Lower Extremity Venous Disease (LEVD)
Lower Extremity Venous Disease (LEVD) Wounds

Etiology

Lower extremity venous leg ulcers are caused by chronic venous hypertension. Failure of valves in the veins or faulty calf muscle pump action in the legs results in inadequate fluid return from the legs. Fluid extravasations, tissue ischemia and, eventually, ulceration is the common course of the condition.
LEVD Ulcer Clinical Presentation

- **Location**
  - Malleolus
  - Medial aspect of leg superior to medial malleolus

- **Appearance:**
  - Wound depth – usually shallow, superficial crater
  - Wound edges – irregular
  - Wound bed – ruddy red, may have yellow adherent or loose slough
  - Amount of exudate – moderate to high
LEVD Ulcer Clinical Presentation

- Pain – variable; dull aching, heaviness, or cramping
- Edema – generalized, often worsens during the day
- Skin Conditions
  - Periwound margin: macerated, crusty
  - Dermatitis – inflammatory process due to extravasation of proteolytic enzymes and metabolic waste into tissues
  - Scaling
  - Hemosiderin staining
  - Fibrotic tissue
  - Atrophe blanche, white, fragile tissue with tiny, tortuous blood vessels
  - Ankle flare
  - Scarring from previous ulcers
LEVD Ulcer Treatment Recommendations

- Review Health History
  - Risk factors

- Assess Wound History
  - Description of wound
  - Onset
  - Duration
  - Causative factors
  - Response to previous treatment modalities
  - Compression
  - Recurrences
LEVD Ulcer Treatment Recommendations

Assessment of ulcer

- Location
- Size
- Appearance
  - Wound bed tissue and depth
  - Color
  - Amount of drainage
  - Periwound skin appearance
- Pain
LEVD Ulcer Treatment Recommendations

- Determine perfusion status of affected leg
  - Skin temperature, color, absence or presence of pedal pulses, venous filling time
  - Complete ankle-brachial pressure index (ABPI)

- Observe for presence of edema

- Presence of infection or other factors that may impede healing

- Nutritional status
LEVD Ulcer Treatment Recommendations

- Provide topical therapy based upon assessment
  - Cleanse wound with each dressing change per facility protocol
  - Provide debridement of nonviable tissue as needed
  - Select a topical dressing to fill depth, manage exudate, and promote moist wound healing
  - Consult physician or wound care specialist to evaluate wounds that show signs of infection or fail to progress
  - Consider use of topical antimicrobial dressing if high bioburden suspected
  - Protect wound margins from maceration using an alcohol-free skin barrier or white petroleum ointment
  - If periwound skin is fragile or weeping, avoid the use of adhesive dressings or tape
LEVD Ulcer Treatment Recommendations

- Control edema using sustained compression therapy
  - Consult physician or wound care specialist when considering compression therapy
  - Select compression based on careful assessment
  - Compression therapy is not indicated for use on patients with an ABPI <0.5
  - Individuals in which mixed arterial/venous disease is suspected or the patient’s ABPI is >0.5 to <0.8 may benefit when using reduced compression bandaging
LEVD Ulcer Treatment Recommendations

- Patient Education
  - Prevention is critical to manage reoccurrence
  - Reoccurrence rates 26% to 69% following ulcer healing*

- Principles of Venous Leg Ulcer Prevention
  - Wear bandages or stockings
  - Elevate legs for 15+ minutes several times a day
  - Exercise – walk, cycle
  - Avoid standing in one position
  - Don’t wear constricting clothing
  - Protect legs from trauma
  - Pay attention to legs

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## 3M Wound Product Guide for Lower Extremity Wounds

### Lower Extremity Venous Ulcer

Lower extremity venous leg ulcers are caused by chronic venous hypertension. Failure of valves in the veins or faulty calf muscle pump action in the legs results in inadequate fluid return from the legs. Fluid extravasation, tissue ischemia and, ultimately, ulceration is the common course of this condition.

**CLEAN:** 3M™ Wound Cleanser  
**PROTECT:** Cavilon No Sting Barrier Film  
**FILL:** 3M™ Tegaderm™ Non-Adherent Contact Layer (fragile/painful wound bed)  
3M™ Tegaderm™ Alginate Dressing  
**COVER:** Tegaderm™ Foam Dressing (nonadhesive)  
**COMPRESS**  
3M™ Coban™ 2 Layer Compression System (ABP ≥ 0.8)  
3M™ Coban™ 2 Layer Lite Compression System (ABP ≥ 0.5)

### Lower Extremity Arterial Ulcer

Lower extremity arterial ulcers are caused by lower extremity vascular arterial disease.

**CLEAN:** 3M™ Wound Cleanser  
**PROTECT:** Cavilon No Sting Barrier Film  
**FILL:** Non-Draining to Minimal Drainage  
Tegaderm™ Contact Layer (fragile/painful wound bed)  
Tegaderm™ Hydrogel Wound Filler  
Moderate to Heavy Drainage  
Tegaderm™ AlGINate Dressing  
**COVER:** Non-Draining to Minimal Drainage  
Tegaderm™ Plus Dressing  
Medipore™ Plus Dressing  
Moderate to Heavy Drainage  
Tegaderm™ High Performance Foam Adhesive Dressing  
Tegaderm™ Foam Dressing (nonadhesive)

### Neuropathic Ulcer / Diabetic Ulcers

Neuropathic ulcers result from neurologic and musculoskeletal changes leading to a lack of protective sensation and altered weight-bearing. Tissue damage most often results from trauma and/or repetitive pressure. Inadequate arterial perfusion may also be a factor.

**CLEAN:** 3M™ Wound Cleanser  
**PROTECT:** Cavilon No Sting Barrier Film  
**FILL:** Non-Draining to Minimal Drainage  
Tegaderm™ Contact Layer (fragile/painful wound bed)  
Tegaderm™ Hydrogel Wound Filler  
Moderate to Heavy Drainage  
Tegaderm™ AlGINate Dressing  
**COVER:** Non-Draining to Minimal Drainage  
Tegaderm™ Plus Dressing  
Medipore™ Plus Dressing  
Moderate to Heavy Drainage  
Tegaderm™ High Performance Foam Adhesive Dressing  
Tegaderm™ Foam Dressing (nonadhesive)
3M Resources

- For further information on 3M Advance Wound Care products and solutions contact:
  - Your 3M Skin Health Representative
  - 3M Health Care Customer Help Line
    - 1-800-228-3957
  - 3M Website
    - [www.3M.com/skinhealth](http://www.3M.com/skinhealth)
LEVD Reference List

- AAWC Guideline [www.aawcone.org](http://www.aawcone.org)
- WOCN Clinical Fact Sheets
- WOCN Clinical Practice Guidelines: