



**1. Definition:** A leg ulcer is a break in the skin of the lower leg which takes more than 4-6 weeks to heal (HSE, 2009)

**2. Causes:**

- Venous Disease 70%
- Arterial Disease 15-20%
- Rheumatoid Arthritis (Less Common)
- Vasculitis (Less Common)
- Malignancy (Less Common)



**It is important to know the underlying cause of the ulcer as treatment varies according to the disease process:**

- **Venous Ulceration-** Chronic venous hypertension is the main underlying cause of venous leg ulceration
- **Arterial Ulceration-** Caused by ischaemia, usually as a result of atherosclerosis.
- **Mixed Aetiology Ulcers-** Mixed arterial and venous disease (approx 20% of patients with leg ulcers)

**3. Assessment:** should be carried out by a practitioner experienced and knowledgeable in leg ulcer care. A structured **leg ulcer assessment form** should be used and include details about:

- Patient:** the general health of the patient, screening for diabetes, patient and family history of venous or arterial disease.
- Leg:** signs of venous or arterial disease.
- Vascular assessment:** measurement of the Ankle Brachial Pressure Index with a hand held doppler, together with the overall assessment is used to confirm or exclude the presence of arterial disease.
- Ulcer:** site, dimensions, appearance of the wound bed, wound edge, level and type of exudate, the surrounding skin.

**Remember:**

- **Leg ulcers of any aetiology can be extremely *painful*.**
- **Patients with non-healing or atypical leg ulcer should be considered for biopsy to out rule malignancy.**
- **Bacteriology *swabs* should only be taken where there is clinical evidence of infection.**



4. **Management** : Management of a leg ulcer will depend on the underlying cause of the ulcer e.g. venous or arterial disease.



### 1. **Venous Ulcer Management**

- **Compression therapy:** aims to improve venous return and reduce venous hypertension.
  - Multi-layer elastic or inelastic bandages
  - Compression hosiery
  - Intermittent pneumatic therapyHigh compression is more effective than lower levels , the general consensus is that pressures in the region of 40mmHg are required at the ankle to reduce venous hypertension. **Compression bandaging should be applied by trained practitioners and in accordance with manufacturers instructions.**
- **Wound Cleansing:** leg ulcers can be cleansed by bathing the leg in warm tap water, irrigation with potable tap water or saline, strict asepsis is unnecessary.
- **Dressings:** simple non-adherent dressings are recommended in the management of venous leg ulcers. Dressing choice depends upon wound circumstances. Routine long term use of topical antiseptics, antimicrobials is not recommended. The peri ulcer skin should be treated with a bland emollient.
- **Systemic Antibiotics:** in patients with chronic venous leg ulcers, systemic antibiotics should not be used unless there is evidence of clinical infection.
- **Exercise and Elevation** should be balanced so that the patient gets adequate rest, but increases muscle activity in the leg.

#### Management of a patient with a healed Venous Ulcer:

- **Hosiery:** below the knee compression hosiery is advised
- **Surgery:** patients with chronic venous leg ulcer and superficial venous reflux should be considered for superficial venous surgery to help prevent recurrence.
- **Advice:** skin care education and advice regarding continued care.



### 2. **Arterial Ulcer Management**

- **Vascular Referral:** refer to vascular specialist for revascularization to restore normal blood flow if possible.
- **Wound care:** keep ischaemic wound as dry as possible to reduce risk of infection.
- **Patient Education:** advice re: stop smoking, control Diabetes, hypertension and hyperlipidaemia. Also give advice regarding foot and leg care, walking...
- **Compression therapy:** is not appropriate for arterial leg ulcers.



3. **Mixed Aetiology Ulcers** are managed and treated using a combination of both approaches above.

#### *References:*

- HSE (2009) National best practice and evidence based guidelines for wound management, HSE, Dr Steeven's Hospital, Dublin 8
- Royal College of Nursing, UK 1998
- Moffatt C(2001) Leg Ulcers In. Murray S (ed) Vascular Disease: Nursing and Management. Whurr, London 200-237
- Morison MJ, Moffatt C (2004) Leg Ulcers. In: Morison MJ, Ovington LG, Wilkie K (eds) Chronic Wound Care: A Problem Based Learning Approach. Mosby, Edinburgh: 164-76
- Cullum N, Nelson EA, Fletcher AW, Sheldon TA (2000): *Compression for venous leg ulcers* *Cochrane Database for Systematic Reviews* 2000(3):CD000265

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