Varicose Veins
An information guide
Varicose Veins

Introduction
This leaflet tells you about varicose veins and the various treatment options available to you. It also explains the possible risks involved. It is not a substitute for the advice the doctor or specialist may give you. Prior to any procedure you should have a full explanation of the procedure, and the risks involved, before signing the consent form.

What are varicose veins?
Blood flows down the legs through the arteries, and back up the legs through the veins. Varicose veins are veins under the skin of the legs which have become widened, bulging and twisted (tortuous). They are very common and do not cause medical problems in most people.

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 less important veins under the skin, which can turn into varicose veins. All veins contain valves, which should only allow the blood to flow upwards. If the veins become widened and varicose, these valves no longer work properly. This in turn allows the blood to flow backwards down the veins and causes the veins to swell and become varicose.

What problems do they cause?
Very many people have no symptoms, except for the fact that veins are noticeable and their appearance can be embarrassing. Simply having varicose veins is not a good reason for going to the doctor or having treatment. Other than cosmetic embarrassment, the most common symptoms are aching and swelling, which are usually worse at the end of the day.
In a few people, the skin near the ankle can become brown in colour, sometimes with scarred white areas. Eczema (a red skin rash) can develop. If these skin changes are allowed to progress, or if the skin is injured, an ulcer may occur. Skin changes are therefore a good reason for going to see your GP for referral to a specialist.

Varicose veins can occasionally cause phlebitis and bleeding. Phlebitis, sometimes called thrombophlebitis means inflammation of the veins, and causes the veins to become hard and tender. It does not mean that the veins necessarily need treating. The risk of bleeding as a result of knocking the veins worries many people, but this is rare. It will always stop with firm pressure and elevation and the veins can then be treated to remove the risk of further bleeding.

What tests are required?

If treatment is being considered then you may have some special tests. In most cases, a simple examination plus a painless test with an ultrasound machine is all that is required to enable your doctor to decide what needs to be done. Occasionally, a more detailed duplex scan (which produces pictures as well as blood flow information), may be required.
What treatments are available?

Most people with varicose veins do not need treatment. The medical reason for advising treatment is skin damage leading to eczema, ulcers or bleeding. However, if the varicose veins are causing some trouble, aching or there are other symptoms, treatment may be worthwhile. There are several methods of treatment:

- support hosiery
- injections (microsclerotherapy)
- foam sclerotherapy
- endovenous laser therapy (EVLT)
- VNUS (radio frequency ablation)
- varicose veins surgery.

Support hosiery

This means support stockings or tights, which can be effective in relieving symptoms of aching and heaviness caused by varicose veins. They can be bought from clothing shops or chemists.

Stronger support hosiery (graduation compression stockings) are more effective. They are made in above or below knee lengths, and in three different ‘classes’ of compression. (Class 1 are a little stronger than ordinary support tights; Class 2 are most often advised by doctors for patients with vein problems; and Class 3 provide very firm compression when there is a particular need). Graduated compression stockings can be obtained with a doctor’s prescription. If worn regularly each day, graduated compression stockings need to be renewed every six months. In some areas there are specialist nurse-led clinics, to which your doctor may refer you for follow-up.
Injection treatment (microsclerotherapy)

Injection treatment is a method for closing off varicose veins by injecting a chemical substance into them. This causes the vein walls to glue together so that they close off and shrivel up.

What happens during injection treatment?

Microsclerotherapy is an effective treatment for thread/spider veins which are causing severe social embarrassment and psychological unease. In general the treatment is very effective but it does not work in all cases. It is rare to achieve a perfect result using microsclerotherapy.

A tiny needle is inserted into the thread veins and these are flushed through with a dilute irritating chemical. As many as 20 injections may be required. This causes very little pain.

The effect of the chemical is to cause inflammation and ultimately shrinkage of the prominent veins. This is a very safe treatment. The only serious side effect is that of an allergic reaction but this only occurs once every ten years in our practice.

This acute reaction settles down over a few days. Following this the treated veins will appear rather bluish and bruised. This reaction may take up to three or four months to settle down.

The disadvantages of microsclerotherapy include the appearance of small brown freckly marks (pigmentation). These may fade out over a period of 12 months but can occasionally be permanent.

A rare complication of the procedure is ulceration of the skin around the injection site. If this occurs please contact your consultant’s secretary.
Following treatment the patient is fitted with a firm elasticated compression stocking and is encouraged to walk a minimum of three miles per day for the next two weeks. The compression stocking should be kept in place 24 hours per day for the first five days. For the next five days the stockings should be worn during the daytime only. It should be reapplied as soon as the patient gets out of bed in the morning.

You may feel a burning sensation or discomfort around the injection sites for up to 48 hours which can be relieved using simple pain killers such as paracetamol.

Often two to three sessions of treatment are needed to bring about adequate control of thread veins. Wash and keep your stocking for any future procedures.

**Is loss of this vein a problem?**

No. There are many veins in the leg and after treatment the blood in the faulty veins will be diverted to other normal veins in order to make its way back to the heart.

**Foam sclerotherapy**

The procedure takes approximately 20-30 minutes and you do not have to remain in hospital after the procedure. You may eat and drink as normal and take any regular medicines at all times. The procedure involves no anaesthetic.

Foam sclerotherapy is performed by forcibly mixing a solution known as sodium tetradecyl sulphate with air. This procedure turns the liquid into a foam that has the consistency of shaving foam. Then, using a small needle, the foam is injected directly into the visible varicose vein. The foam irritates and causes inflammation to the lining of the vein and in response the vein collapses. The nurse
will then monitor the travel of the foam with the ultrasound scanner. Once the foam is at the junction of the deep and superficial veins, (either behind the knee or in the groin) the nurse will use the probe to gently compress the vein. This will stop the foam going into the deep vessels. Once all this is completed (approximately 20-30 minutes) some padding and a bandage will be applied to help compress the vein. A light compression stocking from toe to knee will be applied over the top of the bandage. The bandage and the stocking have to stay on for one week. This is an important part of the treatment as the stocking acts as a clamp to close the vein together whilst the injection is still working. After the week, you may take the stocking off the night before and wash it through. Follow the manufacturer’s instructions for washing/drying.

The next day you may remove the bandage, padding and tape and have a normal shower/bath. You may then reapply the stocking. The stocking should be applied every morning, worn all day and then removed before you go to bed. You do not sleep in the stocking after the first week. Make sure that there are no wrinkles in the stocking and that you do not overstretched the stocking. The stocking should sit just below the crease of your knee.

You are advised to walk at least three miles a day whilst the bandage is on. You may need to take painkillers such as paracetamol or Ibuprofen (if you are able to take them), until the pain settles. The stocking needs to be worn daily after the first week for at least 8-12 weeks. After approximately three to four months you should get an appointment in the post to see if the foam sclerotherapy has been successful.

Complications of this procedure can include a brown line along the length of the vein. This may fade over time, however, sometimes it never fades. Short term side effects include stinging and tingling sensations up the leg after the injection. This should settle after a
few hours. Other rarer side effects include disturbed vision, blood clots and an ulcer at the site of the injection. A common side effect of the procedure is redness and hardness along the length of the vein. This is often painful to the touch and usually occurs a few weeks after the procedure. Plenty of walking, painkillers and wearing the compression stockings are the best treatment for this.

Is loss of this vein a problem?

No. There are many veins in the leg and after treatment the blood in the faulty veins will be diverted to other normal veins in order to make its way back to the heart.

Endovenous Laser Therapy (EVLT)

EVLT is a quick, minimally invasive laser procedure which closes the faulty vein but leaves minimal scarring. It has a short and relatively pain-free recovery period and is usually performed under local anaesthetic. The treatment itself will usually take less than an hour and you can return home shortly after the procedure is finished. Normal activities can be resumed immediately, and you should be able to return to work within a couple of days.
How is EVLT performed?
This may take place in the Day Services Unit or in the operating theatre. The main steps in the procedure are as follows:

• your leg will be draped and disinfected

• the chosen entry point on the leg will be anaesthetised and a tiny skin nick will be made

• under ultrasound control a needle will be inserted into the vein followed by a flexible guide wire

• a special long flexible tube (catheter) will be passed over this wire into the vein within the leg

• the wire will be removed and replaced with the flexible glass fibre through which the laser light will pass

• using ultrasound, the tip of the fibre will be positioned at the correct start point for the treatment within the vein (usually at a point high up in the groin)

• local anaesthetic will be injected along the line of the vein to numb the treatment area. This will again be guided by ultrasound

• special glasses will be issued to protect the eyes if you are awake. The laser will be switched on and the treatment will begin. You may hear the laser beep as it is activated

• as the laser is activated the surgeon will withdraw the fibre from the vein closing the vein as it passes

• once the desired length of the vein has been treated the fibre will be removed from the vein and the treatment is now complete
• the entry point will be closed with a steri-strip or stitch. Depending on what had been agreed with the surgeon treatment may or may not continue at this point to remove the visible varicose veins remaining in the leg.

Post Operative Care
• immediately following EVLT, the leg will be bandaged to apply pressure to the vein and a compression stocking will be fitted

• instructions will be given on how long to keep these dressings in place

• treatment is followed by an immediate return to normal activities but hot baths and vigorous gym workouts should be avoided

• discomfort during the procedure is minimal. There may be some bruising and soreness for 7 – 14 days after the treatment. You may need to take painkillers such as paracetamol or Ibuprofen (if you are able to take them), until the pain settles

• follow-up appointments may be scheduled to check progress

• if additional treatment for the visible veins was not done immediately after the EVLT procedure it may be performed later.

How does the procedure actually work?
The laser energy passes through the fibre into the faulty vein and damages the vein walls, shrinking them and thus closing the vein so that the blood can no longer flow through it.
What are the potential complications of the procedure

There are potential complications with any medical procedure, however only minimal complications have been reported with the EVLT procedure. There may be some post procedural bruising and tenderness and there have been a small number of cases of transient paresthesia (temporary numbness).

Am I at risk from the laser?

If viewed directly the laser light can cause eye damage but you will be given a pair of special glasses to wear to protect your eyes; although this is just a precaution against accidental firing of the laser energy outside the body.

What is the alternative to this treatment?

Traditionally, faulty leg veins have been treated with surgical ligation and stripping. This involves at least two surgical incisions in order to tie off and pull out the faulty vein. It is usually performed under general anaesthesia. EVLT appears to have a lower risk, a shorter recovery period with less discomfort and much less scarring compared to surgery.

Will my varicose veins return?

By treating the underlying cause of your varicose veins you have the best chance of them not returning. However no guarantee can be given that varicose veins will not develop again in the future.

VNUS Radio frequency ablation (microwaves)

This is an alternative minimally invasive treatment to EVLT. This procedure can be performed as a day case under either a local or general anaesthetic. EVLT/VNUS treat the cause of varicose veins. However complete resolution of your vein will only occur in about 60% of cases. Subsequent foam sclerotherapy or avulsions under LA may be needed.
An ultrasound machine is used to locate the varicose vein. A catheter (tube) is then inserted into the vein. Anaesthetic fluid is then inserted into the area surrounding the vein. This numbs the leg, helps squeeze blood out of the vein and provides a fluid layer outside the vein to protect surrounding tissue from heat once the catheter starts delivering the radio frequency (microwaves). The catheter tip is gradually withdrawn destroying the vein as it goes. Following the procedure the aftercare for EVLT previously discussed should be followed.

**How can varicose veins be treated by an operation?**

A cut is made over the top of the main varicose vein. It is then tied off where it joins the deep vein in the groin. The cut is closed with stitches, which are hidden under the skin.

The main vein under the skin is removed by passing a fine wire down it – to either just above or just below the knee (‘stripping the vein’). This helps guard against varicose veins forming again. The varicose veins are marked for operation and are removed through tiny cuts in the skin. These cuts can be closed with stitches or adhesive strips. After this vein has been removed, blood flows up the many other veins in the leg.

Other veins under the skin with important connections to the deep veins may also need dealing with – one in particular is just above and behind the knee.

**Day patient**

If you are medically fit and have somebody at home with you, then a day case operation may well be possible. If you only need an operation to one leg, then you are more likely to be offered surgery as a day patient than if you have a lot of varicose veins in both legs. As a day patient, you are able to return home on the day of your operation.
After three to four hours on the ward, you should feel fit enough to go home. Before you leave the ward, staff will check your leg. They will give you a note for your general practitioner and some painkillers to take with you. The staff will make arrangements for a nurse to call the next day, to check on you and change your bandages for a special support stocking.

**Inpatient**

If you come into hospital as an in-patient, you will either be admitted the day before or on the day of the your operation.

**What happens before the operation?**

- you may or may not be called to attend a pre-admission clinic
- a nurse or doctor will take some information from you and discuss any worries or questions you may have
- routine blood samples may be taken and your blood pressure, pulse, temperature and weight will be recorded
- your operation will be explained to you and you will be asked to sign a consent form
- you will not be allowed to eat or drink for four to six hours before the operation
- your veins may be marked with a pen
- to help you to relax, you may be given a pre-med before your operation. This may be given in tablet or injection form.
Pain after the operation
The amount of pain experienced varies, although most experience is discomfort only. Painkillers will be prescribed for you to take after the operation. You should not need them for more than a few days, but the duration of discomfort varies from person to person.

What about my wounds?
Sometimes a little blood will ooze from the wounds during the first 12 to 24 hours after the operation. The amount is likely to be very small and bleeding usually stops on its own. If necessary, press on the wound for 10 minutes with a dressing or pad of paper tissues. If bleeding continues after doing this twice, go to the accident and emergency department.

It is common for the area under the groin wound to feel tender for a few days and thickened for a few weeks. Areas of tender lumpiness may also be felt elsewhere on the legs. This is caused by some blood clots under the skin where the varicose veins were removed. It is not harmful and will gradually go away, but it may take several weeks.

Will my legs be bruised?
Bruising is common after varicose vein operations. It is sometimes quite extensive and may take a month or more to settle. It can also occur on the inner side of the thigh, where no cuts were made.

Will I have dressings or stitches?
Sometimes no dressing is used in the groin. If a dressing has been used, it can generally be taken off two or three days after the operation. The groin wound can then be washed normally with soap and water.
There may be stitches under the skin in the groin, which do not have to be removed as they simply dissolve. The small cuts further down the leg are closed with adhesive strips.

You will be told not to bath or shower for about 10 days, unless you can do so without getting the adhesive strips wet. About 10 days after the operation, you can remove the strips yourself. It is often easier to do this in a bath or shower as it helps to loosen them.

**What about bandages and support stockings?**

The nurse will change your bandage for special support stockings the day after the operation. These should be worn for 10 days, day and night. If they are unduly uncomfortable at night, they can be taken off before you go to bed and put on again in the morning.

**How far should I walk?**

You can start to walk about as soon as you are able.

**Your operation**

Getting up the next day is sometimes a little uncomfortable, particularly where the groin has been operated on. The whole leg may be stiff and tender to the touch in places. You will not damage any of the wounds by walking. Take painkillers if you need them.

You should aim to walk about every half hour or so for the first couple of weeks. For many people this simply means getting back to their daily routine as quickly as possible. There is no special advantage in going for a single long walk during the day. You may walk as far as you wish. Frequent walking is more important than walking a long distance.

When you are not walking about, try to put your foot up – either on a couch or on your bed. Avoid standing, or sitting with the foot on the floor, as much as you can for about two weeks after the operation.
When can I drive a car?

You can drive as soon as you feel confident that you can make an emergency stop without pain. This is often about a week after surgery to one leg, or ten days after surgery to both legs. If you have an automatic car and surgery is to the left leg, then driving may not pose a problem. If you are concerned, check with your insurance company.

When can I return to work and play sports?

You can return to work and sporting activity as soon as you feel sufficiently well and comfortable. If your job involves prolonged standing or driving, then you should not consider going back for at least two weeks. It is unusual to need more than three weeks off work after surgery to one leg, or four weeks after surgery to both legs. Avoid violent sports while you are still in support stockings or bandages. Thereafter start with some gradual training, rather than immediate competition.

Do not go swimming until you are out of support stockings and all wounds are dry.

What problems can occur after the operation?

Serious complications are uncommon after operations for varicose veins. Some bruising is usual, and occasionally the leg becomes very bruised. This bruising may appear during the first few days after the operation, but it will disappear over a period of weeks.

• aches, twinges and areas of tenderness may be felt in the legs for the first few weeks after the operation. These will settle down and should not discourage you from becoming fully active as soon as you are able

• tender lumps under the skin are common and are caused by blood clots, which have collected in places where the veins were removed. They are not dangerous and will gradually be digested by the body,
but this can take several weeks. Occasionally, they can be quite painful during the first two weeks or more

• infection is an occasional problem, particularly in groin wounds. However, it usually settles with antibiotic treatment. If the wound was closed by a stitch under the skin, this may need to be removed to allow the infection to clear up. If an abscess forms then a further operation may be required to drain it. The area will need to be dressed regularly until it has healed

• complications in groin wounds are more common in obese people, and also following previous groin surgery

• the scars on your legs are easily noticeable to start with, but will continue to fade for many months after the operation

• nerves under the skin can be damaged when removing varicose veins close to them. This is uncommon, but will give an area of numbness on the leg, which settles or gets smaller over weeks or months

• if varicose veins on the foot are removed, damage to small nerves is a special danger

• if a nerve lying alongside one of the main veins under the skin is damaged, then a larger area of numbness can be caused. If this happens after stripping the main vein on the inner side of the leg, then numbness will result over the inner part of the lower leg and foot

• if a main vein behind the knee needs to be dealt with, then there is a risk to the nerve which conducts feeling from the skin on the outer part of the lower leg and foot. There is also a very small danger to the main nerves, which move the leg and foot. The risk of nerve damage is increased when surgery is done after previous operations in the same area
• deep vein thrombosis causes swelling of the leg and can result in a blood clot passing to the lungs. It is a possible complication after varicose vein surgery, but it particularly unlikely if you start moving your legs and walking frequently soon after the operation. Injections are sometimes given to make the blood clot less than normal, reducing the risks of thrombosis, but increase bruising.

• If you are taking the contraceptive pill your risk of thrombosis is increased. The surgeon will discuss with you the pros and cons of stopping the pill or continuing taking it and reduce your risk of a thrombosis. If you start taking the contraceptive pill whilst waiting for your operation, let the hospital know.

• there is no guarantee that either all the symptoms, or the appearance of the leg, will be improved to the expectation of every patient following surgery.

Will my varicose veins come back?

10-20% of patients will develop new varicose veins during the years after a varicose vein operation, but it is uncommon after thorough surgery. Rarely, varicose veins simply re-grow in the areas previously dealt with. They can also develop in a different system of veins, which were normal at the time of the original operation. If veins develop again, they can be dealt with by injections or a further operation.
Contact numbers
If you have any questions or queries you can contact your GP or alternatively the secretary for your consultant surgeon.

Vascular Nurse Specialists - Tel 0161 778 5090

Vascular consultant secretaries, Oldham
Tel: 0161 627 8698/ 0161 627 8981/ 0161 627 8826
If English is not your first language and you need help, please contact the Ethnic Health Team on 0161 627 8770

For general enquiries please contact the Patient Advice and Liaison Service (PALS) on 0161 604 5897

For enquiries regarding clinic appointments, clinical care and treatment please contact 0161 624 0420 and the Switchboard Operator will put you through to the correct department / service

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