

Patient information

Disorders of the Veins

Varicose veins are very common, affecting at least 10-15% of the adult population in the UK. This condition can be embarrassing and painful and if untreated can lead to leg swelling, pigmentation of the skin on the lower leg and ulcers. Venous ulceration affects 10% of people with varicose veins and can be difficult to heal.

Veins are the vascular structures which carry blood back towards the heart (arteries carry blood away from the heart). In the legs, the veins have valves to help the blood return to the heart against gravity when a patient is standing. There are two systems of veins in the leg:

- The deep system carries the majority of the blood and, as the name suggests, lies deep within the muscles. The veins contain blood under high pressure, generated by the contraction of your thigh and calf muscles.
- The superficial system lies just underneath the skin and is designed to carry blood under low pressure. The superficial veins join the deep veins at two main points: in the groin and behind the knee. At each point, valves prevent high pressure blood from the deep system entering the superficial system. If the valves become leaky, the high pressure blood enters the superficial veins and causes them to become dilated and visible – varicose veins. Instead of all the blood from the legs returning to the heart, a proportion of blood refluxes back down the superficial veins impairing the venous circulation of the leg and giving rise to the symptoms of aching, swelling and night cramps.

If the venous circulation is impaired for a long time, the delivery of oxygen to the skin around the ankle is decreased and toxins accumulate. Over the years this causes a thickening and pigmentation of the skin which is similar in appearance to eczema – venous eczema. Eventually, the skin affected by venous eczema breaks down and an ulcer develops – a venous ulcer.

Fortunately, recent advances in the assessment of varicose veins means that the underlying causes of the many various conditions which come under the heading of varicose veins, are much better understood and the correct treatment can be

applied.

Reticular veins, thread veins and spider veins

Not all visible veins in the legs are varicose veins. Varicose veins are related to leaky valves as explained above. Some veins are just prominent due to a number of different reasons and cause symptoms of discomfort, itching and irritation as well as being unsightly. Some prominent veins are associated with varicose veins or occur independent of them. The treatment of these veins can consist of surgery or injection sclerotherapy (see injection sclerotherapy).

Phlebitis

Prominent or varicose veins can become red, inflamed and tender – phlebitis. This is usually caused by a clot forming in the vein which then causes irritation of the vein wall. The condition is usually treated conservatively with aspirin-type painkillers and a compression or supportive bandage and settles down after a few weeks. The inflammation is not caused by an infection so antibiotics are not required. Once the inflammation settles, the veins may be felt as a firm, cord-like structure underneath the skin which may persist for months.

The underlying cause is usually varicose veins and treatment of these is required to prevent recurrent episodes of phlebitis. In some patients, the occurrence of phlebitis indicates an underlying disorder which predisposes to blood clots and thrombosis. It is recommended that these patients are assessed with blood tests and ultrasound scans to exclude abnormalities.

Leg swelling and ulceration

Varicose veins are a common cause of leg swelling and leg ulcers, even if the varicose veins do not appear that visible. In some patients the venous circulation of the leg is so abnormal (due to the leaky vein valves) that swelling, pigmentation of the leg and ulceration around the ankle occurs. This is a serious condition which can result in loss of the limb and requires careful assessment and treatment.

Swelling and ulceration can be caused by abnormalities in the superficial veins, the deep veins or both. If the superficial veins are the cause, this can usually be treated by surgery. If the deep veins are the cause, conservative therapy with compression bandages and stockings can usually reduce the swelling and heal the ulcers.

Deep Vein Thrombosis (DVT)

As the name suggests, DVT is caused by a clot and thrombus forming in the deep veins of the leg. The deep veins are blocked and the leg becomes swollen and painful. This is an emergency which requires hospital treatment because sometimes

a clot and thrombus can break off from the veins in the leg and lodge in the lungs, known as a pulmonary embolus. A large pulmonary embolus can be fatal. Initial treatment requires blood thinning drugs such as heparin and Warfarin to stop further clots forming in the veins and to prevent pulmonary embolus.

DVTs are more common in patients on the contraceptive pill, during pregnancy, after surgical operations or people who have fractures of the leg bones requiring immobilization of the leg in plaster of Paris etc. Some people have an inborn tendency to thrombosis or are prone to thrombosis because of another illness.

In most patients the body removes the clot and thrombus from the deep veins so that they re-open. However, this takes many months and although the vein is open again, the valves are permanently destroyed resulting in a condition known as deep venous insufficiency. This often results in a permanently swollen leg which is prone to ulceration. In some patients severe swelling of the leg persists because segments of the deep veins remain blocked – a condition known as deep venous obstruction.

The practice of medicine and surgery is not an exact science and reputable practitioners cannot properly guarantee results either expressed or implied. These procedures are highly advanced and discussion about them (including risks and benefits) should be with your specialist.

Please sign below to indicate you have read and understood this information sheet. Bring this sheet with you when you come to the hospital and hand it to your specialist.

Signature:

Name: *Date:*

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