make sure that the stocking does not get wet.

You will be asked to dress and a nurse will go through any do's and don'ts and answer any of your questions before you leave. If you have a dressing on a leg ulcer this will be replaced before you leave.

The procedure will take approximately an hour but can take a little longer if you have more than one vein to be treated.

You will be able to go home straight after the treatment and aftercare has been carried out.

Your doctor will normally recommend that you start to move around soon after the procedure, to keep the blood flowing.

You will not be able to drive yourself home after the procedure, so please arrange for someone to bring you to hospital and take you home afterwards.

You should not go home on public transport after this procedure. You will need to be taken home by car. This will be more comfortable for you and also quicker for you to return to the hospital if there are any complications on the journey home.

Pain relief

The local anaesthetic will begin to wear off after 4 to 6 hours. If you have any mild pain when the local anaesthetic has worn off you can take either ibuprofen, paracetamol or other pain relief you would normally take for a headache. Avoid taking aspirin but do not stop taking your low dose aspirin if you are prescribed this medicine for other conditions.

It is a good idea to have a supply of painkillers ready at home. Always follow the dosage instructions on the packaging.

If you feel you need a stronger painkiller please contact your GP. Alternatively, you could speak to the pharmacist at your local chemist who will be able to advise you if there is anything else you could take to help.

Do not use hot or cold compresses (including microwave wheat bags or hot water bottles) on the area where you have had the procedure as this could scald or burn your skin.

What are the risks of having this procedure?

As with all medical procedures there are some risks involved. For this procedure there may be a chance of the following:

- once the local anaesthetic wears off, you may get some pain and bruising along the line of the treated vein
- phlebitis – when the vein becomes inflamed causing tenderness, lumpiness and red/purple discolouration
- nerve damage – numbness in your leg after the local anaesthetic has worn off (less than 5% or 5 in 100 chance)
- deep vein thrombosis (DVT) – blood clot in the leg (less than 5% or 5 in 100 chance)
- pulmonary embolism – where a blood clot travels to the lung (less than 0.5% or 1 in 200 chance)
- skin burn (rare)
- infection (rare)
- arteriovenous fistula – an abnormal connection between an artery and vein (this is rare).

If you have any of the symptoms below, please speak to your GP immediately.

If you are unable to contact your GP please ring the John Radcliffe Hospital and ask to speak to the On-Call Vascular Registrar:

Telephone: **0300 304 7777**

- fever (raised temperature)
- breathlessness
- hot and inflamed (red) leg
- excessive bleeding – this is continuous bleeding that causes your dressings to become very wet, or bleeding that does not settle down with you resting your leg with it elevated (raised up)
- haematoma (a collection of blood under the skin) or severe bruising
- burns to your skin.

Getting back to normal

The day after the procedure you can usually get back to normal activities including work.

You should not drive for at least 48 hours after RFA and you should only drive when you are pain free and able to safely perform an emergency stop.

For the next two weeks:

- Avoid sitting down or standing for long periods.
- Try and elevate (raise) the treated leg/s on a stool when you sit down.
- Make sure that you take a brisk walk for five minutes every hour during the day. This may be walking upstairs quickly or around your garden fast to help keep the blood circulating in your legs.

For a few days refrain from strenuous activities such as running, lifting or pushing heavy objects, such as a supermarket trolley.

Keep mobile (moving around).

Follow-up

You will be sent an appointment for a follow-up about six weeks after the procedure.

Please contact your consultant's secretary if you haven't received an appointment letter by this time.

You can return to work the following day if you feel up to it. This will largely depend on whether your job is a strenuous one, but you will most likely be able to return after two to three days at most.

Further questions and how to contact us

If you have any other questions about this procedure, please contact either your **GP** or the:

Vascular Ward - 6A at the John Radcliffe Hospital:

Telephone: **01865 221 802 or 01865 221 804**

We would like to thank Medronic (Closurefast) for their kind permission to use their leaflets and diagrams as the basis of this patient information leaflet.

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Further information

Patient information on varicose veins is available from the NHS website:

www.nhs.uk

and the Vascular Society for Great Britain and Ireland website:

www.vascularsociety.org.uk

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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Oxford University Hospitals NHS Foundation Trust
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