



University Hospitals Birmingham
NHS Foundation Trust



Venous Leg Ulcer

This leaflet has been produced in accordance with NHS patient information guidelines by the Birmingham Vascular Centre for patients of UHB NHS Foundation Trust and SWBH NHS Trust

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What is a leg ulcer?

A leg ulcer is a break in the skin which has not healed within two weeks. It typically occurs from the ankle to mid-calf of the leg.

The most common cause of leg ulcer is due to high blood pressure in the leg veins. This is known as a venous leg ulcer.

A venous leg ulcer is the most common type of leg ulcer accounting for more than 90% of all cases.

What causes a venous leg ulcer?

The veins in your legs carry blood back to your heart with the help of the muscles in your lower legs and feet during walking or other exercise.

The veins have a one way valve to ensure the blood flows upwards towards the heart against gravity.

Damage to the valves in the veins can impair the blood being pumped back towards your heart. As a result, the pressure in your veins increases. This can lead to swelling of the ankles and lower legs, aching pain in your legs, hardening of the skin, itch, changes in skin colour and eventually a leg ulcer.

There are other conditions which may make you more at risk of developing a venous leg ulcer such as:

- A blood clot in the deep veins (Deep vein thrombosis or DVT)
- Varicose veins
- Fracture or trauma to your leg
- Multiple pregnancies
- Surgery
- Immobility
- Inflammation of the veins
- Obesity
- Sitting or standing for long periods of time
- Varicose eczema

How is a venous leg ulcer diagnosed?

Your healthcare professional will undertake a detailed assessment of your condition. This includes your medical history, your general health, the medications you take and your lifestyle.

They will ask whether you have symptoms associated with venous leg ulcers like swelling in your ankles, discolouration and darkening of the skin.

They will also examine your leg, the ulcer and the surrounding skin.

To help diagnose the cause of your leg ulcer, you may have a Doppler study and/or a Duplex ultrasound of the blood vessels in your legs. These tests provide information to help your healthcare professional make a sound diagnosis and outline a treatment plan.

Doppler study also known as **Ankle brachial Pressure Index (ABPI)**. This involves measuring the blood pressure in the arteries at your ankles and comparing it to the pressure in your arms. This is recorded with a hand held ultrasound machine called a Doppler.

Duplex ultrasound scan: This looks at the blood flow through your arteries or veins.

What treatment will I need?

The most important part of the treatment of your venous leg ulcer is controlling the high pressure in the leg veins. This will help your wound to heal. This can be achieved through:

Venous intervention: If you have varicose veins in your leg you may be offered treatment for these. These treatments are minimally invasive, 'walk in, walk out' day case procedure. If this is required in your case this will be discussed with you during your consultation with the vascular surgery team.

Compression therapy: Compression could be in the form of bandages, stockings or compression wraps. These are used on top of the appropriate dressings to the ulcer. The applied compression gives support to your calf muscle which helps reduce the pressure in the veins by enhancing the flow of blood back towards your heart through the damaged veins.

Compression therapy should feel comfortable, firm and supportive but not too tight or painful.

Compression bandages

- Bandages that are applied in 2, 3 or 4 layers. The pressure applied is greater at the ankle and reduces towards your knee. The bandages are usually changed weekly unless the wound requires more regular changes
- The application of compression bandaging is a skilled procedure and should only be applied by trained healthcare staff

Compression wraps

- This is an alternative to compression bandaging. The compression wrap can be used to treat swelling of the lower limb and/or leg ulceration
- Your doctor or nurse will decide if a compression wrap is required

Your nurse will measure your leg for the compression wrap. The wrap is applied at ankle level to below the knee and is easy to secure with velcro straps. Some compression wrap systems come with a compression ankle stocking to wear with the wrap but this is not always necessary.

A liner stocking is placed over the leg and the compression wrap applied on top. The wrap can be removed at night.

- Compression wraps should be replaced every six months and are available on prescription

- This is also an alternative for patients who are unable to apply and remove compression stockings

Leg ulcer stocking/hosiery kits

- Alternative to bandages for treating leg ulcers. The ulcer kit consists of two stockings worn over each other

Your nurse will be able to advise which system would be best for you.

What benefits will I have from wearing compression therapy?

Compression therapy will:

- Reduce the pressure in the veins
- Reduce the swelling in your leg
- Help reduce the pain in your leg
- Help to heal your ulcer

What are the risks of compression therapy?

If you experience any of the following symptoms, you should remove the bandage/stockings/compression wrap and seek advice from your nurse or doctor.

- Pins and needles sensation in your toes
- Continuous blue or white toes
- Swelling of your toes
- Unusual pain in your leg, foot or toes
- Numbness or reduced sensation
- Excessive itching, burning or irritation
- Slippage from the bandages
- Increased shortness of breath

If you have any leakage or slippage of bandages, they will need to be reapplied by your community nurse.

If you do not experience any of the above, the bandages should be left in place until your next nurse visit. Interfering with the bandages can delay healing.

Treating an infected ulcer

An ulcer sometimes produces a large amount of discharge and becomes more painful. There may also be redness around the ulcer and may make you unwell.

These symptoms may be signs of infection.

If your ulcer becomes infected, it should be cleaned and dressed as usual.

Occasionally your nurse or doctor may prescribe antibiotics if clinically indicated although usually good wound care (bathing the leg and moisturising the surrounding skin) is all that's required.

The aim of antibiotic treatment is to clear infection. Antibiotics **do not** heal ulcers and should only be used in short courses to treat severely infected ulcers.

How long will it take to heal my ulcer?

Ulcers can occasionally heal in a few weeks while others can take many months, or even years.

The key to success is following your healthcare professional's advice.

How can I help with the healing of my leg ulcer?

Leg elevation- The higher the leg, the lower the pressure in the leg veins.

Try to raise your legs higher than your hips to help gravity pull the blood and fluid in the right direction towards your heart. This will reduce any swelling.

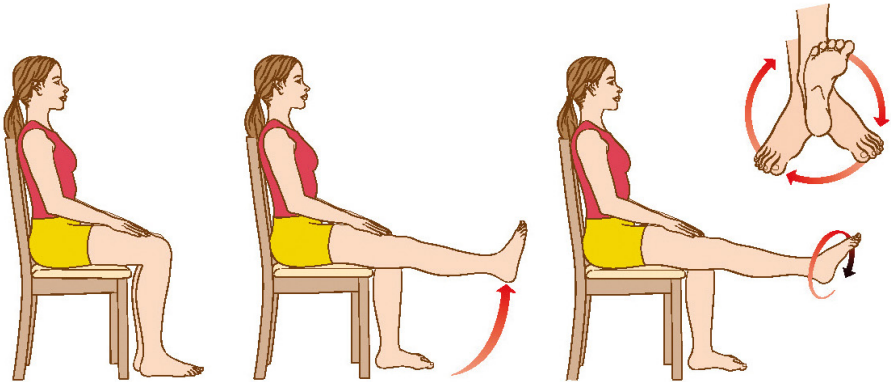
You can do this by using foot stools or with extra pillows if in bed.

Exercise- Exercising your legs regularly helps to keep the calf and foot muscles working.

Ankle and foot exercises:

1. Sit on a chair up straight with your feet flat on the ground
2. Raise your leg up and roll your feet in a circle
3. With your leg up, point your toes down and then point your toes towards your chest

See picture as demonstrated below:



Avoid sitting or standing in one position for long periods – If this cannot be avoided, activate the calf muscle pump by taking the weight off your heels and standing on your toes and rolling back onto your heels with the toes off the ground. This encourages the venous blood supply of blood to your heart.

Avoid injury – Take care not to bang your legs as some ulcers start following an injury and may take a long time to heal.

Pain – Everyone experiences pain differently. It is important you take your painkillers as prescribed and do not exceed the recommended dose. If the pain is becoming worse or you think the painkillers are not helping, please speak to your nurse or doctor.

Diet – A healthy diet is very important to promote wound healing.

- Protein provides the building blocks which repair body tissues. This is found in meat, fish, eggs, cheese, milk, nuts and pulses
- Vitamins and minerals help regulate body functions. They are mainly found in vegetables

You may be referred to a dietician if required. Your health care practitioner will give you this information.

Try to maintain your ideal weight. Being overweight puts extra strain in your veins.

Stop smoking – It is challenging to give up but help is available. Speak to your doctor or nurse for advice or call the NHS Smoking Cessation service on **08001690169** and online via **<https://www.nhs.uk/smokefree>**

Footwear – Wear sensible footwear to accommodate any bandages or dressings. Tight footwear can lead to skin damage and foot ulceration.

Skin care – Ensure your skin is moisturised with an unscented ointment or cream. Use a downward motion in the direction of hair growth. This will prevent infection at the base of the hairs.

Check your leg regularly and note any skin changes and report them to your health care practitioner.

Be aware that there is a fire risk with all emollients. This is not to be used near naked flames or cigarettes.

Keep all appointments – It is important that you attend all your appointments with your nurse or doctor.

Keeping your ulcer healed

Venous leg ulcers commonly reoccur (come back) after being healed. To prevent this from happening:

- Your practice nurse/district nurse or tissue viability nurse can help you find a compression stocking/ wrap that fits correctly and you can manage yourself. There are various accessories you can buy to help get the stockings on and off
- This must be worn during the day time and taken off at night
- Compression hosiery/stockings and wraps will need replacing every 4–6 months to remain effective. Refer to the manufacturer's advice. Your GP, district nurse or tissue viability nurse should arrange the replacement for you

Frequently asked questions

Is it alright to wash my leg?

It is important to keep the leg clean and washing the leg (including the ulcer) with ordinary tap water, unless otherwise advised, is fine. When bandages are in place they need to be kept dry but the leg can be washed when the bandages are due to be changed. Find out from your district nurse the time they will be visiting so that you can wash your leg beforehand without being exposed for too long. It is not advisable to scrub or use highly perfumed soaps.

There are dressing protectors that can be used to keep your dressing dry whilst you bathe or shower. Ask your nurse about this.

Who to contact if I have queries or concern?

- The community nurse caring for your ulcer can assess it and seek further advice from a wound care specialist
- Your GP or district nurse
- The vascular secretaries if you have been seen by the vascular doctor or vascular nurse

Further information

The following websites will provide information and clinical evidence:

www.circulationfoundation.org.uk

www.legclub.org.uk

www.legsmatter.org

www.rcn.org.uk

www.nhs.uk

www.nice.org.uk

Ankle and foot exercises Illustration on page 7, kindly provided by Accelerate

www.acceleratecic.com



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