



A Guide to

Varicose Veins & Pregnancy

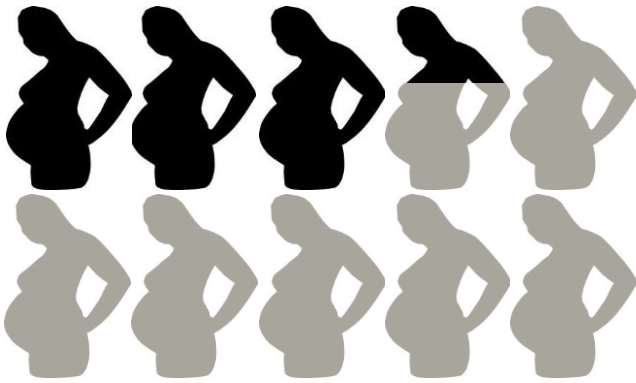
What are varicose veins?

Varicose veins are bulging and unsightly blue veins that occur on the legs. They can occur at any age in both men and women, but are very common in women after pregnancy.

Varicose veins are extremely common - approximately 30% of the population will suffer from varicose veins at some stage of their lives. Varicose veins can be painful as well as unsightly. A lot of patients experience aching and serious discomfort from their veins, especially at the end of a long day standing up.

In addition to varicose veins, a lot of ladies develop thread veins during or after pregnancy. Thread veins (also called spider veins) are tiny blood vessels just under the skin, which have an unsightly appearance. They occur particularly frequently in women and almost always on the legs. Because they occur more frequently in women than in men, we think they are related to the effects of female hormones on the skin. Thread veins are not dangerous in the medical sense of causing any serious problems but they are of cosmetic concern to a lot of women who feel embarrassed about their legs and don't want to wear shorts or skirts or go swimming because of the thread veins. Most thread veins can be treated effectively by injection sclerotherapy or various types of laser or other light treatments.

How many people do varicose veins affect during pregnancy?



Varicose veins affect around
1/3 of pregnant women

As a rough guide, about a third of women will have trouble with varicose veins during pregnancy. This can vary from being quite minor 'spider veins' through the common aching, discomfort and swelling of the legs through to painful phlebitis where the vein become hard, lumpy and sore to touch. Usually, problems with veins are worse in the later stages of pregnancy when the heavy uterus is blocking the return of blood from the leg veins to the rest of the body, causing the veins in the legs to bulge out more and become uncomfortable.

Why am I getting varicose veins on my legs?

Varicose veins are caused by valves in the vein system that start to leak. We all have lots of veins in the legs and their function is to return blood up the leg and ultimately back to the heart to go around the circulation again. Because people stand up a lot of the time, the direction of flow is against gravity and we need to have valves in the veins to keep the blood moving in the correct direction. When these valves fail, the blood tends to flow the wrong way down the leg and causes the veins to swell up. Patients see this as blue bulging marks on the leg which can ache and be really quite uncomfortable.

There are thought to be two main reasons why pregnancy makes a leaky vein worse. The most

obvious is the size of the enlarged uterus in the later stages of pregnancy, which tends to press on the veins in the pelvis and restrict blood flow from the legs. This increases the pressure on the leg veins and worsens any leaking valve.

In addition to the mechanical effect of the heavy uterus, we know that as pregnancy progresses, the female body produces hormones which make all the ligaments and tissues relax in order for the baby to pass through the birth canal. These hormones also have an effect on the veins in the legs, making the muscle in the vein wall relax, which in turn causes the veins to enlarge naturally, also increasing the risk of them becoming varicose.

Why are they appearing on other parts of my body?

Some ladies in pregnancy will develop varicose veins on the vulval area, usually in the later stages of the pregnancy. Vulval varices can be very painful and sometimes they can bleed during delivery of the baby.

Fortunately, the majority of vulval varicose veins do get better after pregnancy and it is a minority of patients who have problems with them after pregnancy that require treatment.

They are commonly associated with leaky valves in the pelvic veins within the body itself rather than on the leg. Pelvic vein reflux is quite common during and after pregnancy, particularly in ladies who have delivered a normal birth rather than by Caesarean section. Pelvic vein reflux can cause varicose veins on the legs as well as on the vulva – these sort of veins can be especially difficult to treat and have a higher rate of recurrence than varicose veins caused by leaky valves in the top of the thigh.

What are the symptoms of varicose veins?

The symptoms of varicose veins range across a wide spectrum, from the purely cosmetic dissatisfaction to serious medical problems such as venous ulcers. The degree of symptoms relates to the severity of the leaking valves and the length of time that the patient has had problems.

In the initial phase of varicose vein development, patients will notice some enlarging blue veins usually on the calf area. Initially these veins will not typically be painful. They are usually more obvious in slim people and in those with pale skin. However they are often sufficiently bad enough to make ladies very self-conscious in public especially when wearing shorts or skirts or a swimming costume.

As the veins gradually enlarge and swell, they become more noticeable and will start to ache, especially towards the end of the day. This is often associated with swelling of the ankles. The reason veins ache is because the blood inside the veins is under higher pressure as a result of the leaky valve – this makes the vein wall stretch and become sore.

The subsequent set of symptoms become more troublesome. As a result of the higher pressure in the vein, chemicals from the blood stream leak out of the vein and into the tissues under the skin. These substances make the skin inflamed. Initially this is experienced as an itching sensation often associated with dry skin usually over the ankle bone on the inside of the leg. A rash can develop, which doctors

call 'venous eczema'. The rash can be treated with low dose steroid creams, but the cream will only temporarily treat the rash and will not make it go away.

Often patients will notice that the skin over the ankle area becomes quite dark in colour and looks purple or bruised towards the end of the day. Sometimes there are a lot of broken veins over this

area as well. This is the beginning of venous skin change – damage to the skin caused by prolonged varicose veins. The progression of skin change causes the skin to become dry and discoloured – usually a brown colour. This is a serious situation as the next step is the development of a venous ulcer (see below).

Can I do anything to help prevent varicose veins?

Sadly there is nothing that can be done to prevent anyone from getting varicose veins. The reasons people get veins is still the subject for debate – some doctors think they are genetically based (ie they run in families). Others think that it is just because people stand upright and this causes the delicate valves in the veins to fail and become varicose. We certainly see a lot of people who stand in their jobs do develop varicose veins, such as teachers or policemen or hairdressers for example. It is definitely not the case that crossing ones legs makes varicose veins more likely!

It is an interesting observation that a lot of people have leaky valves from an early age (about 1 in 20 schoolgirls according to some studies). Current thinking is that these early leaky veins don't cause a lot of trouble until people are a lot older or until something like pregnancy accelerates the problem.

The other interesting observation is that although pregnancy does predispose patients to getting varicose veins, it cannot be the only cause because men get varicose veins almost as frequently as women, and by definition they cannot be as a result of pregnancy.

Are varicose veins a serious problem?

In the initial phase of development, varicose veins are not usually a serious medical problem but they can become a serious problem if left untreated for a long time.

The first medical problem that can develop is thrombophlebitis. This is a painful condition caused by localised little clots in the varicose vein which can really be quite sore.

It arises because as the vein gets stretched by excessive pressure within it, the vein wall becomes damaged. In normal circumstances the inside of a vein wall should be smooth like glass. This stops the blood from clotting inside the vein. If the vein becomes chronically stretched, the inside lining becomes damaged and rough, and blood will clot on it. The clot causes inflammation, and the patient notices this as a tender hard, hot lump under the skin surface.

Usually phlebitis will settle down on its own over 10 to 14 days. In the meantime it can be treated with anti-inflammatory gel or tablets. However, once a patient has had one bout of phlebitis it is likely that they will eventually get a recurrent attack. The only way of fixing it is to have the veins treated definitively by surgery.

On rare occasions varicose veins can bleed, but it is quite uncommon for this to happen. However, if it does happen it can be quite dramatic. The sort of vein that bleeds is usually very close to the skin surface and almost always low down on the leg just above the ankle, as this is the site of highest pressure in the vein. If a varicose vein gets knocked accidentally or erodes through the skin, the patient can bleed quite substantially. Although bleeding looks very alarming it will stop with a few simple measures such as lying down and elevating the leg by putting it on a chair, and simple pressure over the vein with a finger or a piece of gauze swab.

Finally, patients who have had varicose veins for a long time can develop the worst complication of a venous ulcer.

An ulcer is a sore that doesn't heal up. The commonest place for people to get ulcers is on the lower leg. Most ulcers in the UK are caused by venous disease - mainly due to varicose veins which have been left untreated for many years. Ulcers usually affect the elderly because they take a long time to develop but they can afflict younger people as well.

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Ulcers usually start after a long period of time with an area of skin damage. This is usually seen over the ankle area and looks like an itchy patch of skin with a brown discolouration. The skin becomes hard and 'woody' rather than soft and supple. Usually a little scratch on the damaged skin is the starting point for an ulcer to develop. The scratch does not heal and instead deteriorates into an ulcerated area.

Ulcers can be a real nuisance. Apart from being painful, they can get recurrent infections which make people quite unwell and need courses of antibiotics, sometimes requiring admission to hospital. They also need regular dressing and they produce fluid discharges which are smelly and unpleasant. Chronic ulcers are difficult to heal up and cause a lot of old people to become isolated and stuck in their homes because they can't get around anymore.

Is there anything I should do before surgery?

The first thing you should do before surgery is to check that your surgeon is a proper veins specialist and is experienced in the latest techniques for varicose vein treatment. The old vein treatments of 'high tie and strip' requiring a general anaesthetic and often a night in hospital should now be a thing of the past. Modern vein techniques are 'minimally invasive' and usually done by 'keyhole' type methods under local anaesthetic. However there are not many surgeons who are skilled and experienced in these newer techniques and even today there are still patients being treated by standard surgical techniques who could be offered a minimally invasive alternative.

Whilst waiting for treatment, the use of compression stockings can be helpful to treat the symptoms of aching and heaviness of the legs. Stockings need to be measured correctly for each person and be of good quality to give the right level of compression. Active people often find that wearing compression stockings long term is quite difficult. Generally speaking, compression stockings are only really suitable in the long term for patients who can't have vein surgery because their veins are not suitable, or in people who are too ill to have surgery for other reasons. Stockings are not a substitute for surgery although they can be helpful for patients during pregnancy with sore veins who are waiting until after the delivery for definitive treatment.

What are the treatment options for varicose veins?

In the last 10 years, there has been a move away from old style surgery and a variety of new 'minimally invasive' treatments have been developed which allow patients to have their treatment under local anaesthetic with far less pain and bruising than was the case with open surgery. The vast majority of vein specialists now use one or more of these new techniques and very few vein surgeons now perform open surgery as their first choice technique.

From the patient's point of view however, the situation has gone from one of no choice to a bewildering array of choice. Now replacing 'high tie and strip' we have endovenous lasers of varying wavelength and type, radiofrequency vein ablation (again with several devices), foam sclerotherapy, Clarivein, steam vein ablation and the latest tissue glue closure system.

The current minimally invasive options can be split into techniques which close the leaky vein in the thigh by the use of heat, and techniques using other ways of sealing the vein. Heat based techniques require some injections into the thigh to numb the leg and prevent pain for the patient. The non heat based techniques are not so painful so don't require injections.

Heat based techniques such as EVLT (endovenous laser treatment) and Radiofrequency ablation (VNUS Closure) are the longest established treatments and the ones with the largest amounts of clinical and follow-up data – up to 10 years now. Both lasers and Radiofrequency work very well, with a 90 – 95% success rate and have a low recurrence rate. The only downside is that both require some injections of anaesthetic and fluid into the thigh to protect the patient from the heat of the device and stop the patient feeling pain during the operation – these injections can be a bit uncomfortable.

The non-heat based methods include Foam Sclerotherapy, Clarivein and glue treatments. Foam sclerotherapy is a well established technique used for many years which damages the vein wall by

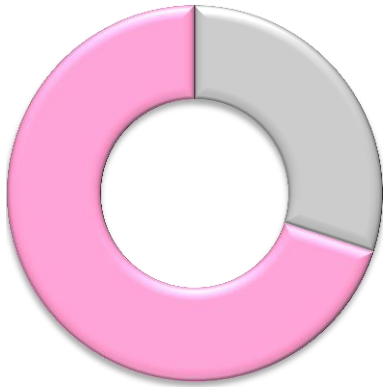
causing a chemical burn on the inside of the vein, usually by using a drug called Fibrovein mixed with air to make a foam. The technique can work well to seal the leaky vein but there is a relatively high recurrence rate (30% at 2 years) compared to EVLT or radiofrequency. Quite often patients get skin staining or brown marks along the track of the vein in the thigh. Some reported cases of transient mini-strokes after treatment from injection of bubbles into the vein circulation - vein specialists are still arguing over the significance and incidence of these events.

Clarivein was introduced into practice in 2009 in the USA and 2010 in the UK. It closes the vein by a combination of mechanical disruption of the inside lining followed by chemical irritation and, as no injections into the thigh are required, it is painless to perform and almost completely painless afterwards. Tissue glues are the latest techniques to be trialled. They close the leaky vein by use of a cyanoacrylate tissue sealant and there has been a lot of interest in the technology. However it is at a very early stage of development and it will be several years before we know how safe and successful this technique is.

Can I be treated for varicose veins on the NHS?

That depends on the severity of the condition, and to an extent, on where you live. There have always been restrictions on access to varicose vein surgery on the NHS but recently these restrictions have been widened. In most parts of the UK only patients with

the severest problems are now able to access treatment on the Health Service. Severe veins are usually defined as ones which cause very severe skin change and ulcers.



70% of
varicose vein
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These restrictions essentially exclude 70% of the patients suffering from varicose veins from NHS treatment. In particular, patients with aching, heaviness, throbbing of the legs and swelling of the ankles are now not able to get treatment on the NHS.

The reason these restrictions have been enforced is due to the need for the NHS as a whole to save money. These decisions are taken at a local level in each area by a body called the Primary Care Trust or PCT. The PCT in a given area is allocated a budget by the Department of Health to provide healthcare for their local residents. The PCT then has to decide what it is going to spend its money on. The majority of PCTs in the UK have decided that varicose vein treatment is a low priority except for the most severe cases as outlined above. Many patients argue that mild varicose veins will eventually develop into severe varicose vein and require treatment but unfortunately these restrictions are being rigorously applied and enforced in most parts of the UK.

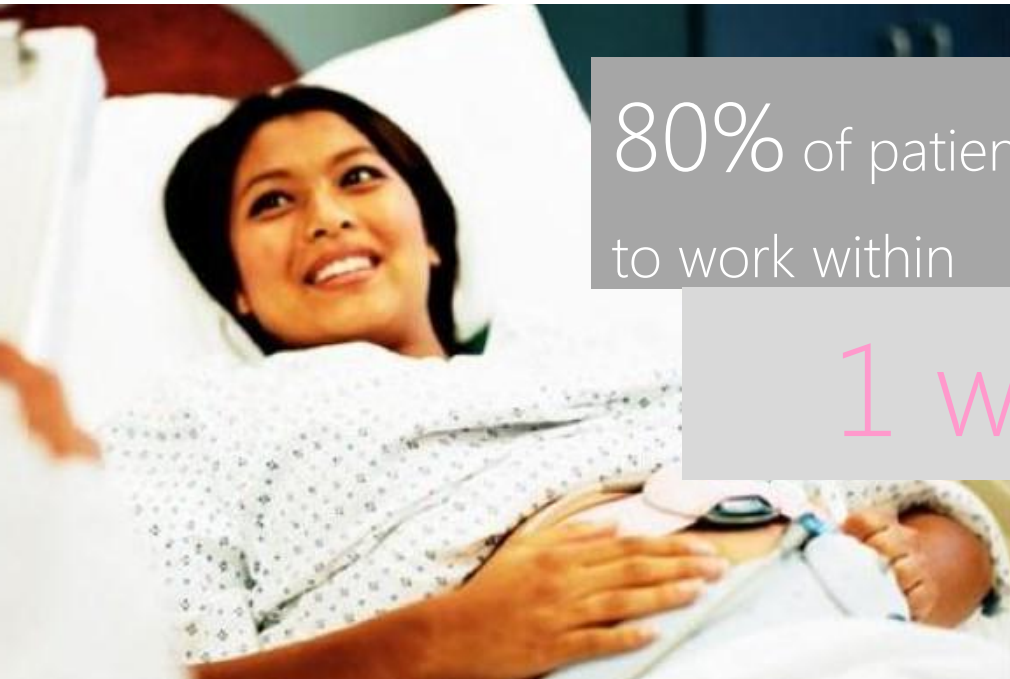
What is the recovery time after surgery?

This depends a little bit on the technique used and on the individual patient. For all of the minimally invasive techniques mentioned above, the recovery is very quick. All the procedures are 'walk in, walk out' and do not require a stay in hospital. For EVLT (endovenous lasering) most patients find that by the end of the first week they are back to all their normal day to day activities including driving a car. Most patients will need to take tablets or use anti-inflammatory gel for about 3 days after treatment. By the end of the second week after surgery, patients are usually back to light sport and by the end of week 3 are essentially back to normal.

Patients usually will be back to work within a week, although patients who can work from home may not

need to take any time off at all and often patients will return to work a lot sooner than a week.

In our experience this is the recovery profile for 80% of people. There will be a lucky 10% of patients who have almost no pain at all and an unlucky 10% who get sore phlebitis or inflammation of the vein that may persist for longer than a few days and require prolonged painkillers. These are usually patients with very big and distended veins. Eventually however, all patients get back to normal very soon and certainly a lot faster than after the old 'high tie and strip' procedure.



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Will they reoccur?

Recurrence rates after venous surgery vary quite a lot depending on the technique used. Recurrence can occur because the treated vein re-opens or because the patient springs a leaky valve elsewhere in the vein system.

With the old 'high tie and strip' procedure, recurrence happened in up to 30% of patients at 5 years, so one in 3 people would get their varicose veins back again within a relatively short time frame. The newer techniques are much better in terms of lower recurrence rates but are still not infallible. For EVLT, lasering and VnUS closure the recurrence rate is estimated at about 5 % at 5 years (so 1 in 20 patients).

Foam sclerotherapy has a higher recurrence rate (about 30 % at 2 years) but the technique is easy to repeat. The newer operations such as Clarivein haven't been around long enough for us to make a valid estimate of recurrence rates yet.

30%

Recurrence rate
of varicose
veins after foam
sclerotherapy

Often if veins do recur, the recurrence is not as bad as the original vein problem and with the minimally invasive techniques now available, almost all recurrences can be successfully retreated without resorting to painful open surgery.

Can I get DVT (Deep Vein Thrombosis) during pregnancy?

Deep vein thrombosis (or DVT) is a condition where a blood clot forms in the deep veins of the legs. As a consequence of the clot, the leg can swell up and become very painful, although in rare cases the clot can be 'clinically silent' – ie cause no pain at all.

Patients who have had a caesarean section are more likely to get post pregnancy DVT than patients who delivered normally.

DVT can complicate approximately 1 in 1,000 pregnancies, which doesn't sound like a large number but as there are about 700,000 babies born each year in the UK that makes about 700 DVTs as a consequence of pregnancy. DVTs can occur in ladies who are not pregnant but pregnancy does increase the risk of DVT very substantially.

The reason people get concerned about DVT is that if left untreated, the clot can spread and sometimes detach from the vein wall. If this happens to a large clot, it can travel in the bloodstream into the lung circulation and cause a pulmonary embolus – this is where the clot gets jammed in one of the arteries supplying the lungs – and if the clot gets stuck in one of the main pulmonary (lung) arteries, then that can be a life threatening condition. Fortunately prompt diagnosis and treatment of DVT will reduce the chances of this happening very substantially.

DVT is more likely to occur in the later stages of pregnancy when the swollen uterus presses on the veins in the pelvis, but it can occur at any stage of pregnancy or in the 6 weeks following delivery.



Patients who have had a caesarean section are more likely to get post pregnancy DVT than patients who delivered normally. Some women are at higher risk of developing DVT than others. Older women (over 35), women with a past history of having had DVT (or a family history of DVT) or with one of the known blood disorders which predispose people to getting DVTs are all more likely to have DVTs in pregnancy than people without these factors.

About the Author

Eddie Chaloner qualified as a Doctor in 1989, training as a surgeon in London and South Africa before being appointed as Consultant Vascular Surgeon in 2002. Mr Chaloner is a pioneer of endovenous laser surgery for varicose veins in the UK having been the first surgeon in London to use the technique in 2003. Mr Chaloner was then the first surgeon in the UK to use the revolutionary new ClariVein[®] method in 2010.

He regularly lectures and teaches surgeons from across the world in minimally invasive techniques for varicose veins surgery and has contributed a wealth of information to various health web sites.

About Radiance Health

Radiance Health is a leading clinic based in London and the South of England specialising in the latest treatments for varicose veins, using state-of-the-art minimally invasive techniques. The two consultant vascular surgeons at Radiance are pioneers in the field of vascular surgery with huge experience, having successfully treated many thousands of patients.

The Radiance Health website (www.radiancehealth.co.uk) has information about all the conditions and treatments available at Radiance, and if you have any further questions the team can be contacted on 08450451160 or info@radiancehealth.co.uk.