



# Leg ulcers

**Their causes, treatment and how to reduce the risk of getting them**

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## **Introduction**

A leg ulcer is a wound on your leg or foot that takes longer than six weeks to heal. Symptoms include pain, itching and swelling in the affected leg.

## **Types of leg ulcer**

The most common type of leg ulcer is a venous leg ulcer (80-85% of all cases) which occurs when persistently high blood pressure in the veins of the legs (venous hypertension) causes damage to the skin.

Other types of leg ulcer include:

- Arterial – caused by the arteries not working correctly
- Diabetic – caused by high blood sugar
- Other causes – such as those associated with chronic inflammatory disorders such as rheumatoid arthritis

## **How common are venous leg ulcers?**

Venous leg ulcers are quite uncommon in the general population, affecting an estimated one person in 500 in the UK. However, rates of venous leg ulcers rise sharply with age and it is estimated that one person in every 50 over the age of 80 is affected by venous leg ulcers.

## **Risk factors**

Risk factors for developing a venous leg ulcer include:

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- Obesity: this increases your risk of high blood pressure, which can damage the veins in your legs
  - Being immobile for a long period: this can lead to a weakening of the calf muscle
  - Deep vein thrombosis (DVT): blood clots that develop inside the leg, which can damage the valves inside the veins
  - Varicose veins: swollen and enlarged veins caused by malfunctioning valves
  - Previous injury to the leg, such as a broken or fractured bone, which may cause a deep vein thrombosis
  - Increasing age: generally, the older you get the less efficient your blood circulation system becomes

## Outlook

It will have taken many years for the venous disease to cause the ulcers, so it is not surprising that the ulcers may take a fairly long time to heal. With appropriate treatment, most venous ulcers heal in three to four months. A small proportion may take considerably longer.

## Symptoms of venous leg ulcer

A venous leg ulcer is a chronic wound with broken skin and exposed tissue. If you have a venous leg ulcer, you may also have:

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- Swollen ankles filled with fluid that temporarily hold the imprint of your finger when pressed (known as pitting oedema)
  - Discolouration and darkening of your skin around the ulcer (known as haemosiderosis)
  - Hardened skin around the ulcer, which may make your leg feel hard and resemble the shape of an upside-down Champagne bottle (known as lipodermatosclerosis)
  - Small, smooth areas of white skin, which may have tiny red spots (known as atrophie blanche)

## **Infection**

A venous leg ulcer can be vulnerable to bacterial infection. Symptoms of an infected leg ulcer include:

- Worsening pain
- A high temperature of 38°C (100.4°F) or above
- A painful, tender red region developing rapidly around the ulcer

## **When to seek medical advice**

You should always contact your healthcare professional/GP as early as possible if you think you may be developing a venous leg ulcer. Venous leg ulcers are unlikely to get better on their own. They require specialist medical treatment. Please see page 17 and the back of this leaflet for contact details.

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## **Causes of venous leg ulcer**

The veins in your leg are tubes that carry the blood back from the foot towards the heart. The veins in your legs have one-way valves that make sure the blood flows up the leg, not back down. In some people, these valves are not very effective or can become damaged.

If the valves are damaged, blood can flow the wrong way down the veins, which results in high pressure in the veins when standing up.

The constant high blood pressure in your legs causes fluid to leak out of the veins. The fluid causes swelling and damages the skin, which becomes hard and inflamed, leading to an ulcer.

## **Diagnosing a venous leg ulcer**

Your nurse or doctor will examine you and perform tests (such as a Doppler study) to see what type of ulcer you have.

## **Doppler studies**

To rule out a condition affecting your arteries (vessels that carry blood from your heart to the rest of your body), your nurse or doctor may carry out a test known as a Doppler study to check for peripheral arterial disease (a condition where the blood flow to the legs is reduced). The test involves taking a measurement of your blood pressure in each leg at the ankle, and comparing it with the blood pressure in your arm. The arterial blood

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pressure should be about the same in the arms and legs.

You may also be referred to a vascular specialist if your nurse or doctor is unsure about your diagnosis, or about what has caused your venous leg ulcer.

### **Treating a venous leg ulcer**

A venous ulcer can be healed by:

- The application of strong sustained compression with a bandage or stocking, and
- Treating the underlying cause of the ulcer

When appropriate, both treatments can be used at the same time.

Treatment for venous leg ulcers should always be carried out by a healthcare professional trained in leg ulcer management. In most cases this will be a trained practice or district nurse. You may be invited to attend a leg ulcer clinic.

### **Compression treatment**

In order to keep the pressure in the leg veins low when you are standing up, you will be treated with compression bandaging or stockings. Several layers of bandages may be required to get the necessary pressure to control the veins. Once the ulcer is healed, compression stockings are usually necessary to prevent the ulcer from returning.

These stockings need to be specially fitted and are much stronger than ordinary 'support tights'. If you

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have difficulty putting on your stockings, then speak with your nurse who will be able to advise on special stocking applicators.

## **Dressings**

The nurse may use a number of different dressings under the bandages depending on their assessment of the ulcer. The ulcer will be regularly reassessed and as a result the dressings may change according to your needs.

## **Elevation of the limb**

The higher the leg, the lower the pressure in the leg veins. If the foot is elevated above the heart, then the pressure in the foot drops to a normal level. Put your legs up whenever you can and as high as you are able – the arm of the sofa is good.

## **Surgery**

Very occasionally for the largest or very resistant ulcers either a skin graft or an operation on the veins may be necessary. If your ulcer is due to varicose veins then these may be treated, usually once the ulcer has healed.

## **What you can do yourself**

The following advice may help your venous leg ulcer to heal more quickly:

- Try to keep active by walking regularly. Immobility can worsen venous leg ulcers and

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the associated symptoms, such as oedema (fluid-filled swelling of your ankles and feet)

- Whenever you are sitting or lying down, try to keep your affected leg elevated
- Be careful not to injure your affected leg, and wear only comfortable well-fitting footwear
- If you are prescribed an emollient (a cream or liquid which is applied directly to the skin which reduces water loss from the outer layer of the skin (epidermis) by covering it with a protective film) by your nurse for venous eczema, use it as often as possible. This will hydrate your skin and keep it supple and healthy
- Wear your compression bandage exactly as instructed by your nurse. If you have any problems with it, do not remove it yourself

### **Treating an infected leg ulcer**

Sometimes an ulcer will produce a large amount of pus and become more painful, and some red inflammation may develop around the ulcer. These symptoms may be a sign of infection and you may be prescribed a course of antibiotic tablets. Your nurse will continue to clean the ulcer as usual and a dressing will be applied. Treatment with compression bandages may be suspended for 48 hours when antibiotic therapy is started.

### **Follow-up treatment**

You should return to your nurse once or twice a week to have your dressings and compression



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bandages changed. They will also monitor the ulcer to see how well it is healing. Once your ulcer is healing well, you may only need to see your nurse once a month.

## **Treating associated symptoms**

### **Pain**

Venous leg ulcers can often be painful. Mild to moderate leg pain can be treated using paracetamol. However, if your pain is more severe and does not respond to paracetamol, your healthcare professional may prescribe something stronger.

If after treatment your leg pain has continued to worsen, you should inform your nurse because you may have developed a complication such as an infection.

### **Leg swelling (oedema)**

Venous leg ulcers are often accompanied by oedema (fluid-filled swelling of your ankles and feet). This is very effectively controlled with the use of compression bandages or graduated elastic medical compression stockings.

Keeping your affected leg elevated will also usually help to ease any swelling. Try keeping your leg raised above hip level for 30 minutes, three or four times a day. Putting pillows or cushions under your feet when you are asleep may also help.

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## Itchy skin

Itchy and irritated skin associated with a venous ulcer is known as varicose eczema, and is caused by the fluids leaking out of your veins into the surrounding tissue.

If you have severe or worsening varicose eczema, your nurse will first need to rule out cellulitis (a bacterial infection of the deep layer of skin). If you have cellulitis, you will be given antibiotics.

To treat varicose eczema, your nurse may suggest using an emollient (moisturiser) on the affected area, as well as a mild corticosteroid cream or ointment. These will ease the itching and encourage your skin to heal.

## After your leg ulcer has healed

Once a leg has suffered a venous ulcer, there is a one in four chance of further ulceration developing within the next two years. You can take an active role in looking after your legs and to lower your risks of developing a new ulcer. Your nurse will be able to give you specific advice.

**An easy way to remember how to keep your legs healthy and reduce the risk of venous ulcers recurring is identified below.**

Now that your leg ulcer has healed, these five easy-to-follow steps should help to make it remain so for KEEPS:

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**Keep in touch**  
**Eat a healthy balanced diet**  
**Emollients (creams and ointments)**  
**Pain**  
**Stockings and Stop smoking**

## **Keep in touch**

**Please get in touch with us as soon as possible** if you:

- Notice any changes in your leg's skin condition
- Have knocked or scratched any part of your leg

If you've had an injury or the skin is broken, it is really important that appropriate treatment is started as soon as possible so that further breakdown of the injury is prevented. Early treatment will reduce the risk of a larger ulcer developing. **Telephone the number on page 17 of this leaflet.**

## **Eat a healthy balanced diet**

Continue to eat foods high in vitamins, minerals and proteins. These are found in a varied diet of **meat, fish, eggs, cheese/dairy products, vegetables, fruit and nuts.**

Losing excess weight can help to prevent venous leg ulcers because excess weight puts an extra load on the veins in your legs and contributes to high blood pressure. Maintaining a healthy weight is beneficial to your overall health.

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Check your alcohol levels: the Department of Health recommends that men should drink no more than three to four and women should drink no more than two to three units of alcohol a day. One unit is equivalent to half a pint of normal strength beer, a small glass of wine, or a pub measure (25ml) of spirits.

Although your skin has healed on the surface, the layers below need to get stronger and thicker. It can take up to two years for your skin to fully heal and get back to its original strength, so you need to take good care of it.

### **Emollients (creams and ointments)**

These need to be applied regularly **every day**. Keeping your skin well moisturised is very important. If the skin on your leg becomes dry and cracked it can potentially cause an environment for infection. As well as a moisturising cream, the emollient can be used as a soap substitute – please ask your nurse for advice. As you apply the cream, take your time to become aware of your leg shape and the feel of your skin so that you quickly notice any changes and get in touch if you have any concerns. Your emollient will be available on repeat prescription.

### **Pain may still occur in the scar where your ulcer was**

This can be caused by the nerve endings reconnecting. Continue with any painkillers that you

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were taking before to keep yourself pain free, being careful not to exceed the recommended maximum dose. This will make taking gentle exercise easier and help your circulation. When you are relaxing, continue to elevate your legs. Put your feet up for **30 minutes at least three or four times a day.**

## **Stockings**

Please continue to wear your compression stockings every day. Like the compression bandages, the stockings help the circulation in your legs and are vitally important in preventing another leg ulcer developing. Put a clean stocking on in the morning when your legs are less swollen.

**Do not cut the tops of the stockings.** If they are too tight or loose, then please get in touch as soon as possible. Tight stockings can cause damage to your circulation and swelling in your knees, and loose stockings are ineffective. You will need two pairs of stockings – one to wear and one in the wash. Please see manufacturer's instructions for washing and care of material. Your stockings will need to be replaced every three months and will be on your repeat prescription. You will be offered a six month follow-up appointment in the Doppler Clinic to review your stockings. This appointment will be sent to you.

## **Stop smoking**

Cigarettes contain nicotine, which narrows your veins and arteries and damages your blood

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circulation, making venous leg ulcers more likely to develop. If you need help to quit, please contact our Stop Smoking Service on 0800 0854 113, or talk to your nurse.

### **Remember:**

**K** = Keep in touch

**E** = Eat a healthy diet

**E** = Emollient

**P** = Pain

**S** = Stockings and stop smoking

### **Possible complications of a venous leg ulcer**

A venous leg ulcer can result in several complications, some of which are detailed below.

#### **Immobility**

You may find it difficult and painful to move around if you have a venous leg ulcer. This can make the ulcer worse, as blood pressure rises when you are immobile, aggravating your ulcer.

#### **Infection**

Venous leg ulcers can become infected, so it is important to look out for any signs of infection. These include swelling, redness, pus and increased pain. You may also have a fever and feel generally unwell. If your venous leg ulcer becomes infected, it can be treated using antibiotics. Please contact the number given below if you suspect infection.

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## Loss of quality of life and general functioning

Living with a venous leg ulcer can be difficult. Ulcers can be painful and take a long time to heal, and you may find that you need a lot of time off work. For some people, the loss of independence and social isolation can cause emotional distress. **If you are affected in this way, please talk to either your nurse or your GP.**

## Preventing your venous ulcer recurring

Treatment of your leg does not stop when your ulcer heals. The following points will help you prevent your ulcer returning.

**Compression stockings** – prevent fluid from building up and help the veins work more effectively.

- You will be measured and fitted with compression stockings. These are available on prescription
- Below-knee stockings are generally prescribed although thigh-length stockings are available
- Compression stockings are available in a range of colours and styles (including a man's sock). Ask to be shown the range available
- Your nurse or doctor will advise you which class of stocking to use for your condition. There are three classes of stocking: Class I,

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Class II and Class III. These determine the level of compression the stockings apply

- You must obtain new stockings every three months as they will lose their elasticity after this time and not work as effectively

### **Instruction for applying and wearing stockings**

- You must apply your stockings in the morning before your legs begin to swell
- You must wear your stockings all day
- At night remove your stockings, and wash and cream your leg. Avoid heavily perfumed soaps and creams. Ask your nurse if you are not sure or if you need help
- Do not remove your stockings if your legs ache – try taking a walk or exercising your ankle

## **Venous ulceration 2**

### **Applying your stocking**

**Step 1** Turn stocking inside out up to the heel

**Step 2** Pull foot of stocking over foot

**Step 3** Gradually ease stocking up over heel and ankle

**Step 4** Ease rest of stocking up the leg. Avoid pulling hard at the top. Check toe and ankle piece is in place



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Your stocking should fit smoothly, with no creases or wrinkles. There are a number of tips to help you successfully apply your stockings

- A small slipper is available to help application
- A plastic bag placed over the foot and removed when the stocking is in place
- Rubber gloves or talcum powder give greater grip
- A number of stocking applicators are available

## Care of your stockings

Follow the manufacturer's instructions concerning care of your stockings.

- Do not wash in hot water
- Avoid detergents or fabric softeners which may irritate your skin
- Do not use direct heat or tumble drying
- Do not iron your stocking

Don't forget to keep up the exercise every day. Continue to raise your legs when sitting during the day.

If you knock your leg or notice a break in the skin, don't despair, contact your nurse immediately.

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## Advice for patients receiving multi-layer bandage treatment

1. Do not push bandage up and down or remove layers
2. Do not cut the bandages if rubbing – contact the nurse
3. Do not get the bandage wet
4. Wear a larger shoe / slipper
5. The bandages may feel tight for the initial day but then they should feel more comfortable
6. If you have acute pain, please contact the nurse immediately

**To contact the nurse in an emergency, telephone 01953 609409, Monday to Friday, 8.30am to 5pm.**

**Or at a weekend, please contact your GP.**

### Other contact information

Leg ulcer clinic on a Tuesday: 01508 531175

Urgent problems with bandages: 01953 609409



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## Find out more

Long Stratton Health Centre

Telephone: 01508 531175

Single Point of Contact

telephone: 01953 609409

Long Stratton Health Centre fax: 01508 531679

**Flowerpot Lane**

**Long Stratton**

**NR15 2TS**



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You can receive help with queries about NCH&C services from

**Patient Advice and Liaison Service**

Telephone: 0800 088 4449

Email: [pals@nchc.nhs.uk](mailto:pals@nchc.nhs.uk)  
(Monday-Friday  
9am-5pm)

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