

# Venous Leg Ulcers

A skin ulcer is where an area of skin has broken down and the underlying flesh is exposed. A leg ulcer can take more than six weeks to heal. Symptoms of a venous leg ulcer include pain, itching and swelling, discoloured or hardened skin.

80-85% of leg ulcers are venous leg ulcers. They are caused by persistently high blood pressure in the veins of the legs (venous hypertension). Venous leg ulcers affect around 1 person in 500. However this rises to about 1 in 50 of people over the age of 80. Risk factors for venous leg ulcers are being unable to move properly, obesity and having varicose veins.

## Other types of leg ulcer

Other types of leg ulcer include:

- **arterial leg ulcers** - caused by poor blood circulation in the arteries
- **diabetic leg ulcers** - caused by persistent high blood sugar levels
- **vasculitic leg ulcers** - caused by chronic inflammatory disorders such as rheumatoid arthritis and lupus
- **traumatic leg ulcers** - caused by injury to the leg
- **malignant leg ulcers** – caused by a skin tumour

## Prevention

Prevention of a venous leg ulcer includes wearing a compression stocking, losing weight (if overweight) and taking care of the skin including keeping skin well hydrated.

## Symptoms

Venous leg ulcers usually occur on the inside of the leg, just above the ankle. They are often painful, particularly if infected. Other symptoms include:

- swollen ankles filled with fluid that temporarily hold the imprint of a finger when pressed
- discolouration and darkening of skin around the ulcer
- hardened skin around the ulcer, which may make the leg feel hard
- small, smooth areas of white skin, which may have tiny red spots

Symptoms of a venous leg ulcer caused by lack of blood flow (venous insufficiency) include:

- leg pain, which can be continuous or intermittent
- a heavy feeling in the leg
- aching
- itching
- swelling
- varicose eczema (itchy, irritated skin associated with varicose veins)

Bacterial infection may occur. Symptoms of an infected leg ulcer include worsening pain, a high temperature of 38°C or above and the ulcer area becoming tender and red.

## **Causes**

A venous leg ulcer is caused by low blood circulation due to damaged veins in the legs. Vein problems occur when the valves inside the veins stop working properly.

In healthy veins, blood flows towards the heart. Blood is prevented from flowing backwards by a series of valves that open and close to let blood through. If the valves weaken or are damaged (for example, due to deep vein thrombosis) the blood can flow backwards. Constant high blood pressure in the legs causes fluid to leak from the veins. The fluid causes swelling and damages the skin, which becomes hard and inflamed, leading to an ulcer.

## **Risk factors**

Risk factors for developing a leg ulcer include:

- obesity which increases the risk of high blood pressure
- being immobile for a long period which leads to a weakening of calf muscle
- deep vein thrombosis (DVT) which are blood clots that develop inside the leg and can damage valves inside the veins
- varicose veins which are swollen and enlarged veins caused by damaged valves
- previous injury to the leg such as a broken bone can cause a deep vein thrombosis
- diabetes leads to poor blood circulation and an increased risk of pressure ulcers
- increasing age as the blood circulation system becomes less efficient with age
- peripheral arterial disease which is blocked arteries in the legs generally caused by smoking

## **Treatment**

70% of small ulcers will heal within 12 weeks of treatment but larger ulcers can take longer to heal. Leg ulcers are commonly colonised by bacteria, however bacteria are not the cause of the ulcer and do not need to be treated unless there is obvious infection. Antibiotics treatment is not routine.

Ways to allow venous leg ulcers heal more quickly include:

- Keeping active by walking or do other physical activity. Immobility can make venous leg ulcers worse
- Elevating the affected leg when possible. (eg) a pillow under the leg to raise it while in bed
- Wearing comfortable well-fitting footwear
- Use moisturising emollients such as aqueous cream or emulsifying ointment regularly, especially when venous eczema occurs. The motion of rubbing in the emollient boosts circulation
- Wearing compression bandage if advised. Your pharmacist can measure for and advise on compression stockings. Compression stockings lead to about 70% of ulcers healing within about 6 months. Compression stockings for the prevention of venous leg ulcers are usually below knee in length rather than thigh length. A compression stocking should be changed after 6 months as elastic wears after this time. Venous leg ulcers commonly recur after they have healed. To prevent this, a compression stocking should be worn during the daytime for at least five years after the ulcer has healed.

A dressing will aid healing, improve comfort and control fluid build up. Before putting on a dressing, the ulcer must be cleansed by gentle washing in warm tap water. Sometimes saline is used instead. This removes debris and dead tissue that accumulates on the surface of the ulcer between dressing changes. Removal of this helps ulcer healing. A simple, non-sticky dressing can be used to dress the ulcer. (eg Melolin<sup>®</sup>). Always get advice from a healthcare professional such as a nurse, doctor or pharmacist before using a dressing on a leg ulcer.

### **Treating infections**

A large amount of pus, pain and red inflammation around the ulcer is a sign of infection. Cleaning of the ulcer should continue as usual and a dressing applied. If possible, compression stocking or bandages should still be used; however, sometimes the leg may be too painful to allow this so compression may need to be temporarily reduced or avoided until the leg is more comfortable. A seven-day course of antibiotic, generally a penicillin antibiotic called flucloxacillin, will be prescribed. In rare cases, infection could lead to more serious conditions such as osteomyelitis (infection of the bone) or blood poisoning if not treated.

### **Treating Pain**

Mild to moderate leg pain can be treated using paracetamol. If pain is more severe and does not respond to paracetamol, a combination of paracetamol and ibuprofen may be required.

### **Treating leg swelling (oedema)**

Swelling of the ankles and feet can be controlled with the use of compression bandages or graduated elastic medical compression stockings. With a compression bandage it should still be possible to move the ankle around. Occasionally, the compression is too tight, or it may affect the circulation in the legs. Therefore, take the bandages off if the foot changes colour or temperature, or if there is increasing pain; this is a sign circulation is blocked. Keeping the leg raised above hip level for 30 minutes, three or four times a day can help.

### **Treating 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 veins into surrounding tissue. Using an emollient moisturiser regularly on the affected area will help. A mild corticosteroid cream or ointment may be needed to ease itching and encourage the skin to heal.

**Disclaimer: Please ensure you consult with your healthcare professional before making any changes recommended**

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