

Livewell Southwest

## **Lower Limb Ulceration Policy**

Version No 2.6

Review: February 2018

### **Notice to staff using a paper copy of this guidance**

**The policies and procedures page of Intranet holds the most recent version of this guidance. Staff must ensure they are using the most recent guidance.**

**Author: Clinical Nurse Specialist Tissue Viability**

**Asset Number: 169**

## Reader Information

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<b>References/sources of information</b>	National Institute for Clinical Excellence (2001) Wound Care- Debriding agents. Reference TA24. Ref CG 29 <a href="http://www.nice.org.uk">www.nice.org.uk</a> <a href="http://www.nice.org.uk/">http://www.nice.org.uk/</a>  National Institute of Clinical Excellence (2006) Nutrition support in adults: oral nutrition support, enteral tube feeding and parenteral nutrition Reference: <b>CG32</b> <a href="http://www.nice.org.uk">www.nice.org.uk</a>

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<b>Associated documentation</b>	<p>Livewell Southwest Competencies in Compression Bandaging and Doppler Guidelines for the assessment and management of Exudate Lower Limb Ulceration Assessment form Lower Limb Ulceration Referral Pathway Information for patients</p>
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## Document review history

Version no.	Type of change	Date	Originator of change	Description of change
1	Published	12/03/2006		
1:1	Review	10/10/2008	Clinical Nurse Specialist Tissue Viability	Reviewed, minor changes made.
1.2	Amendments following PRG	May 2009	Clinical Nurse Specialist Tissue Viability	Reviewed, changes made.
2	Updated	January 2010	Clinical Nurse Specialist Tissue Viability	Additions from other members of staff.
2:1	Review	29/03/10	Clinical Nurse Specialist Tissue Viability	Reviewed, minor changes made.
2.2	Amendments following PRG	30/03/10	Clinical Nurse Specialist Tissue Viability Matron DN Treatment Clinic	Reviewed, changes made.
2.3	Review	25/02/2012	Clinical Nurse Specialist Tissue Viability	Review of flow chart.
2.4	Review	12/03/2014	Clinical Nurse Specialist Tissue Viability	Reviewed and major changes made. Management of Venous Leg Ulcers guidelines added.
2.5	Review	10/06/14	Clinical Nurse Specialists Tissue Viability Matron DN Treatment Clinic Vascular Surgeons Lead Vascular Nurse	Reviewed.
2.6	Competencies	02/03/16	Livewell Southwest Ratification Group	New competencies added.

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# Lower Limb Ulceration Policy.

## 1 Foreword

- 1.1 These guidelines are not intended to be a textbook or training manual. Neither are they intended a rigid or inflexible tool.
- 1.2 It is strongly recommended that anyone involved in the delivery of leg ulcer care has had adequate training and developed their competencies in leg ulcer assessment, Doppler ultrasound, compression bandaging techniques and leg ulcer management. The evidence base for these guidelines is based upon systematic reviews conducted by Scottish Intercollegiate Guidelines Network (SIGN 2010). A full reference and recommended reading list will be given at the end of these guidelines.

## 2 Introduction

- 2.1 Lower limb ulceration due to venous disease is estimated to affect approximately 1% of the patient population in developed countries. Current leg ulcer care costs the NHS £300-600 per year with a substantial proportion of this attributable to nursing time. (BMJ 2009).
- 2.2 These estimates are primarily associated with venous ulceration and yet the cost of arterial disease (and some venous ulceration) that is not managed effectively can result in lower limb amputation. The financial cost of which is £6,103 per limb and the potential personal consequence on quality of life of this surgery is or can be insurmountable.

## 3 Purpose

- 3.1 The purpose of the document is:
  - To identify methods of assessment, intervention and treatment therapies to promote healing and reduce recurrence of lower limb ulceration.
  - To provide health professionals with evidence linked recommendations of leg ulcer assessment and management.
  - Assist the practitioner to identify the presence of arterial disease.
  - Formulate and implement appropriate care and management.
  - Reduce variations in practice and standardise care across health care settings and to facilitate appropriate and timely referral to secondary care.
- 3.2 Moreover, the clinician is made aware of the necessity for patient participation and involvement in their care to ensure therapeutic, non-judgemental relationships with informed patient consent (Van Hecke *et al* 2009).

## 4 Duties

- 4.1 The Chief Executive has overall responsibility for care and treatment of patients and the implementation of this policy.

- 4.2 The Deputy Director of Professional Practice, Quality and Safety, and Locality Managers will be responsible for ensuring that all staff follow the standards set out in this policy.
- 4.3 The Clinical Nurse Specialist (CNS) in Tissue Viability (TV) is responsible for providing evidence based education and training for staff within Livewell Southwest (LSW). Implementation and review of the Lower Limb (Leg Ulcer) Policy and the supporting literature to LSW.
- 4.4 Unit / Ward Managers / Service Managers/District Nurse Team Managers are responsible for the safe implementation of the policy.
- 4.5 All staff caring for patients with Lower Limb Ulceration will comply with all standards and procedures outlined in this policy.

## 5 Definitions

Lower limb/leg Ulceration	A leg ulcer can be defined as an open lesion between the knee and the ankle joint which is failing to go through the normal phases of wound healing and that does not respond to treatment within 4 weeks (SIGN 2010).
Debridement	The removal of dead (devitalised) tissue, cell debris or foreign matter from a wound.
Sustained Graduated Compression Therapy	A bandaging or hosiery system that facilitates venous return via the venous circulatory system to the heart. The graduation indicates that the sub-bandage pressure is greater at the ankle and reduced at the knee. The level of pressure achieved is determined by the use of elastic or inelastic bandages according to the ulcer aetiology, the circumference of the limb, the configuration of the bandage system being used and the level of competency of the practitioner applying the bandage system.
Compression Hosiery	Stockings or socks that are woven from elastic or inelastic fibres to achieve graduated compression to the lower limb in limbs that have healed, have superficial ulceration, or varicosities and associated skin changes due to early stages of venous disease. Compression hosiery also enables patients to self-care and encourages concordance with the desired treatment.

Reduced compression	Reduced compression is used to treat patients who cannot tolerate full compression or who are not suitable for full compression systems so must be closely monitored.
Short Stretch bandaging	This system of bandaging provides an inelastic system for patients' with lymphoedema/chronic oedema and patients who have restricted ankle movement.
Sub bandage pressure	The interface pressure exerted between the limb and the bandages.
Doppler Assessment	Is an assessment using Doppler ultrasounds which measure the patient's Ankle Brachial Pressure Index (ABPI). The purpose of a Doppler assessment is to eliminate arterial disease. Compression must never be applied to treat arterial ulcers. Occasionally the vascular surgeon may request compression therapy dependant on the degree of arterial disease. On these occasions specific written instructions must be obtained from the consultant and the therapy must be closely monitored by the health care professional responsible for delivering the patient's care.
Duplex	A non-invasive ultrasound that provides an immediate picture of the veins and arteries to determine the strength and direction of blood flow. Duplex studies are used to identify venous incompetence and arterial disease.
ABPI	The ABPI ( <b>A</b> nkle, <b>B</b> rachial <b>P</b> ressure <b>I</b> ndex) confirms or excludes the presence of arterial disease in the lower limb and is calculated via Doppler assessment. It determines the percentage of blood supply to the patient's foot/feet.
Competent	A clinician that has had training in a specialised area and has achieved a level of capability that deems them competent. No form of compression therapy should be applied by practitioners who have not undertaken a recognised training program in leg ulcer management or that have not been deemed capable through a competency framework, as high compression therapy inappropriately applied can cause significant damage.

## 6 Guidance

### Assessment

#### Ankle Brachial Pressure Index (ABPI)

The measurement of the patient's ABPI must be undertaken by practitioners who have received adequate training in leg ulcer management and whose competencies have been updated according to local policy. Appropriate training is required due to complexities around the interpretation of the results. ABPI is carried out to substantiate the presence or absence of significant peripheral arterial disease (PAD), except in those patients with calcified vessels. For values above 1.3 (ABPI) and associated with ulceration, the vessels are likely to be incompressible and the results cannot be relied upon to make a clinical decision (SIGN 2006).

- 6.1 All patients to be assessed by a competent qualified nurse or an Assistant Practitioner (AP), who has received adequate training, experience and has worked through a competency framework.
- 6.2 Patients who have a wound to the lower limb must undergo a leg ulcer assessment including an ABPI calculation within four weeks and depending on the urgency of presenting signs and symptoms.
- 6.3 Aspects of past history, aetiology and patho-physiology and clinical signs and symptoms to be recorded on the assessment form with patient perceptions of the impact of their symptoms reflected in the care plan. Factors such as obesity, malnutrition, intravenous drug use and co-existing medical conditions will affect prognosis and suitability for venous surgery (SIGN 2010).
- 6.4 Although chronic venous insufficiency is the most common cause of leg ulceration the circulation cannot be viewed in isolation. Assessment of the patients' ABPI by an experienced healthcare professional should bring together general and specific information on the following:
  - Patient.
  - Skin.
  - Circulation.
  - Limb.
  - Ulcer.

The assessment should answer the following questions:

- What is the cause and possible aetiology of the ulcer?
- What factors may delay healing?
- What is the most appropriate treatment for this individual patient?
- Are there any correctable risk factors which will speed healing and reduce recurrence?

Patients presenting with risk factors, for example varicose veins and lower limb

ulceration. Where appropriate should be considered for intervention of underlying correctable aetiologies within a timely manner. Identification of venous or arterial disease should prompt referral. The National Institute of Clinical Excellence (NICE CQ 168 2013) recommends referral within two weeks of identifying the signs and symptoms.

- 6.5 The patient's mobility should be considered including joint mobility/fixed ankle joint as compression bandaging will affect the patient's mobility. Help available to the patient in the community must also be considered when prescribing compression hosiery and ease of application.
- 6.6 Planning of Doppler/ABPI assessment should be undertaken in negotiation with the patient to ensure the patient has an understanding of the procedure and to reduce potential anxiety. Doppler ultrasound is performed following a full clinical assessment and forms part of a holistic assessment.

6.7 Clinical Assessment of the Patient:

Document:-

- Relevant past medical history.
- Associated disease and risk factors (table 2).
- Current ulcer history.
- Previous ulceration and successful/unsuccessful treatments.
- Current drug therapy.
- Allergies.
- Presence and type of pain
- Nutritional status and their build using an appropriate recognised assessment tool e.g. Pain Scale Measuring Tool and MUST if required.
- Sleep pattern.
- Social circumstances.
- Psychological status.

6.8 Management of Venous Ulcers.

6.9 All patients with an ABPI of  $<0.65$  and ulceration are deemed to have significant arterial disease and should be referred to Vascular services as an urgent referral.

6.10 Approximately 5% of patients will have Diabetes Mellitus. All Diabetic patients with ulceration that is on the foot and below the malleolus should be referred to the Joint Diabetic Foot Clinic at Plymouth Hospitals NHS Trust. Compression therapy should not be routinely applied to diabetic patients with leg and foot ulceration due to potential micro vessel disease and neuropathy. This could increase the risk of pressure ulcers.

**Important note:** Compression therapy should **not** be applied in the presence of pressure ulcers to the heels. Advice should be sought from the Tissue Viability Service.

- 6.11 A high ABPI (e.g. >1.3) in the absence of clinical symptoms of arterial disease and without lower limb ulceration does not require referral to Vascular services.
- 6.12 The outcome of the assessment should be fully explained to the patient with the results of the clinician's investigation. Different treatment options must be discussed to offer the patient a choice and encourage concordance, enabling the patient and clinician to achieve an agreed plan of care that is reflective of evidenced based practice guidelines.

## **7 Procedures**

- 7.1 Procedures will be undertaken that comply with universal precautions for control of infection and correct disposal of clinical waste.
- 7.2 Equipment used during the assessment purpose (such as Doppler or Sphygmomanometer) will be fit for purpose and the procedure carried out under optimum conditions.
- 7.3 For patients with active ulceration Doppler reassessment should be carried out every 24 weeks and thereafter at 24 week intervals or if there is a clinical change in the patient's symptoms which may affect the patient's arterial status. When an ulcer recurs, a full assessment should be carried out including a Doppler. Patients with healed ulcers using compression hosiery should have a reassessment of their ABPI every 6 months or sooner if there is a clinical change in presenting symptoms.
- 7.4 Those patients who have undergone a Duplex scan will not require a follow up Duplex or Doppler unless there are significant clinical signs of deterioration. Compression can be applied following a Deep Vein Thrombosis as long as the patient is effectively anticoagulated.
- 7.5 Compression therapy is the gold standard treatment for patients with venous leg ulcers. There are a variety of compression systems available to allow patient choice and participation. High compression multi component bandaging should be used in the treatment of venous leg ulcers using a multi-layer or a two layer system.
- 7.6 Compression therapy should only be applied by staff with the appropriate training and in accordance with the manufacturers' instructions.
- 7.7 Primary dressings deemed necessary to address symptoms such as management of pain or exudate, or promote healing will follow the recommendations of the South and West Devon Formulary unless discussed and agreed with Specialist Tissue Viability services. Most venous ulcers can be treated with a simple low adherent primary dressing under their compression therapy dependant on the classification of the ulcer bed. There is no clinical evidence to support the use of complex wound care products under compression therapy unless there are clear clinical indications.

## **8 Education**

- 8.1 All qualified nurses and healthcare professionals with a responsibility for caring for patients with lower limb ulceration will be updated in the treatment and management of leg ulceration particular to their level of intervention.
- 8.2 Registered Nurses will be deemed competent in compression bandaging and holistic Doppler assessment by an experienced clinician who has been deemed competent in leg ulcer management. Achieving competence will require practice to build upon the theoretical knowledge from education and training. The competencies will be signed off 3 yearly. They will complete yearly self assessment thereafter. Assistant Practitioners and Extended Role Health Care Assistants will have their competencies supervised and signed off by a competent Registered Nurse.
- 8.3 Education and training will be made available to both Livewell Southwest & PHT, via the Tissue Viability and Vascular services; and reflect the education requirements of staff. Educational study days will be designed for all Registered Nurses, Assistant Practitioners and Health Care Assistants involved in the management and treatment of leg ulcers. Consideration will be given to the level of expertise and competencies of the group receiving training and sessions will be designed specifically to meet their needs.
- 8.4 Staff will ensure that patients/clients and their carers are informed of the elements of and their role in maintaining tissue integrity. Patients and carers will be taught the basic principles of good skin care to maintain skin integrity. They will be shown how and when to apply compression hosiery and will be provided with information regarding hosiery applicators to encourage concordance.

## **9 Audit**

- 9.1 Quality Assurance and Audit - The principles upon which this document is based are:
  - An individual holistic assessment should be undertaken and evidenced-based treatment plans commenced. This will take into account the underlying aetiology, patient's circumstances and their choices. Working in partnership with the practitioner's clinical judgement, available resources and knowledge of more recent research findings will facilitate the overall treatment goal.
  - Those who undertake ABPI assessment, planning, implementation and evaluation of care should be trained, educated and competent in leg ulcer care and management. They should have attended the two day in-house Leg Ulcer Management training programme and will require supervision of their practice with an experienced nurse in leg ulcer management who has had their competencies signed off.
  - The process should be clearly documented on the leg ulcer assessment form and should be accessible to all those caring for the patient to ensure continuity of care.
  - Monitoring of ulcer healing and recurrence rates as an indicator of quality care

will be undertaken regularly through a clinical audit process. Audit will be carried out to assess the efficacy of the policy and referral pathway.

- 9.2 All information regarding referral of patients with lower limb ulceration whether within or without the organisation will be collated and shared via the Vascular Group Meetings and using the agreed Leg Ulcer Care Pathway (Appendix E). A collaborative, multi-disciplinary approach will be taken to meet the needs of patients with or at risk of leg ulcer development.
- 9.3 The process of audit will be every practitioner's responsibility and reflect the philosophy from the Essence of Care (2010) document. Practice, training and procedures will be developed and amended to reflect the requirements of patients/clients and clinicians as identified from the audit process.

## **10 Monitoring Compliance and Effectiveness**

- 10.1 Leg Ulcer Prevention and Management training will be delivered by the Tissue Viability Team and will be provided over the course of 2 days. The course will be available on 3 occasions annually, or according to demand.
- 10.2 Hyperlinks to relevant national guidance and best practice statements will be included on the reference list.
- 10.3 All documentation will be reviewed in response to the publication of evidence based research findings and /or National or International consensus publications that dictate essential review.

**All policies are required to be electronically signed by the Lead Director. Proof of the electronic signature is stored in the policies database.**

**The Lead Director approves this document and any attached appendices. For operational policies this will be the Locality Manager.**

**The Executive signature is subject to the understanding that the policy owner has followed the organisation process for policy Ratification.**

Signed: Director of Operations

Date: 5<sup>th</sup> February 2015

## APPENDIX A

### **Registered Nurse and Extended HCA Competencies**

#### Bandaging competency

[Compression Bandaging Competencies](#)

#### Doppler competency

[Doppler Ultrasound Assessment of the Lower Limb Competency](#)

## APPENDIX B

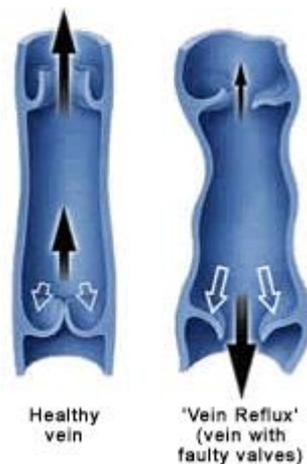
### Patient Information –Chronic Leg Ulcers

#### 1. What is a leg ulcer?

A leg ulcer is simply a break in the skin of the leg below the knee, usually caused by a minor injury. In most people such an injury will heal up without difficulty within a week or two. However, if there is an underlying cause, the wound healing may be delayed with an increased breakdown of skin, resulting in a chronic leg ulcer. Leg ulcers tend to affect older people and are more common in women.

#### 2. What causes leg ulcers?

Venous ulcers – these make up about 70% of all ulcers. Each time your leg muscles move they help pump the blood up to the heart, whilst a series of one-way valves stop it from flowing backwards. If these valves become damaged, due to an injury, deep vein thrombosis (DVT), or pregnancy, the blood will flow back down the leg and cause increased pressure on the veins. After a time, the veins will become stretched and fluid will leak out causing swelling of the legs, thickening and damage to the skin.



Arterial ulcers – About 10% of people have this type. The arteries supply blood to the legs and feet. If the arteries become narrowed (*atherosclerosis*), due to smoking, high blood pressure, diabetes, rheumatoid arthritis, heart disease etc., the leg circulation will be reduced, the leg will be starved of oxygen and nutrients and the skin will begin to break down.

Diabetic ulcers – 5% of diabetics will suffer with ulcers, usually on the foot. Diabetes increases the likelihood of atherosclerosis. It also affects the nerves, causing a lack of sensation in the feet (*sensory neuropathy*) which makes ulcers more likely to appear. Diabetic ulcers can occur due to smoking, poor dietary control, incorrect medication, poor foot care or badly fitting shoes.

Rheumatoid ulcers- some patients have normal veins or arteries but develop ulcers because of conditions Rheumatoid Arthritis this is an inflammatory disease or Lupus this is a disease of the blood.

### 3. What are the symptoms?

**Venous ulcers** – The appearance of a venous leg ulcer is fairly typical. It is often located just above the ankle, on the inside of the leg. The leg is swollen and the ulcer may leak fluid. The ulcer may be tender to touch and the skin may feel dry and itchy (*varicose eczema*) with mottled brown or black staining. Some venous ulcers are painful, particularly if they become infected.

**Arterial ulcers** – These tend to occur on the foot and lower part of the leg. The feet and legs often feel cold and may have a whitish or bluish, shiny appearance. Arterial leg ulcers are often painful, particularly at night in bed. The pain is often relieved when the legs are lowered.

### 4. How are leg ulcers diagnosed?

Your nurse / doctor will examine you and arrange to do some tests to assess the circulation in your lower limb to help to identify the cause of the ulcer. This should include a thorough examination, an assessment of the condition of your overall health, and a look at the appearance and site of the ulcer. These checks are important because the treatment for venous and arterial ulcers is different and they must be sure what type of ulcer you have. Routine blood and urine tests may also be done to check for other causes such as anaemia and diabetes.

This usually involves a Doppler assessment, which compares the blood pressure in your ankle with the blood pressure in your arms, to give a ratio known as the Ankle Brachial Pressure Index, or ABPI. This is measured using a hand held ultrasound machine called a Doppler. The results can identify if you have poor circulation in your legs.

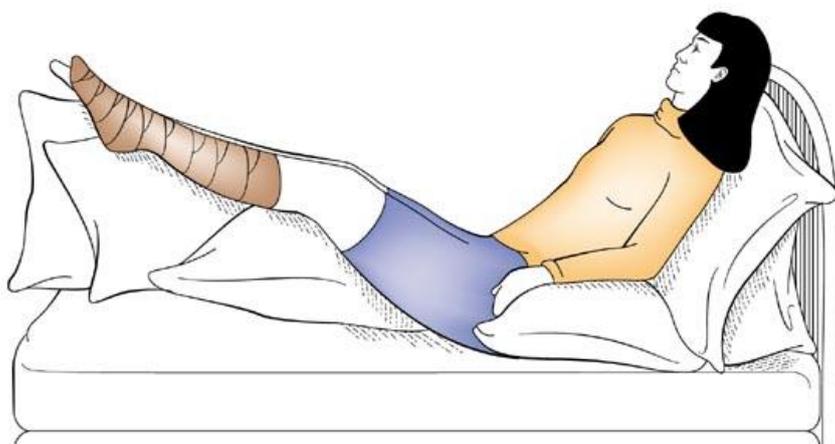


However, you may need a more in depth vascular assessment and your GP may refer you to see a vascular surgeon. You will usually be sent an appointment to be seen in our Vascular Assessment Unit, where your ulcer will be further investigated by means of an ultrasound, or Duplex, scan. This scan will help us to find out which type of ulcer it is e.g. venous or arterial.

## 5. How will I be treated?

**Treatment of a venous leg ulcer** is aimed firstly at controlling the high pressure in the leg veins and secondly at the ulcer itself. The mainstays of treatment are compression bandaging or stockings and elevation of the limb:

- **Elevation of the limb.** Put your legs up whenever you can and as high as you are able. The higher the leg, the lower the pressure in the leg veins. When elevating the foot **above the heart** the pressure in the foot will drop to a normal level. It helps to lift the lower end of your bed (6 inches or so), so that when in bed your feet are a little higher than your head.



- **Compression bandaging or stockings.** In order to keep the pressure in the leg veins at the ankle low when you are standing up, you will be treated with a compression bandaging system or compression stockings or socks. Several layers of bandages may be required to get the necessary pressure to control the veins. This may feel uncomfortable at first but if you experience severe pain, it's important to remove the bandages and contact the Nurse for a review.

When the ulcer has 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 have difficulty putting on your stockings then you can obtain a special stocking applicator ask the nurse for details.

- **Surgery.** If your ulcer is due to varicose veins then these may be treated, by surgery or by injection of foam, usually once the ulcer has healed. A skin graft, or a procedure to correct the underlying problem with the veins, may be necessary. A small tissue sample (biopsy) may occasionally be taken if the ulcer does not respond to treatment.
- **Good Skin care.** Moisturising the skin around the ulcer is important to maintain skin integrity and prevent dry cracked skin from forming, using an emollient to add to bath water or as a soap substitute adjacent to a moisturising agent which

can be used to cream your leg. You need to apply the moisturiser in a gentle downward motion in the direction of the hairs, to avoid blockage of the hair follicles.

If you wish to bath or shower whilst your bandages are in situ, please ask the nurse to prescribe a bandage protector (Limbo or Seal Tight).

Your Doctor may prescribe Steroid creams to treat eczema but these should be sparingly applied and as instructed. These range in potency from strong (Dermovate), moderate (Elocon) to mild (Betnovate RD). Creams are used for wet eczema and ointments for dry eczema. Your Doctor may refer you to a Dermatologist for a review if symptoms persist. It is important to ensure that your leg or the area of eczema is moisturized prior to applying the Steroid ointment/cream. This will allow the Steroid to be absorbed. Steroids creams/ointments should be gradually discontinued and not stopped abruptly to avoid the eczema recurring.

- **Antibiotics** are occasionally required to treat ulcers that show clinical signs of infection and where a swab test has indicated the use of anti-biotics, particularly if there is evidence of infection in the surrounding tissues and skin (cellulitis) or lymphatic channels (lymphangitis), resulting in increased pain and a flu like illness. However, unless you are unwell with a fever, antibiotics are not needed, as they can encourage resistant bugs. The infection may be treated by anti-bacterial dressings.
- **Dressings.** The nurse may prescribe specific dressings under the bandages, to ease your symptoms. The ulcer will be regularly reviewed by the nurse and dressings will be prescribed according to the phases of healing. Remember the bandages will treat the cause of the ulcer.
- **Arterial ulcers** may benefit from surgery – a bypass operation or balloon angioplasty (stretching an artery with a balloon), a procedure that relieves narrowing and obstruction of the arteries.

## 6. How long will it take the ulcer to heal?

It has usually 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. Although most venous ulcers will heal within in 12 to 16 weeks, a small proportion will take considerably longer. This may be due to other underlying health conditions and repeated infections. Even in these resistant cases, treatment is usually successful.

Mixed arterial and venous ulcers are more difficult to treat and in the more severe cases it may not be possible to achieve healing. You may require further investigations to identify the most appropriate treatment.

## 7. Is there any risk of losing my leg?

**Venous ulcers** - It is *very rare indeed* for venous ulceration of the leg to lead to the need for amputation of the leg and even the larger ulcers can usually be treated successfully.

**Arterial ulcers/Ulcers associated with Diabetes Mellitus** - Occasionally it is not possible to perform a bypass operation or an angioplasty and if you have a very large painful ulcer on your leg it may be better for you to consider an amputation. Your doctor will discuss this with you in detail. He or she will be aware that this is a very difficult decision for you and will not proceed with an amputation unless you are happy that this is the appropriate option for you.

## **8. How can I help myself?**

- Stop smoking. This is one of the major risk factors for vascular (circulatory) disease. It is difficult to give up but help is available. Speak to your doctor or further help is available locally from the

**Livewell Stop Smoking Service Tel: 01752 314040**  
**[www.smokingadvice.com](http://www.smokingadvice.com)**

- Take regular exercise. Using your foot and leg muscles encourages the circulation. By flexing and rotating your ankles and flexing your toes will significantly improve your circulation. Avoid standing or sitting in one position for a long time.
- Eat a healthy well balanced diet and include protein, oily fish, fresh fruit and vegetables. Lose weight if you are overweight. Your Nurse / Doctor can give advice and refer you to a dietician if appropriate.
- If you are advised to put your legs up, ideally rest with your ankles above waist height. Don't cross your legs when sitting or allow the edge of the chair to press into the back of your legs.
- Wear support stockings if these have been advised. If you have a problem with your dressings or bandages, or if your stockings become loose, tell your nurse straight away.
- Avoid tight clothing on your legs and wear comfortable, well-fitting shoes & socks. See a podiatrist (chiroprapist) regularly (at least every 3 months) and take care when cutting toe nails.
- Take care not to bang your feet or legs on sharp corners or objects. If you injure your feet or toes, keep the wound clean and seek advice from your Nurse regarding dressings.
- Protect your skin and legs. Keep your feet and legs warm but avoid extremes of temperature, e.g. hot baths, sunburn, sitting too close to the fire.
- Use mild soap, or soap substitute, to keep your skin clean and keep it supple with a bland moisturiser. Your doctor or nurse can advise you about products to use.
- Inspect your feet and legs regularly. Look for sores or changes in colour – use a mirror to help. Do not delay in seeking help if you think you are developing an ulcer. Please contact your GP if it has been some time since you have had contact with your nurse. He/She will direct you to the appropriate clinician and service.

## **9. How can I stop the ulcer coming back?**

Ulcers do have a tendency to recur, especially in elderly people or people who have advanced venous disease where intervention is not appropriate. Although the skin is intact the underlying problem with the veins remains and you must take precautions to

prevent the ulcer recurring. If you have been advised to wear support stockings, you will need to wear these indefinitely. These should be replaced according to the manufacturer's instructions to maintain adequate compression and should be re measured and checked. Your nurse will advise you specific to your requirements. If your ulcer reoccurs, you must inform the nurse immediately.

<b>Vascular Surgical Unit</b>  <b>Surgical Directorate</b>  <b>Derriford Hospital</b>  <b>Plymouth</b>  <b>PL6 8DH</b>	Lead Clinician	01752 431822
	Consultant Vascular Surgeon	01752 431805
	Consultant Vascular Surgeon	01752 431822
	Consultant Vascular and transplant Surgeon	01752 431805
	Vascular Scientists	01752 439228
	Vascular Nurse Specialist	01752 439245
<b>Livewell Southwest</b>	District Nurse team	
	G.P	
	Tissue Viability Specialist Nurse	01752 434757

## **APPENDIX C**

COM151 Leg Ulcer Assessment Chart

[COM151 Leg Ulcer Assessment Chart](#)

COM152 Doppler Assessment

[COM152 Leg Ulcer Doppler Assessment Chart](#)

## **APPENDIX D**

### **Directions for the use of the Vascular Pathway Flow Chart**

The Vascular Pathway requires the user to have performed both a clinical and Doppler Assessment to determine the presentation, symptoms and the blood supply of the affected limb/limbs. ABPI Measurements and referral criteria need to be considered to facilitate a correct referral. If ABPI cannot be undertaken then the reasons should be documented on the referral.

The flow chart is an aide memoir for Clinicians on the appropriate intervention and referral criteria required for patients with lower limb ulceration. It aims to reduce inappropriate referrals to the wrong specialities, streamline patient care and ensure safe and effective leg ulcer management.

Lower Limb ulceration is defined as a wound that is below the knee and above the malleolus (ankle) that has been present for 4 weeks or more.

Foot ulceration is a wound that is below the malleolus. It's important to consider the clinical presentation and patient history to establish whether there is Ischemic disease or Neuropathy and whether they have a familial history or a diagnosis of Diabetes.

### **Arterial Ulcers**

The Vascular Consultants recommend that a referral is required for all patients with leg ulceration whose ABPI 0.65 mmHg and below.

### **Signs & Symptoms of Arterial ulcers include:**

- Resting pain to the toes/foot.
- Discolouration of the toes or extremities (dependent rubor).
- Increased pain not relieved on elevation.
- Loss of sensation.
- Atrophic shiny skin.
- Increased depth of ulceration.

### **Diabetic foot ulcers**

All patients with Diabetes (Type I & II) with an ulcer on or below the malleolus should be referred to the diabetic foot clinic at Plymouth Hospitals NHS Trust, for a more in-depth assessment.

## **Mixed Venous / Arterial Ulcers**

Patients with mixed Venous / Arterial ulcers with ABPI of 0.65 - 0.8, should be routinely referred for a vascular assessment. Reduced compression may be commenced if clinically indicated and decisions documented. Close monitoring and observation is essential and compression must be discontinued if not tolerated.

## **Uncomplicated Venous leg Ulcers**

These are often the end stage result of a chronic disease process, namely chronic venous insufficiency. Compression should be commenced in Patients with ABPI of 0.8 and above. NICE recommends that patients with active venous ulcers that have not healed within two weeks should now be referred to see a vascular specialist for consider treatment of the underlying venous disease to help prevent recurrence (NICE CQ 168 2013). A routine vascular referral should be made, as the Patient may benefit from surgical intervention, such as Foam Sclerotherapy.

## **Healed leg ulcers**

The referral of healed ulcers is for those patients with signs of venous disease who may benefit from an endovenous intervention such as Ultrasound guided foam Sclerotherapy; to treat underlying venous disease and prevent ulcer recurrence. NICE recommends that patients with active venous ulcers that have not healed within two weeks should now be referred to see a vascular specialist for consider treatment of the underlying venous disease to help prevent recurrence (NICE CQ 168 2013).

## **Calcified arteries**

Patients with an ABPI of  $> 1.3$  do not routinely need a vascular assessment in the absence of arterial symptoms and/ or ulceration or tissue loss. It is the local consensus that the patient's arteries are already calcified and that compression CANNOT do any untoward damage, as the vessels will not be squeezed. Compression may be commenced if clinically indicated and no signs of arterial disease are present, but the Patient should be observed and closely monitored for further ischemic changes, when a referral for vascular assessment should be made.

Any concerns or queries can be directed via your Tissue Viability Service by telephoning:-

(01752) 434757 Livewell Southwest  
(01752) 763053 Plymouth Hospital Trust or  
(01752) 439245 Vascular Specialist Nurse Plymouth Hospital Trust

# Joint LIVEWELL SOUTHWEST & PHNT Leg Ulceration: Vascular Treatment Pathway Pathway

**PRESENTATION:** Patient presents with a Leg Ulcer, a wound below the knee that has been present for 4 weeks or more.

## ASSESSMENT:

Undertake full clinical history and holistic patient assessment.

Perform a Doppler Assessment to gain an ABPI (Ankle Brachial Pressure Index)

Where Doppler Ultrasound cannot be heard refer to Tissue Viability Service Toe Pressure Measurement

Once Diagnosis confirmed, commence Treatment and consider Specialist Referral (See Referral Pathway overleaf). Refer to Joint Formulary for Dressing

Reference; EWMA Position Document 2003  
Understanding compression therapy pp 12

## DIAGNOSIS:

Arterial Ulcer  
ABPI of  $< 0.65$

Mixed Venous/Arterial Ulcer/  
Diabetic Leg Ulcer  
(ON OR ABOVE MALLEOLUS)  
ABPI OF 0.65 TO 0.8

Diabetic Foot Ulcer  
(Below the Malleolus)

Uncomplicated Venous Ulcer  
ABPI of  $>0.8 - 1.3$

Healed Venous Leg Ulceration  
ABPI of  $>0.8$

## TREATMENT:

Nil Compression.

Simple dressings as per Plymouth Area Joint Formulary recommendations.

Reduced compression bandages at 15-25 mmhgs should only be applied under the instructions of the vascular surgeon, vascular nurse or tissue viability nurse and must be closely monitored. If pain is present or evidence of compression damage DO NOT apply Compression.

Dressings as per Plymouth Area Joint Formulary Recommendations

Compression Therapy: To aim for 40 mm Hgs with Elastic (4 layer) or Inelastic bandaging (Short Stretch) or Hosiery Kits.

Prevention of recurrence: - Long Term compression hosiery, Skin Care & Education.

# Joint LIVEWELL SOUTHWEST & PHNT Leg Ulceration: Vascular Referral Pathway

**Assessment:** Patient presents with lower limb ulceration. Undertake full clinical history and holistic patient assessment including Ankle Brachial Pressure Index (ABPI).

## DIAGNOSIS:

### Arterial Ulcer

ABPI of  $< 0.65$

### Mixed Venous/ Arterial Ulcer/ Diabetic leg ulcer (ON OR ABOVE MALLEOLUS)

ABPI of 0.65 to 0.8

### Diabetic Foot Ulcer

(BELOW THE MALLEOLUS)

### Uncomplicated Venous Ulcer

ABPI of  $>0.8$

### Healed Venous Leg Ulceration

ABPI of  $>0.8$

## REFERRAL:

**URGENT** fast track referral to a Vascular Consultant via DRSS (0845 155 8283)

**Routine** Vascular Consultant referral via DRSS

All patients with diabetic foot ulcers are to be referred to the Joint Diabetes Foot Clinic in PHT  
[www.plymouthdiabetes.org.uk](http://www.plymouthdiabetes.org.uk)

Routine Referral to Vascular Specialist Venous Leg Ulcer Clinic if not healed within two weeks via DRSS

Routine Vascular Specialist referral via DRSS

## OUTCOME:

Priority outpatient appointment to investigate, diagnose and to treat underlying condition

Outpatient appointment to investigate, diagnose and treat underlying condition

Effective management of diabetic foot ulcers within a specialist multi- disciplinary outpatients setting

Duplex assessment of underlying venous insufficiency and assessment of suitability for compression therapy and possible treatment of venous disease