Varicose Veins

Information for Patients

This information is written to provide information about varicose veins and treatment options

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What are varicose veins?

Arteries carry blood down the legs and veins bring blood back up the legs to the heart. There are two main systems of veins in the legs – the deep veins that carry most of the blood back up the legs to the heart, and the superficial veins.

Varicose veins are **superficial** veins of the legs that have become swollen, twisted and visible. **They are very common**.

What causes varicose veins?

When we are standing blood must be pumped “uphill” through the veins by the muscles of the leg. To help blood travel in an upward direction veins have many one-way valves to prevent blood that has been pumped upwards falling down again when we stand still. Failure of these valves increases the pressure in the veins when standing. This excess pressure leads to dilation (bulging) of the veins and the appearance of varicose veins.

Varicose veins often run in families. Women are more likely to seek treatment for varicose veins and up to 40% of women may develop varicose veins during their lifetime. Hormonal factors including puberty, pregnancy and menopause can make varicose veins more noticeable. Jobs involving long periods of standing often make the symptoms from varicose veins worse.

What symptoms do varicose veins cause?

Many people have no symptoms from their varicose veins.

Other than cosmetic concerns, the commonest symptoms from varicose veins are aching, discomfort, and heaviness of the legs. These symptoms are usually worse at the end of the day, but are not medically serious.

In a few people the high pressure in the veins causes damage to the skin near the ankle. Brown staining of the skin and eczema (flaky, itchy skin) can develop as a result of varicose veins. Ulceration (a break in the skin) may occur if these skin changes are allowed to progress, or if the skin is injured.

Varicose veins can cause phlebitis or thrombophlebitis. Phlebitis means inflammation of the veins and this inflammation may be accompanied by some thrombosis (clotting of blood) inside the affected veins, which become hard and tender. When phlebitis and thrombosis occurs this is called thrombophlebitis. This is **not** the same as deep vein thrombosis (DVT) and is not usually dangerous.

The risk of bleeding as a result of injury to varicose veins worries some people, but this is very rare. It will always stop with firm pressure and elevation of your leg. Your doctor can then refer you to a specialist to treat your veins to prevent further bleeding.

What tests are used to investigate varicose veins?

Most varicose veins originate from faulty valves at the groin level or, less commonly, behind the knee. A detailed ultrasound scan called a Duplex ultrasound scan, will usually be required if treatment is planned. This is usually done by appointment with the Vascular Laboratory. The scan looks at the superficial veins and deep veins. It can detect leaking valves, map the route of the superficial veins and detect evidence of previous blood clots in the deep veins (deep vein thrombosis or DVT). The scan is performed by specially trained staff called sonographers and is reviewed by your Vascular Surgeon.

Do I need treatment for my varicose veins?

Most people with varicose veins do not require treatment.

This avoids exposing people to the risks of an operation unnecessarily. **Patients are unlikely to suffer any serious harm by not having varicose vein treatment.**

If you have varicose veins there are a number of reasons why you may decide to have intervention. The Vascular Surgeon will discuss **all** the treatment options with you before you decide which treatment is best for you.

Patients with ulceration (broken skin), or areas where your skin is at risk of breaking down because of their varicose veins carry the highest priority.

Bleeding from varicose veins can be frightening and may recur. This problem also carries a high priority for treatment.

Repeated episodes of phlebitis (inflammation of the vein) or thrombophlebitis (inflammation with clot within the vein), is also sometimes an indication for surgical treatment.

Small varicose veins that are not causing any significant symptoms do not need to be treated.

The aims of varicose vein treatments are to reduce the pressure in the superficial veins. This will reduce the risk of existing varicose veins from enlarging further and may help prevent new varicose veins from growing. For people with skin changes around the ankles or previous ulceration, reducing the pressure in the varicose veins helps prevent worsening of the skin change and usually reduces the risk of further ulceration. For this group of patients, the addition of support stockings further protects the skin.

Treatment Options

Most people with varicose veins do not require treatment.

Patients are unlikely to suffer any serious harm by not having varicose vein treatment.

Compression

Tight compression socks or stockings can help control the symptoms caused by varicose veins. They come in a variety of colours and styles and need to be carefully fitted. They can be prescribed by your GP. These support garments can help to heal skin that has been damaged as a result of varicose veins.

Endovenous Ablation Therapy

Endovenous Ablation Therapy (EVA) is the term used to describe a technique where the varicose veins are closed by a heating process within the vein itself. It involves puncturing the varicose vein around the knee level with a needle and passing a fine fibre (like a wire) up the main superficial vein to the groin region near where the main superficial vein connects to the main deep vein. Several more injections are then used to surround the varicose vein in local anaesthetic fluid. The end of the fibre then heats up and causes a thermal injury (burns) to the inside of the vein as it is pulled back down the leg. The procedure can be performed either entirely under local anaesthetic or under general anaesthetic.

If successful this causes the vein to block off and shrivel up, which in turn reduces the pressure in the veins lower down the leg, making them less visible.

If your varicose veins involve the main superficial vein behind your knee running down the back of your calf a similar procedure can be used to treat this vein.

Some patients may need further treatment in addition to EVA to treat any varicose veins that might still be visible.

After the procedure a support stocking will be applied to your leg and most surgeons recommend wearing the stocking for around a week, particularly during the day if standing for long periods.

What should I do after treatment?

After EVA, you will be monitored in the recovery area for a few hours then once you have recovered from any anaesthetic you can go home. You should not drive for around 4 or 5 days. If travelling by car for more than one hour, you should sit back on the back seat with your leg(s) on the seat. You should stop hourly and walk for 5 minutes. During the first few days you will probably feel some discomfort or tightness over the treated vein. To minimise this we recommend a 3 to 5 day course of simple painkillers such as paracetamol.

When the support stocking is first removed there may be some bruising over the treated vein. This is normal together with some hardness under the skin. This will settle down.

We recommend walking ½ mile to 1 mile each day after your treatment. Normal activity, including work, can be resumed as soon as you like, although we suggest avoiding contact sports, the gym and swimming for 2 to 3 weeks after EVA.

What problems might there be after treatment?

In around 3 in 100 (3%) of patients the varicose vein fails to close and the varicose veins remain visible. In a very small number of patients the vein may initially close only to re-open later. If this happens further treatment may still be possible although further EVA attempts may not be possible or advised.

If you have many varicose veins below the knee they may remain visible following EVA and additional procedures may be required either at the time or at a later date.

Excessive bruising and/or tenderness can occur in less than 1 in 20 (5%) of patients. If it occurs it may be helpful to continue taking painkillers for longer after discussion and agreement with your GP. About 1 in 100 (1%) of patients may experience some numbness in the lower leg after EVA. This is almost always temporary.

Deep venous thrombosis (DVT) occurs rarely following varicose vein EVA. You will be given an injection of blood thinning medication at the time of your procedure to reduce this risk. Women taking the oral contraceptive pill may be at increased risk of developing DVT and you should notify the Vascular Surgeon if you are using the pill. Rarely the blood clot in the deep vein can travel to the lung. This is called a pulmonary embolus and can be very serious.

EVA can be performed under general anaesthetic and there are risks associated with the general anaesthetic process itself.

Varicose Vein Surgery

Varicose vein surgery involves removing the varicose veins from the leg through incisions (cuts). The operation varies a little from person to person, depending on where your varicose veins are located. In the vast majority of cases the operation is performed under general anaesthetic.

If the main superficial vein in the thigh is the problem you will have an incision (cut) about 3 to 4cm long in the skin crease of the groin. Through this incision the top end of the main superficial vein is disconnected from the main deep vein. A soft flexible wire is passed down the inside of the main superficial vein to around the knee level where a second small incision is made to retrieve the vein and the flexible wire. The main superficial vein and the flexible wire are then pulled out of the leg together. This process of pulling the vein out of the leg is often called “stripping” the vein and is a term that many people use to describe the operation.

If your varicose veins involve the main superficial vein behind your knee running down the back of your calf the main incision (cut) is in the skin crease behind your knee and only a short length of vein is removed using this incision. This reduces the chances of damaging any nearby nerves than can occur if the vein is “stripped” to the ankle level.

Finally, in most cases, remaining visible varicose veins are removed from the leg through tiny incisions about 2 to 3mm in length. Incisions are typically placed a few centimetres apart along the line of the varicose vein and there may be a large number of tiny incisions if your varicose veins are extensive.

The removal of visible varicose veins through small incisions is often referred to as “Multiple Stab Avulsions” and may be performed in some patients who have already had the main superficial vein treated at an earlier procedure or where the main superficial vein does not require intervention.

The larger incisions are closed with a stitch, which lies beneath the skin and does not need to be removed. The smaller incisions are closed with special sticky paper strips that hold the skin edges together. The leg is bandaged firmly from toe to groin at the end of the operation.

Varicose vein surgery is usually performed as a Day Surgery. To be suitable for Day Surgery you need to be reasonably fit, have a family member or friend to take you home and be with you overnight and have telephone. Patients having more complex surgery and those who live alone may need to stay in hospital overnight. Please bring with you all the medications that you are currently taking. You will be admitted to your bed by one of the nurses who will also complete your nursing record.

The Vascular Surgeon who will be performing your operation will visit you immediately before the procedure. Your varicose veins will be marked with a waterproof pen and you should ensure that all the varicose veins you hope to have removed are marked.

The doctor who will give you the anaesthetic will also visit you, and explain the anaesthetic to you. They will also discuss painkillers for after the operation.

What should I do after the operation?

Some people describe the feeling in the leg as stinging immediately after the operation but it is unusual for the leg to be very painful. You must let the nurses or doctors know if you are in pain. Following this sort of surgery you are very unlikely to feel sick, and you should be able to eat and drink again within a few hours. Some of the smaller incisions may bleed a little over the first 24 to 48 hours and we encourage you to leave the leg covered with bandages. Before you leave hospital you will be given a typed sheet of post-operative instructions. This explains when and where to have the bandages removed, how long to wear the stockings for, what to expect in the coming days and follow up arrangements by your Vascular Surgeon or your GP.

Most people describe the leg as sore or uncomfortable when they get home. These feelings can increase steadily from the second post-operative day and can be at their worst 8 to 10 days after the operation. The discomfort usually resolves 12 to 14 days after the operation. Sometimes no painkillers are required at all but we recommend that you take simple painkillers such as paracetamol regularly for the first few days after surgery.

Regular daily exercise, such as going for gentle ½ mile walks to provide a gradual return to normal activity, is recommended. To rest completely after the operation increases the risk of developing blood clots in the deep veins of the leg (deep vein thrombosis or DVT).

You can shower or bath within 48 hours of the operation. Sometimes bathing or showering immediately after surgery may lead to bleeding from the smaller incisions that should stop with firm pressure.

You will be able to drive within seven days of the operation provided the leg is not too uncomfortable although we recommend checking if your insurance policy has any specific instructions regarding driving after surgery.

You should be able to return to work within a few weeks of surgery depending on your job and there are no strict limitations to lifting but heavy lifting is probably best avoided for two weeks. We suggest avoiding contact sports, the gym and swimming for 2 to 3 weeks after surgery.

The incisions, although initially visible, will subside to become virtually invisible within 9-12 months. There is usually considerable bruising in the leg, particularly down the inside of the thigh. This bruising usually lasts for 4-5 weeks.

What problems might there be after treatment?

Complications after varicose vein surgery are uncommon. Serious complications are rare. The Vascular Surgeon will outline the potential risks of your specific operation and will discuss these risks with you. You will be given lots of opportunities to ask any questions that you may have.

The incisions (cuts) can sometimes become infected and this may need treatment with antibiotics. This is more common when surgery is being performed for a second time for recurrent varicose veins and involves an incision in a scarred groin. Bad infections are rare.

Occasionally the groin incision may leak blood-stained or clear fluid. Usually this only lasts a few days. Sometimes clear fluid collects under the groin incision. It may be contained beneath the skin or it may leak through the incision. This collection of fluid is called a lymphocele. This complication mainly occurs following re-operation on the groin. If there is leakage from the groin, it may take up to six weeks to settle. Rarely lymphoceles need further surgery to fix them.

Nerve injuries are uncommon, occurring in about 1 in 20 (5%) of cases. Two skin nerves are particularly at risk. One helps with sensation on top of the foot, and the second on the outer border of the foot. Other nerves may also sometimes be damaged, leading to reduced or altered sensation anywhere in the leg. The reduced sensation may be very noticeable at first, but normally fades with time, and is not usually a problem in the longer term.

Deep venous thrombosis (DVT) occurs occasionally following varicose vein surgery. Women taking the oral contraceptive pill may be at increased risk of developing DVT and you should notify the Vascular Surgeon if you are using the pill. Rarely the blood clot in the deep vein can travel to the lung. This is called a pulmonary embolus and can be very serious.

Varicose vein surgery is usually performed under general anaesthetic and there are risks associated with the general anaesthetic process itself. These risks will be discussed with

you by the anaesthetic team and are detailed in our “General Anaesthetic – Day Surgery – Information for patients leaflet”.

A large number of patients undergoing varicose vein surgery will develop more varicose veins over time, often near to where the original varicose veins were located. This is true for all treatment options and in many patients the veins are not troublesome. For a few patients further treatment may be required.

Ultrasound Guided Foam Sclerotherapy (UGFS)

This involves injection of special chemical foam into the varicose vein. The foam causes irritation and inflammation in the lining of the vein. The inflammation causes the walls of the varicose vein to stick together. If this is successful the varicose vein will be less visible.

Accurate and effective injection usually needs to be guided with an ultrasound machine. This is called ultrasound-guided sclerotherapy. Bandaging the leg or wearing tight stockings compresses the vein following the foam injection and helps the vein walls stick together.

Vascular surgeons do use this technique but may not recommend it as a first line treatment if you have significant valve failure. This is because foam injections can be less successful than other treatments when the valves in the main superficial veins have failed.

What happens during injection treatment?

Foam injection treatment is done as an outpatient using a very tiny needle that causes little discomfort. No anaesthetic is required. Several injections may be required to treat the varicose veins. Each injection site is covered with a pad and your support stocking or a bandage will be applied to the leg. This puts some pressure on the veins that have been injected until the walls of the vein have stuck together.

What should I do after injection treatment?

You should walk briskly for at least 20 minutes after having your injections. The stocking or bandage must be worn continuously for 48 to 72 hours. After this you can take the stocking off at night but wear it during the day for the rest of the week. Remain as active as you can. Avoid standing still for long periods. If you need to stay standing for more than about half an hour go for a short walk to keep the legs moving. There are no restrictions on your activities and you can return to work immediately after the treatment. It is reasonable to pursue most sports, but avoid very strenuous activities for the first few weeks.

What problems might there be after treatment?

In some patients (perhaps as many as 30 in 100 (30%)) not all the varicose veins will become less visible or may re-appear over time. Further treatment may be possible but again the veins may not be fully treated and many patients are advised not to have repeated treatments.

The chemical foam that is injected into the vein can cause inflammation resulting in redness and discomfort. This will settle but if it is troublesome anti-inflammatory drugs such as ibuprofen or simple pain killers such as paracetamol will help. **Most patients do not require any painkillers.**

You may have mild ankle swelling if you stand up for long periods of time. Any swelling will usually settle if you go for a walk, or if you raise your leg when sitting. Deep vein thrombosis (DVT) is a possible consequence of injecting the varicose veins, but it is rare.

Occasionally (less than 1 in 20 (5%) of patients) foam injections can produce brown staining of the skin in the areas where the veins were. It is not possible to predict which patients will be affected by the staining. Although the brown staining may gradually fade it can be permanent.

It is also possible that a tiny ulcer may develop at the site of the injection. Although this will heal it may leave a small scar.

Very rarely blushes or clusters of tiny veins can appear in the skin over areas that have been injected (this can also occur after operation).

Other rare complications of foam sclerotherapy that have been described include migraine or visual disturbance and very rarely stroke.

Further Questions

Please feel free to discuss any concerns or questions you have with the your GP prior to attending hospital or your Vascular Surgeon on the day of your procedure. If you wish to postpone your surgery and meet with your Vascular Surgeon in the outpatient department to discuss your queries before considering any treatment please contact the department.

Vascular secretaries can be contacted on 0131 242 1059.

Cancellation of Surgery

While we make every effort to avoid this where possible, there is always a risk that your operation may be cancelled at short notice. This is due to either emergency patients who require urgent surgery or other reasons which are beyond our control. We realise that this can cause distress and inconvenience, but in the event that your surgery is postponed, you will be offered a new dates as soon as possible.

Keeping your Appointment

If you cannot keep your appointment, or have been given one that is unsuitable, please change it by phoning the number on your appointment letter. Your call will give someone else the chance to be seen and will help us keep waiting times to a minimum.

Public Transport and Travel Information

Bus details available from:
Lothian Buses on 0131 555 6363 www.lothianbuses.co.uk

Traveline Scotland on 08712002233 or www.travelinescotland.com

Train details available from:
National Rail Enquiries on 03457 484 950 or www.nationalrail.co.uk

Patient Transport

Patient Transport will only be made available if you have a medical/clinical need. Telephone **0300 123 1236** *calls charged at local rate up to 28 days in advance to book, making sure you have your CHI Number available. Hard of hearing or speech impaired? Use text relay: **18001-0300 123 1236*** (calls charged at local rate). To cancel patient transport, telephone 0800 389 1333 (Freephone 24 hr answer service).

Interpretation and Translation

Your GP will inform us of any interpreting requirements you have before you come to hospital and we will provide an appropriate interpreter. If you are having this procedure as an existing in patient, staff will arrange interpreting support for you in advance of this procedure. This leaflet may be made available in a larger print, Braille or your community language.