A Patient and Carer Information Leaflet - Your Guide to Venous Leg Ulcers

What is a venous leg ulcer?

A leg ulcer is a wound on the lower part of the leg that takes longer than six weeks to heal. It is usually caused by a minor injury that breaks the skin. In most people, such an injury will heal up without difficulty within a week or two. Leg ulcers can develop quickly and, if untreated, can last for years. It is important that they are properly diagnosed so that the correct treatment can be given.

What causes a venous leg ulcer?

Leg ulcers may be caused by damage to the valves in the veins in your legs, which in turn cause varicose veins, or by blood clots in the veins (deep vein thrombosis). Leg ulcers are usually due to a problem with your veins (venous) or arteries (arterial).

What is the function of arteries and veins?

- Blood is transported throughout the body via arteries and veins (blood vessels).
- In order to function properly the body needs to be supplied with oxygen and nutritious food and this is done via the arteries (blood vessels).

Veins are the blood vessels that carry blood back to the heart. When your leg muscles move they help squeeze blood back to the heart and the valves in the veins stop the blood from flowing backwards. If these valves leak, blood flows back down the legs and pressure builds up at
the ankle. This high pressure causes inflammation of the skin (cellulitis) and causes swelling due to leakage of fluid (pitting oedema). If untreated, this damage can result in the development of a venous ulcer. Poor mobility can also cause the same problem if the blood is not pumped out of the leg by the muscles.

**How does blood flow up our legs?**

Blood is powered back to the heart by high pressures created by muscles pressing on the deep veins. When we walk, the muscle in the calf forces pressure onto the deep veins and this helps squeeze the blood through the veins up the leg and to the heart.

**What happens when we don’t walk?**

One way valves in our veins prevent blood flowing backwards down the vein. These valves are attached around the vein wall and meet in the middle of the vein opening in one direction only. To make the blood flow the muscle in your leg (calf muscle) moves the valves open. If blood tried to flow backwards due to the force of gravity the valves close.

These are three things that help the venous blood back to the heart:

- The pumping action of the muscle in your calf
- Foot pump which works in the same way as the calf muscle pump
- Valves that do not allow blood to flow backwards.
When things go wrong

If the deep vein system becomes damaged, blood flows into the superficial system and the valves do not close in the normal way. As a result the blood flows in the wrong direction and the superficial system becomes over loaded with blood.

Varicose veins

They are permanently bulging veins and they will never regain their natural elasticity, making them unable to transport blood properly. The veins start to bulge and leak blood into the surrounding tissues.

When this happens several signs and symptoms occur:

- Legs become swollen
- Brown/red staining occurs around the lower leg
- Skin may feel tender to touch
- Skin may itch
- Legs may ache and feel heavy
- Skin may break with the slightest trauma and ulcerate.

When veins bulge the valves can no longer close.
How can my ulcer be treated?

The majority of venous ulcers are treated by compression therapy, which improves the blood flow up the leg. This usually requires several layers of bandages around your lower leg and foot. These are changed by your nurse once or twice a week but may need to be changed more often if your ulcers are very leaky. If the ulcer is small enough, it may be managed by a compression stocking over a dressing. These are changed by your nurse once or twice a week. You can safely bathe or shower with your ulcer exposed before having your legs redressed. This also helps to remove any dry skin. If you cannot expose the ulcer your GP can provide a bath/shower aid to protect the bandage.

How long will it take for my ulcer to heal?

It has usually taken many years for the venous disease to cause the ulcers, so it is not surprising that the ulcers may take a long time to heal. Although many venous ulcers will heal in 3 - 4 months, a small proportion can take considerably longer. Ulcers which have been present for months or years are slower to heal.
Will I need an operation?
If your ulcer is due to varicose veins, these may be treated when your ulcer has healed to reduce the risk of further ulceration.

Things that you can do to help heal your ulcer
Walk or exercise regularly. This assists the calf muscle to pump blood back to your heart. You need to walk toe to heel in order to use the calf muscle pump. Therefore if you have a ‘shuffling gait’ anything that you can do to improve the way you walk will assist the healing of your ulcer.

If you cannot walk far you will be encouraged to exercise whilst sitting in a chair.

**Exercise 1**
Begin by moving your toes up and down 5 times on each foot

**Exercise 2**
Hold you knee straight move your ankle up then down and rotate your ankle. Do this 3 times on each leg.

**Exercise 3**
Sit on a chair straighten your knee and hold for the count of 3 - repeat on each leg 3 times.
**Exercise 4**

If you can stand, rise up onto your toes and repeat this with each foot 5 times.

When you rest make sure you sit with your legs elevated. Your ankles need to be 23cm (9 inches) above your heart for maximum effectiveness, to help drain away the blood from your feet. Rest on your bed with your feet up on pillows or on a settee with your feet on cushions or the arm of the settee.

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**Eat a healthy diet**

Eat a healthy and balanced diet to encourage your ulcer to heal. If you are overweight you may be advised to try and diet. Your nurse may offer advice or you may be referred to a dietician.

Ideally you should include in your diet sources of:

- Vitamin C: examples of these are potatoes, leafy vegetables, and fresh fruit.
• Calcium and Vitamin D. These help to keep bones strong.
• Protein is necessary for growth and repair. Sources of these are found in milk, cheese, yoghurt, oily fish, margarine, meat, fish, lentils bread and eggs.
• Iron is needed to make blood cells. Good sources of these are found in liver, kidneys, red meats, dried fruits, tinned fish, baked beans, peas, lentils and leafy green vegetables.

**Skin Care**

• Take care of your skin. If you have dry skin apply a bland ointment or cream (one that does not have any preservatives added as these could lead to allergic reactions). This needs to be applied in a downward motion to prevent blockage to hair follicles.
• Avoid extremes of temperature as damage can occur to fragile skin. Be careful with hot water bottles, hot baths and sitting too close to fires.
• Be careful not to bang your feet and legs. Watch out for any obstacles such as shopping trolleys and edges of tables.
• Keep your bandages in place as these help your ulcer to heal. If you experience pain or discomfort contact your nurse immediately. Remove the bandage if it feels too tight and uncomfortable.

**Things you should not do**

• Do not force your footwear on as this will restrict the blood flow. Until your ulcer heals you may need to wear shoes a size larger than you normally would. Training shoes offer good support and are comfortable to wear.
• Do not wear tight garters or tight fitting socks.
• Do not sit with your legs crossed as this impairs blood flow in your legs.
• Do not stand for long periods. If you have to make sure you shift your weight from one foot to the other, rotate your ankles and wiggle your toes. This will help the blood flow back to your heart.
• Do not become overweight.

Contact Telephone Number:

Healogics Wound Healing Centre:

Named Nurse:

Web sites and further information:

Lindsay Leg Clubs
Tel: 01473 749565  Web: www.legclub.org

The Circulation Foundation Tel No: 020 7869 6937, fax: 020 7430 9235, email: info@circulationfoundation.org.uk

NICE- http://cks.nice.org.uk/leg-ulcer-venous