

# Varicose Vein Surgery

## What are Varicose veins?

Varicose veins are swollen veins that have a bluish, lumpy appearance and are usually found on the legs. They are very common and do not cause medical problems in most people.

Varicose veins are almost always the result of problems with valves within the venous system of the legs. All leg veins contain one-way flap valves which are designed to help the flow of blood in the veins in an upward direction to return to the heart. When the valves become weak or break, some blood flows back down into the leg and tends to overfill the superficial veins. Over time, this additional pressure of blood causes veins to stretch, bulge and become more visible.

"Leaky" venous valves can occur at any site but the great majority of varicose veins are caused by faulty valves in the groin or behind the knee. At both these sites there is a junction at which superficial veins flow into the important deep veins in the leg, with a one-way valve to control blood flow at the junction.

Generally, older people are more likely to get them, but young people may also have them too. Varicose veins and spider veins often run in families and there may be a hereditary component. Women are more likely to suffer from varicose veins and up to 50% of women may be affected. Hormonal factors including puberty, pregnancy, menopause, the use of oral contraceptives and HRT can affect the disease. It is very common for pregnant women to develop varicose veins during the first trimester. Pregnancy causes increase in hormone levels and blood volume which in turn cause veins to enlarge. Also, the enlarged uterus causes increased pressure on the veins. Varicose veins associated with pregnancy often improve within 3 months of delivery. Other predisposing factors include ageing, standing occupations, obesity and leg injury

## What are the Symptoms of Varicose Veins?

Many people have no symptoms at all, other than the fact that they are noticeable and that they may be embarrassed by their appearance.

**Varicose veins can cause your legs to:**

- Itch
- Throb
- Ache
- Cramp
- Ankle swelling
- Heaviness in the leg especially at the end of the day
- Feel restless.

Varicose veins can get worse over the years but this tends to happen very slowly. In a few people high pressure in the veins can cause skin damage near the ankle, which can become brown in colour, sometimes with scarred white areas. Eczema can also develop. If these skin changes continue, or if the skin is injured, a leg ulcer could result. It is therefore a good idea to seek a medical opinion if you notice any skin changes due to varicose veins.

## Complications of Varicose Veins

Most people who develop varicose vein will not develop any complications. When complications do arise, it tends to be several years after the development of the varicose veins.

**Varicose veins can cause complications as they cause the blood to stop flowing properly. Some complications of varicose veins are:**

- **Thrombophlebitis** – this occurs when the varicose veins become painful and reddened. The skin over your varicose vein may also feel warm and tender. The symptoms are caused by inflammation, or a blockage in the vein. Thrombophlebitis is less serious than a blockage in a deep vein (deep vein thrombosis DVT), and is usually easy to treat. Your treatment may include the following:
  - ❖ Non-steroidal anti-inflammatory drugs (NSAIDs) - these will help to reduce the inflammation and help alleviate pain. However, these drugs are not suitable for people with asthma, or a history of stomach, heart, kidney, or liver problems.
  - ❖ Analgesics - also known as "painkillers", these will help to alleviate any pain or discomfort.
  - ❖ Anticoagulants - this type of medicine thins the blood, and stops clots from forming, which could block the vein.
  - ❖ Thrombolytics - these drugs will help to dissolve any existing clots which are causing blockages in your veins.
  - ❖ Raise your legs - keeping your affected leg raised will reduce any swelling
  - ❖ Apply moist heat - applying a hot flannel to the affected area may reduce inflammation and ease pain.
  - ❖ Keep pressure off - try to keep your affected leg uncovered, avoid any direct pressure to the affected limb.
- **Bleeding** – varicose veins which form near the surface of your skin can sometimes bleed if you cut or bump your leg. You may find the bleeding difficult to stop. You should lie down, raise your leg, and apply direct pressure to the wound. Seek medical help immediately if the bleeding does not stop.
- **Chronic venous insufficiency** – If the blood in your veins does not flow properly, it can interfere with the way that your skin exchanges oxygen, nutrients, and waste products with the blood. If this exchange is disrupted over a long period of time, it is known as chronic venous insufficiency. Chronic venous insufficiency can sometimes cause other conditions to develop. These include:
  - ❖ Varicose eczema - this is when the skin around your varicose vein becomes brown. Sometimes, this discolouration can be permanent.
  - ❖ Venous ulcers - a venous ulcer develops when there is increased pressure in the veins of the lower leg. This causes fluid to seep from your vein and collect under the skin. This fluid can cause the skin to thicken, swell and eventually break down to form an ulcer.

## Treatment of varicose veins

Not everyone with varicose veins will require treatment. If you have no symptoms, and your varicose veins are not causing you any discomfort, then you do not necessarily need to have treatment. However, there are some instances when treatment may be necessary. These include:

- To ease symptoms – if your varicose veins are causing you pain or discomfort, you may want to consider treatment to ease the symptoms.
- Complications – you may require treatment if your varicose veins cause you to develop complications, such as leg ulcers, swelling or skin discolouration.
- Cosmetic reasons – despite having no symptoms at all, some people want their varicose veins removed for cosmetic reasons.



## Treatment options include:

- **Surgery**– large varicose veins may have to be surgically removed. Most surgeons use a technique called ligation and stripping which involves tying off, and then removing the affected vein in the leg. During the surgery a small 3-4 cm incision is made in the groin area and/or behind the knee. The underlying vein and its connections with the deep veins of the leg are identified. All of the associated superficial branches are carefully cut and tied and the superficial vein itself is tied and divided at its junction with the deep vein. This part of the surgery is very important since it corrects the underlying cause of the varicose veins. Surgical stripping of the superficial veins is normally carried out in conjunction with ligation of the veins in the groin. This reduces the risk of future recurrence. Surgical removal of large varicose veins is usually carried out. This involves making a series of tiny stab incisions over the veins and avulsing (pulling out) sections of vein with fine forceps. Blood flow in your legs will not be affected by surgery. This is because the veins which are situated deep within your legs take over the role of the damaged veins.

- **Injection** – sclerotherapy is usually suitable for people who have small to medium sized varicose veins. The treatment involves a chemical solution being injected into these veins which causes them to scar and close. Sclerotherapy can cause side effects including blood clots in other leg veins, headache, fainting and temporary vision problems. Sclerotherapy has been proven to be effective, however, recurrence of varicose veins is more likely to happen with injections than surgery.

- **Compression stockings** – these are designed to support your legs and help to improve your circulation. They may help to ease any pain, discomfort or swelling in your legs caused by varicose veins, however they will not cure your varicose veins or stop new ones from forming.

- **Radiofrequency ablation** – a small tube is passed into the veins and heats the wall of the varicose veins using radio frequency energy. The vein is heated until it collapses and closes. Once your vein collapses, your blood will naturally be directed to one of your healthy veins. This treatment is carried out under local anaesthetic.

- **Endovenous laser treatment** – is when a fine tube is inserted into the veins and laser light is used to shrink them. This procedure is carried out under local anaesthetic. Afterwards, you may feel some tightness in your leg and the affected areas may be bruised and painful.

## What are the complications?

Removing varicose veins is a commonly performed and generally safe procedure. However, all surgeries carry an element of risk. Complications can occur during or after the operation. Some of the complications can include:

- After surgery, it is possible to develop a blood clot (DVT) in the deep veins in the leg. In most cases this is treatable, but it can be a life-threatening condition. Compression stockings and blood thinning agents may be used to prevent DVT
- Damages to the nerves in the skin, resulting in small numb patches on your legs. The feeling usually returns, but may take a few weeks or months.
- Rarely, nerve damage near the knee can affect movement in the ankle which may be permanent.
- Occasionally hard, tender lumps appear near the scars or along the line of the removed veins. These usually disappear after several weeks. Rarely, small patches of brown skin appear where the veins were removed.
- There is a chance that the varicose vein will re-occur in other veins.

## After the Operation

You will be taken from the operating room to a recovery room, where you will come round from the anaesthesia under close supervision. After this you will be taken back to your room. You will need to rest until the effects of anaesthesia have passed. Your leg may feel sore, and you may need painkillers. Some of the smaller incisions may bleed a little over the first 24-48 hours. For this reason it is best to keep the leg covered with bandages or stockings for the first 48 hours. After this time, the stockings may provide support to the bruising making the leg more comfortable. They may be worn for up to 10 days, but do not usually help beyond this time. There is usually extensive bruising in the leg. This usually lasts for 3-4 weeks.

## Going Home

- Most people describe the leg as sore and uncomfortable when they get home. The symptoms increase steadily from the second postoperative day and are usually at their worst on the 8th-10th postoperative day. The discomfort usually resolves 12-14 days after the operation.
- Often no painkillers are required at all.
- Occasionally, usually when there is phlebitis, the leg will be painful. The pain will last for up to three weeks in this situation.
- Regular daily exercise such as going for a walk or using an exercise bike to provide a gradual return to normal activity is recommended.
- To rest up after the operation raises the risk of developing blood clots in the deep veins (deep vein thrombosis or DVT). Regular exercise reduces this risk, but makes the leg more uncomfortable.
- Driving: You will be able to drive within 48 hours of the operation provided the leg is not too uncomfortable.
- Bathing: You can bath or shower within 48 hours of operation. Sometimes bathing or showering immediately after surgery may lead to bleeding from the smaller incisions.
- Work: If this applies to you, you should be able to return to work within 1-3 weeks of surgery depending on your job. Your GP will advise you of this when you see him/her for your sick-note.
- Lifting: There are no limitations in this area.
- Medicines: You will usually be sent home with some painkillers. You will be advised on their use before you leave hospital.

## When to Contact Your Doctor

It is important that you call your doctor if you experience any of the following symptoms: Excessive pain in your legs, even after taking painkillers

- Bleeding
- Numbness or discolouration of the foot
- Persistent nausea and/or vomiting
- A fever or high temperature of over 39° centigrade or 102.2° Fahrenheit
- Chills
- A persistent cough or shortness of breath
- Redness surrounding your incisions.