

3M Skin & Wound Care

# Lower Extremity Arterial Disease (LEAD)



Innovative Solutions  
Improving Patients' Lives



# Lower Extremity Arterial Disease (LEAD)

- Lower extremity arterial disease
  - *May also be referred to as:*
    - *Peripheral vascular disease (PVD)*
    - *Peripheral arterial obstructive disease (PAOD)*
    - *Peripheral arterial disease (PAD)*
  - *Insufficient perfusion to the lower extremities*
  - *Higher risk for the development of non-healing wounds, infection and limb loss*

# LEAD Clinical Presentation

- Perfusion changes
  - *Pallor on elevation*
  - *Dependent rubor*
  - *Skin temperature of lower extremity decreased or cold*
  
- Ischemic skin changes
  - *Shiny, taut, thin, dry skin*
  - *Absences of hair on lower extremity*
  - *Atrophy of subcutaneous tissue*
  - *Toenails may be thick and coarse in appearance (dystrophic)*

# LEAD Ulcer Clinical Presentation

- Location:
  - *Lateral malleolus*
  - *Mid tibia (shin)*
  - *Phalangeal heads*
  - *Toe tips or web spaces*
  - *Areas exposed to pressure or repeated trauma*



# LEAD Ulcer Clinical Presentation

- Wound appearance:
  - *Painful*
  - *Punched out appearance*
  - *Dry, pale or necrotic wound base*
  - *Minimal or absent granulation tissue*
  - *Wound size may be small and may be deep*
  - *Minimal exudate*
  - *Gangrene (wet or dry), necrosis common*
  - *Clinical signs of infection*



# LEAD Ulcer Treatment Recommendations

- Assessment

- *Perfusion*

- *Color*
    - *Temperature*
    - *Pulses*
    - *Delayed capillary refill*
    - *Ankle-brachial pressure index (ABPI)*

If ABPI <0.9 seek medical referral for additional vascular evaluations. Revascularization may be necessary to restore circulation

# LEAD Ulcer Treatment Recommendations

## ■ Assessment

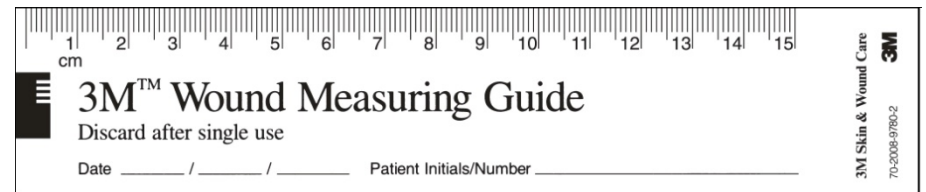
- *Ischemic skin changes*
- *Symptoms of infection/cellulitis*
- *Sensation, pain with activity, at rest, with elevation or nocturnal pain*
- *Underlying medical complications*
- *Nutritional status*
- *Pain management*



# LEAD Ulcer Treatment Recommendations

## ■ Wound Assessment

- *Location*
- *Size – length x width x depth*
- *Wound base – tissue type*
- *Wound edges*
- *Exudate level and color*
- *Presence of odor*
- *Pain*
- *Periwound skin*
- *Presence of infection/cellulitis*





# LEAD Ulcer Treatment Recommendations

- Wound Management
  - *Cleanse wound per facility protocol*
  - *Avoid debridement until perfusion is determined; consult physician or wound care specialist*
  - *Select a topical dressing to fill depth, manage exudate, and promote moist wound healing*
  - *Maintain stable, dry eschar*
    - *Determine proper use of antiseptics to assist with maintenance of stable eschar*
  - *Identify and treat infection*
- Promote lower extremity skin integrity and protect fragile/at risk skin

# LEAD Ulcer Treatment Recommendations

- If edema is present consult physician for management
  - *May be present due to coexisting conditions such as venous insufficiency or congestive heart failure*
  - *Compression should only be used to manage edema under the direction of a physician or wound care specialist*
- Pain Management
- Nutritional Management



# LEAD Ulcer Treatment Recommendations

## ■ Patient education

- *Lifestyle modifications that aid perfusion*
  - *Smoking cessation*
  - *Ambulation to tolerance*
  - *Avoid crossing legs*
  - *Avoid trauma and pressure injury to legs and feet*
  - *Avoid tight footwear, stockings, and clothing*
  - *Continue with medications to control hypertension, diabetes, and other underlying medical complications*
- *Report signs and symptoms of infection or wound deterioration to physician or wound care specialist*



# 3M Wound Product Guide for Lower Extremity Wounds

Lower Extremity Venous Ulcer	Lower Extremity Arterial Ulcer	Neuropathic Ulcer/ Diabetic Ulcers
<p>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, eventually, ulceration is the common course of this condition.</p>	<p>Lower extremity arterial ulcers are caused by lower extremity vascular arterial disease.</p>	<p>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.</p>
		
<p><b>CLEAN:</b> 3M™ Wound Cleanser</p> <p><b>PROTECT:</b> Cavilon No Sting Barrier Film</p> <p><b>FILL:</b> 3M™ Tegaderm™ Non-Adherent Contact Layer (fragile/painful wound bed) Tegaderm™ Alginate Dressing</p> <p><b>COVER:</b> Tegaderm™ Foam Dressing (nonadhesive)</p> <p><b>COMPRESS:</b> 3M™ Colban™ 2 Layer Compression System (ABPI ≥ 0.8) 3M™ Colban™ 2 Layer Lite Compression System (ABPI ≥ 0.5)</p>	<p><b>CLEAN:</b> 3M™ Wound Cleanser</p> <p><b>PROTECT:</b> Cavilon No Sting Barrier Film</p> <p><b>FILL:</b> <u>Non-Draining to Minimal Drainage</u> Tegaderm™ Contact Layer (fragile/painful wound bed) Tegaderm™ Hydrogel Wound Filler</p> <p><u>Moderate to Heavy Drainage</u> Tegaderm™ Alginate Dressing</p> <p><b>COVER:</b> <u>Non-Draining to Minimal Drainage</u> Tegaderm™ +Pad Dressing Medipore™ +Pad Dressing</p> <p><u>Moderate to Heavy Drainage</u> Tegaderm™ High Performance Foam Adhesive Dressing Tegaderm™ Foam Dressing (nonadhesive)</p>	<p><b>CLEAN:</b> 3M™ Wound Cleanser</p> <p><b>PROTECT:</b> Cavilon No Sting Barrier Film</p> <p><b>FILL:</b> <u>Non-Draining to Minimal Drainage</u> Tegaderm™ Contact Layer (fragile/painful wound bed) Tegaderm™ Hydrogel Wound Filler</p> <p><u>Moderate to Heavy Drainage</u> Tegaderm™ Alginate Dressing</p> <p><b>COVER:</b> <u>Non-Draining to Minimal Drainage</u> Tegaderm™ +Pad Dressing Medipore™ +Pad Dressing</p> <p><u>Moderate to Heavy Drainage</u> Tegaderm™ High Performance Foam Adhesive Dressing Tegaderm™ Foam Dressing (nonadhesive)</p>



## 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)*

## LEAD Reference List

- WOCN Clinical Practice Guideline: Guideline for Management of Wounds in Patients with Lower-Extremity Arterial Disease 2008
- AHRQ; National Guideline Clearing House: [www.guidelines.gov](http://www.guidelines.gov)
- AAWC Guideline [www.aawcone.org](http://www.aawcone.org)
- Wound Care Guidelines of the Wound Healing Society, Wound Rep Reg (2006) 14 645-674
- WOCN Clinical Fact Sheets