NHS
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Leg ulcers

Information regarding the treatment, management, and aftercare of my leg ulcer.



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What is a leg ulcer?

A leg ulcer is any wound below the knee and above the ankle bone which has not healed within two weeks, this may have originally been caused by a knock, cut, graze, insect bite, scratch or deterioration in an existing skin condition.

Why has my wound not healed after two weeks?

Possible reasons why your wound has not healed after two weeks:

Physical health issues

- **Poor nutritional intake** - Tissues need vitamins and minerals to remain healthy and wounds require these and protein to heal. A lack of good nutrition can weaken the immune system and slow the healing process.
- **Poor hydration** – Drinking helps keep the skin hydrated, stops it becoming dry/irritated, and prevents tiredness, dizziness, confusion, a risk of falls and hospital admission.
- Chronic medical conditions – Problems with your circulation, breathing and heart failure all affect your blood supply, resulting in a lack of oxygen and nutrients reaching your wound, delaying the wound healing process.
- Diabetes - Excess sugar in the blood from poorly controlled diabetes, increases infection risk through delaying white blood cells getting to the wound site, and inhibiting their ability to fight infection.
- Auto immune deficiency – some medications used to treat autoimmune diseases can increase the risk of infection and delay the wound healing process. Examples include corticosteroids, chemotherapy, and immunotherapy.
- Smoking – Can affect your circulation and impact on oxygen reaching your wound bed, which could delay wound healing. It also causes poor quality new tissue developing, increasing the risk of wound breakdown and delays in wound healing. Infection risk is increased through cigarette chemicals that inhibit white blood cell response.

Venous disease

Blood has to flow from our feet and legs towards our heart through our veins. The veins contain valves that can become ineffective as we get older. As the blood flow works against gravity, blood can sometimes pool in the lower legs and feet. This pooling increases the pressure in the veins which can cause damage, resulting in venous disease.

Arterial disease

Poor blood circulation to the legs and feet due to blocked arteries in the leg.

Mixed aetiology (combination)

This means a combination of venous and arterial disease.

Risk factors for leg ulcers

- Obesity
- Immobility
- Varicose veins
- History of DVT (deep vein thrombosis)
- Smoking
- Diabetes
- High Cholesterol
- High blood pressure
- Age (over 65)
- A family history of arthrosclerosis or other heart problems

Infection/cellulitis

People with a leg ulcer or venous insufficiency are at risk of developing an infection due to breaks in the skin and the potential for fluid to build up in the leg.

The following are signs of infection:

- Increased redness
- Increased heat
- Increased swelling
- More discharge (leakage)
- Increased pain
- Feeling generally unwell

If you think you have an infection, contact your GP or dial 111 out of hours.

Do not wait until your next appointment/visit. You may need antibiotics.

Identifying skin changes on dark skin tones

It is important to remember that signs of venous and arterial disease present differently on dark skin tones. It is therefore important to visually check your skin on a regular basis to ensure early detection of any changes to your skins condition.

Discuss your views and feelings in relation to your overall skin condition with your health care professional. For example, highlighting if any parts of your skin are sore or if there has been any recent changes to your skin, paying extra attention to checking your heels which are particularly vulnerable to skin damage.

Touching your skin is also important to identify any areas of numbness, especially to your toes, as well as any areas of tenderness, or spongy skin. Comparing the temperature/feel of each limb can also help identify early signs of skin damage.

What signs should I look out for?

Tired aching legs

Legs feel sore and heavy as blood stretches the veins in the legs.



Spider veins

Tiny blood vessels which have stretched to become visible.



Swollen ankles

Puffiness from blood and fluid pooling in the legs, often caused by standing or sitting for long periods (the swelling in the ankle reduces once you have put your feet up).



Ankle flare

Blood vessels are enlarged by blood pooling in the feet.



Varicose veins

Bulging veins stretched by blood not returning to the heart efficiently - caused by stretched veins and damaged valves.



How will I be assessed?

If the wound to your leg is not improving within two weeks you should be referred for a full assessment to diagnose your type of leg ulcer i.e venous, arterial or mixed combination. If you are not housebound you will be referred by your health care professional to a local Leg Ulcer Clinic (known as a HUB Clinic) if you are unable to leave your home, your community nursing team will arrange an assessment at home.

The assessment will include a doppler ultrasound: this test compares blood flow in your ankle with that in your arm to find out if there are blood flow problems in your lower leg(s). If the test results show possible arterial damage, you may be referred to a vascular consultant for further investigations or to a tissue viability specialist for advice in relation to your results. Other causes will need to be ruled out to ensure that you receive the most appropriate treatment plan.

On the day of your assessment, you should wear loose fitting clothes to your arms and legs in order for the health care professional to apply blood pressure cuffs to assess your blood flow. Following assessment, you may be advised to start compression bandaging (see page 8 for top tips) and will need appropriate adjustable footwear to allow for the extra padding around your foot and ankle i.e supportive footwear with velcro strapping or a larger size shoe.

If you have a wound near your ankle, you may find the procedure uncomfortable due to the blood pressure cuff inflating around this area while the test is performed, however the procedure will be over in less than one minute. You may wish to consider taking pain relief 15 - 30 mins prior to your assessment.

The health care professional will let you know your results following completion of the assessment.

Your health care professional will indicate how often you will require reassessment. It is very important that you attend any follow up appointments even if you feel your legs are in good condition.

What are my treatment options?

Following your assessment, you may have been informed that you require an onward referral to the vascular department or a tissue viability specialist. This may result in you not starting compression therapy until further advice is sought however your health care professional will ensure that you are signposted to the correct service to provide ongoing management of your wound until an appropriate treatment plan can be discussed with you.

The treatment of choice for venous leg ulcers is compression, this can be in the form of a hosiery treatment kit, a compression wrap (that fastens with Velcro around the leg), or compression bandaging. Compression is specially designed to apply pressure to your lower legs, helping to maintain correct blood flow and reduce discomfort and swelling. It is usually tightest at the ankle and less tight further up the leg. At the start compression can feel uncomfortable, hot and tight. Simple painkillers, such as those you take for a headache, can be useful but, if this doesn't help, speak to your health care professional. As the swelling reduces, compression should be more comfortable. Your health care professional will discuss the most appropriate options with you, which will depend on how much the wound is leaking or how swollen your legs are.

Hosiery treatment kits consist of two stockings that are worn together, they can be machine washed at a maximum of 40°C or by hand using normal detergent but with no fabric softener. Please do not tumble dry them or place them on a radiator. If you think you may struggle with the application of your garments, please speak to your health care professional. There are a variety of different aids available which can be ordered on prescription to support with the application of your garments.

Once healed, you will then be prescribed maintenance hosiery, it is extremely important that you wear these as advised to support your blood flow and stop your ulcer reoccurring or new ulcers developing. If you are struggling to apply or remove these, please talk to your health care professional who can advise on the use of an appropriate application aid.

How long do I need treating for?

You will be treated until your ulcer has healed. This timescale will vary depending on your highlighted risk factors, complications such as infection and your engagement in the advised treatment plan. It is important to highlight that if compression therapy has been advised it is unlikely that your ulcer will heal without it.

You will then be prescribed maintenance hosiery, it is extremely important that you wear these as advised to support your blood flow and stop your ulcer reoccurring or new ulcers developing.

The health care professional may use a number of different dressings under the bandaging 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.

Will I need further checks?

Your clinician will indicate how frequently you will require reassessment. It is very important that you attend any follow ups, even if you feel your legs are in good condition.

Compression top tips

- If you experience significant increased pain, numbness to your feet/toes, discolouration to your toes or have any concerns, please remove the compression/seek support for removing the compression and promptly report to a health care professional.
- You should be provided with two hosiery garments (one to wash/one to wear) these need replacing every six months (this may be more frequently if you have a lot of fluid in your legs). Do not fold or roll the tops down as this can make them too tight, and could cause blood flow problems. Do not cut the toe sections off as this will make them less effective.
- Never cut your compression bandaging or hosiery.
- Request a new garment if it is damaged.
- You can request a garment applicator to support you to apply and remove your compression.
- Compression bandaging must always be applied by a nurse.

- You can apply hosiery treatment kits and compression wraps as part of a shared care agreement with your health care professional. These must be worn day and night.

How can I help myself?

Doctors and nurses alone cannot heal your ulcer or prevent further damage to your veins. They can only provide the right conditions for your body to heal itself.

- Use an emollient to care for your damaged skin as your legs may be very dry. Do not sit closely to heat sources, such as a fire, due to flammability of emollients.
- Ensure you continue to wear your compression hosiery to prevent further damage or ulceration.
- Exercise - walking helps move your calf muscle to pump the fluid through your veins.
- Maintain a healthy weight – being overweight puts added strain on your damaged veins.
- Injury – try not to injure your legs as this can cause an ulcer.
- Try not to stand still for long periods as this puts extra strain on the veins.
- Elevate your legs – Elevating your legs can improve blood circulation, reduce swelling, and reduce the pressure in your veins to prevent vein conditions such as varicose veins, blood clots.
- A healthy diet that contains an adequate amount of protein and a good variety of vitamins and minerals can help prevent skin damage occurring and speed up the healing process. An increase of protein and vitamin C in your diet will support healing.
- You should aim to drink 8 - 10 cups of fluid per day, unless advised otherwise. To increase your fluid you could try foods high in fluid content such as fruit, vegetables, adding milk to mashed potatoes, and custard.
- Stop smoking - cigarettes contain nicotine, which narrows your veins and arteries and damages your blood circulation, making venous leg ulcers more likely to

develop. If you need help to quit, please contact our stop smoking service at: www.quitready.co.uk or call 0345 646 66 66.

What exercises can I do?

Please consider what is within your capability to perform safely and always discuss with your health care professional if you are unsure.

Start with low repetitions as recommended and increase gradually in increments of 5x as they get easier.

These exercises have been provided for general guidance and do not replace any individual clinical advice you have had from healthcare professionals. Exercises should not cause sharp pain; you may feel a stretching or aching sensation to start with. If pain continues or gets worse, or if you have severe shortness of breath, any redness or swelling after exercising - stop and speak to a health professional such as your GP, or 111 if you are in severe discomfort.

These exercises will help to improve your blood flow



Sitting and lying (flexing the foot)





Sitting and lying (rotating the ankle)





Standing (moving up and down)

What should I do if I have any concerns?

Remember – It is better to check a small problem than to wait until an ulcer has formed. Call your nurse/clinic and ask for a review if you have any of the following.

- Swelling in your ankles that continue when wearing your hosiery.
- Redness or itchy ankles.
- Any new wound to the lower leg however small.
- If your toes become cold or numb when wearing your hosiery.
- If you have repeated infections in your leg.
- Any reason you are worried about your leg.
- An increase in pain as this maybe associated with a new infection.

What should I do if the compression feels too firm?

The compression needs to be firm, but if you feel the compression is too firm and you have numbness, tingling or a change in the temperature in the toes, try moving the ankle and wiggling the toes.

This usually resolves the symptoms. If the numbness continues, remove the compression and call your nurse. It is rare for the compression to be too firm.

Discuss pain relief with your nurse if your ulcer is uncomfortable.

Once healed, how do I prevent another ulcer?

Healed leg ulcers or at risk of venous leg ulcers

Once your leg ulcer is healed or you are at risk of developing a leg ulcer (venous insufficiency) you need to continue with compression to reduce the risk of further damage or ulceration.

Venous insufficiency is not curable but can be managed with compression hosiery.

You will be measured for suitable hosiery at your assessment and a prescription will be arranged.

You do not need to wear them at night unless you are advised to do so by your clinician.

You should put on your hosiery before getting out of bed, before your legs have had a chance to swell, and keep them on all day.

You should be provided with two hosiery garments (one to wash/one to wear) which will need replacing every six months according to the make. This will avoid them becoming stretched and allowing the swelling to return.

Ask your GP for a repeat prescription. (It is a good idea to keep the box to show the GP.).

If you need help to understand this leaflet or would like it in a different language or format such as large print, Braille or audio, please ask a member of staff.

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