

Information about VARICOSE VEINS & their treatment

These are general guidelines for your information and need not apply to specific cases

1. What are Varicose Veins?

Veins are the blood vessels that carry blood back to the heart. Varicose veins are abnormally swollen (dilated) veins that are visible just below the surface of the skin. Smaller veins in the skin itself are sometimes called "thread veins" or "spider veins". Although these may be unsightly they are not the same as varicose veins.

2. What causes Varicose Veins?

Blood usually flows through the veins up the leg and back to the heart. This flow against gravity is helped by one-way valves in the veins, which stop the blood flowing the wrong way. If the valves do not work properly, the pressure in the veins of the legs rises, and blood from the deep veins is forced into the veins under the skin, causing them to dilate and appear knotted or lumpy.

Varicose veins often run in the family and as you get older they are more likely to occur. They may also be caused by pregnancy or weight gain that increases pressure on the leg veins.

3. What trouble do they cause?

Varicose veins are very common and often give no symptoms at all, although they may look unsightly. However, aching in the leg is common, especially after a day of standing, and ankle swelling may occur.

Occasionally, severe varicose veins can damage the skin of the leg above the ankle causing itchiness and discolouration (eczema). Without treatment an ulcer may eventually occur. Sometimes a varicose vein may become red and tender. This inflammation is called "phlebitis".

4. What tests are required?

In most cases a simple examination in the clinic, and a painless test with an ultrasound machine are all that is needed to enable your specialist to decide what treatments are possible. Occasionally an x-ray will be needed before advice about treatment can be given.

5. Do I need treatment?

Treatment for varicose veins is seldom essential since serious complications rarely occur. The choice is yours and many patients have varicose veins for the whole of their adult life and never suffer any problems with them.

6. How can I help myself?

Avoid being overweight and wear support stockings if you have to stand up a lot of the time. Regular exercise such as walking also helps to pump the blood out of the leg. Dry itchy skin can often be helped by moisturising (emollient) creams or bath additives available at the chemist.

What treatments are available?

Support Stockings.

These may be all that is required if aching and swelling are the main problems. Properly fitted medium-strength compression stockings up to the knee usually work best.

Ultrasound-guided Foam Sclerotherapy (injections).

This is a new development of a long established treatment for varicose veins, and is recommended by N.I.C.E. for patients whose veins are not suitable for other forms of keyhole treatment. A small amount of a special chemical (Sclerosant) is mixed with air to make a foam. Under ultrasound monitoring the foam is then injected into each vein and the leg is bandaged and placed in a full length stocking for a week. The foam causes inflammation in the vein which then shrivels up and eventually becomes less visible. Sometimes the inflammation can be uncomfortable for a few weeks, and occasionally the skin can blister and become scarred.

Injections are not a form of "invisible mending", and cause some skin staining in more than a third of patients. This usually resolves within 12 months but can occasionally be permanent. Other complications which occur in about 5-10% of patients include allergic reactions, temporary visual disturbance, deep vein thrombosis (DVT), headache, and in a small number of cases, patients suffered a stroke, but made a full recovery.

Traditional Operation.

Until recently more severe varicose veins were often treated with surgery, although N.I.C.E. recommends that this treatment is now only used for patients unsuitable for the newer "keyhole" treatments. This treatment is performed under a general anaesthetic and the visible varicose vein are removed through a series of small cuts which are then closed with adhesive strips.

More importantly a cut is made in the groin over the top of the main varicose vein and the leaky valves are tied off (sometimes this is also done behind the knee). The cut is closed with a stitch, usually hidden under the skin. The vein in the thigh may also be removed (stripped). The leg is then bandaged and placed in a full length stocking for a week. Most patients are able to go home the same day after their operation.

Complications of conventional surgery include occasional bleeding from the wounds, infection in the groin wound, deep vein thrombosis (DVT) and some numbness and/or pain in various places in the leg. These usually settle within a few months; rarely a small area of permanent numbness remains. Bruising, especially along the inner thigh is common in the first week or two after the operation and this can require painkillers until the inflammation eases. The scars on your legs will continue to fade for many months.

Radiofrequency ablation (VeinClear, VNUS closure, Venefit™)

Radiofrequency ablation (RFA) is a relatively new treatment for varicose veins. It is one of the “endothermal” treatments for varicose veins that is now recommended as first choice for the treatment of varicose veins by the National Institute for Clinical Excellence (NICE, www.nice.org.uk), which assesses the safety and effectiveness of all new treatments. The size and shape of the varicose veins will determine whether we are able to treat you using RFA. The procedure is performed under a local anaesthetic, and only requires a small wound to be made at around the level of the knee. A heater probe attached to a generator is used to obliterate (close) the faulty vein after being positioned under ultrasound-guidance, redirecting blood through nearby healthy veins as a result. After treatment the leg is bandaged and placed in stocking for 5-7 days and you will be able to go home on the day of treatment and should be able to resume normal activity straight away.

Most varicose veins are suitable for day case treatment using RFA. Occasionally the vein may not be obliterated by the heater probe (this occurs in about 3% of patients). If the procedure is not effective then it can be tried again, or the veins can be treated by conventional surgery, or foam injections. There may be a few visible varicose veins left after treatment, but these do not cause symptoms and become less visible with time. Rarely you can have slight bruising or tenderness and some temporary numbness in the leg. As with any surgical procedure there is a small risk deep vein thrombosis (DVT).

We do not know how treatment compares with conventional treatment in the long term, although results over the last 10 years appear to be as good as or better than surgery.

Endovenous laser ablation (EVLT)

This procedure is virtually the same as VNUS closure, but uses laser energy to seal the vein closed. The main differences are that a greater number of patients (about one quarter) experience significant discomfort that comes on about 5 days after the treatment, and lasts for a few days, however the results of EVLT are comparable with the other endothermal methods such as VNUS closure.

Local anaesthetic phlebectomies

This procedure is occasionally all that is required to treat varicose veins, but is more commonly undertaken at the time of VNUS closure or EVLT, in certain situations where the varicose veins are thought to have a high chance of remaining after endothermal ablation. After injecting a dilute local anaesthetic solution, the visible varicose veins, marked before the operation, are removed through a series of small cuts which are then closed with adhesive strips or stitches.

New keyhole treatment methods (Cyanoacrylate Glue, Clarivein)

Two new keyhole treatments for varicose veins, that avoid the need for multiple local anaesthetic injections during the treatment, and reduce the need for bandaging afterwards are beginning to be introduced, although there is not enough evidence available yet, to say if these treatments are as good as endothermal ablation (RFA and EVLT).

Both techniques involve placing a catheter in the vein through a small incision in the calf or lower thigh, made under local anaesthetic.

In one technique, endovenous mechanochemical ablation (Clarivein™) a tube with a rotating hollow wire at its tip is inserted through the skin into the affected vein in the leg using ultrasound guidance. As the tube is pulled back out of the vein, the wire is rotated, damaging the lining of the vein. At the same time a chemical is injected through the hollow wire into the vein. The vein becomes inflamed, and then shrivels and closes.

The aim of the other technique called cyanoacrylate glue occlusion, is to close a varicose vein by sticking its walls together. The cyanoacrylate glue is put into the affected vein via a special tube inserted into the vein at the knee and passed to the top of the great saphenous vein, using ultrasound to guide it. This treatment doesn't require bandages to be worn afterwards and skin staining is very rare

Both these techniques have the same potential complications as the established keyhole treatments (bruising, skin discolouration, nerve injury, deep vein thrombosis, allergic reaction, and failure to close the treated vein), but there is not yet enough information available about these techniques to say if these complications are any more likely, or if the success rate of these treatments is any lower.

Do the veins come back later on?

New varicose veins may appear after any varicose vein treatment, and you will have been warned that not every visible vein will disappear as a result of your treatment. Traditional methods to treat varicose veins are associated with a recurrence rate of 10-20%. Rates of recurrence for the newer treatments appear to be better than traditional methods.

Airline Travel

Although the risk of blood clots is minimal with all these techniques we do not advise patients to undertake air travel within 6 weeks of varicose vein treatments. Short flights may be acceptable, but if you have any doubts please discuss with your specialist.

Further information

This document is intended as an overview of the treatments available and you will receive more detailed information specific to your chosen treatment before the procedure is undertaken. Please discuss any concerns or questions with your specialist prior to treatment.

Many sources of information about varicose veins are available on the internet, however do bear in mind that this information may not be unbiased! We recommend the following sources as providing useful and balanced information for people considering varicose vein treatment:

National Institute for Health and Clinical Excellence

Formerly known as N.I.C.E. this organisation produces a range of patient leaflets about varicose vein treatments that can be printed off from their internet site www.nice.org.uk You can also view further information on the various treatments in the “guidance for doctors” documents. Search for:

Information for the public, issued July 2013

<http://publications.nice.org.uk/varicose-veins-in-the-legs-ifp168>

“Varicose veins in the legs.”

“Treating varicose veins with foam injections” Information about NICE interventional procedure guidance 217 (May 2007)

“Radiofrequency ablation of varicose veins” Understanding NICE guidance – information for people considering the procedure. (Sept 2003) (all about VNUS closure)

“Endovenous laser treatment of the long saphenous vein” Understanding NICE guidance – information for people considering the procedure (March 2004) (all about EVLA)

“Cyanoacrylate glue occlusion for varicose veins” NICE interventional procedure guidance 526 (June 2015). guidance.nice.org.uk/ipg526

“Endovenous mechanochemical ablation for varicose veins” NICE interventional procedure guidance 435 (January 2013). guidance.nice.org.uk/ipg435

The Circulation Foundation

This charitable foundation is associated with the Vascular Society which is the professional society of doctors involved in treating diseases of arteries and veins. They produce a range of patient leaflets on diseases of arteries and veins including varicose veins. These leaflets can be accessed at www.circulationfoundation.org.uk/patient.html

