



**Full-Thickness Venous Leg Ulcer**

A full-thickness wound extends into deeper tissues which may involve subcutaneous tissue, muscle, bone or other supporting structures.

**Goals of Care:** restore skin integrity and avoid infection.

**Wound and Skin Care Objectives:** protect intact periwound skin, cleanse wound, manage wound exudate, debride wound, hydrate wound, manage wound odor, and fill in dead space.

**NOTE:** Appropriate wound and skin care is performed in combination with compression therapy.

# V E N O U S U L C E R S



## Healed Venous Leg Ulcer or Skin at Risk

A healed wound is epithelialized with adequate strength to maintain closure. At risk skin is tissue exposed to potential injury or tissue that is in a weakened condition (e.g. dry, thin).

**Goals of Care:** maintain intact skin and improve tissue tolerance.

**Wound and Skin Care Objectives:** protect and moisturize intact skin.

**NOTE: Appropriate skin care is performed in combination with compression therapy.**



## Partial-Thickness Venous Leg Ulcer

A partial-thickness wound involves the epidermis, dermis or both. It is a superficial wound and may present as an abrasion, blister, or shallow crater.

**Goals of Care:** restore skin integrity and avoid infection.

**Wound and Skin Care Objectives:** protect intact periwound skin, cleanse wound, manage wound exudate, debride wound, hydrate wound and manage wound odor.

**NOTE: Appropriate wound and skin care is performed in combination with compression therapy.**

## BACKGROUND INFORMATION:

Venous ulcers are the most common ulcer of the lower leg occurring in ambulatory patients. The underlying etiology involves vein damage or an incompetent calf muscle pump action which leads to venous hypertension. As a result, blood pools in the lower extremities causing edema and leakage of fibrinogen and other blood products into the tissues. Trauma to the area or increased pressure within the tissues results in ulceration.

Venous **leg ulcers** typically share the following characteristics:

- located above the medial malleolus and below the knee ("gaitor" region)
- beefy, red wound base
- wound edges intact without undermining
- large with irregular shaped borders
- superficial crater
- moderate to heavy serous exudate

The ulcer is staged as partial-or full-thickness. Partial-thickness ulcers involve the epidermis and dermis, whereas full-thickness ulcers extend into deeper tissue which may involve subcutaneous tissue, muscle, bone or other supporting structures.

The **periwound and lower leg skin** may have evidence of the following changes:

- hyperpigmentation (brown/black discoloration)
- dryness
- erythema
- weeping dermatitis
- thickening of the skin (lipodermatosclerosis)
- scaling
- edema (non-pitting)
- minimal pain unless infected or desiccated

The algorithm on the reverse side provides a general path of decision-making for assessment, management and treatment of venous leg ulcers. Below is detailed information which is designed to *assist* health care providers. This tool should be used along with the consultative services of a wound care specialist such as an ET nurse, physical therapist, clinical nurse specialist with expertise in wound management or a physician when indicated.

## NURSING ASSESSMENTS:

The following provides a guideline for clinical assessment. Assessments must be done at regular intervals and are used to drive treatment decisions.

- **Assessment of risk or contributing factors:** history of deep vein thrombosis; previous leg ulceration; obesity; pregnancy; leg trauma; smoking; CHF; vascular procedures or surgeries; reduced mobility; family history; advanced age.
- **General assessments:** differentiation between venous, arterial and diabetic etiology is essential and will guide interventions. Patients with combined ulcer etiology require complete evaluation by a multidisciplinary team.
- **Assessment of leg** may reveal edema; varicosities; healed ulcer sites; an inverted "bowling pin" shape to the leg. A palpable peripheral pulse is generally present but may be difficult to assess due to edema. The ankle-brachial index is usually >0.8 and pain is mild to moderate and improved by elevation. Frequently hypersensitive to topical agents; skin temperature normal.
- **Assessment of nutrition, previous ulcer care (if applicable), level of understanding, compliance in care, and learning style.**
- **Assessment of wound:** infection; edema; exudate; odor; size (length, width and depth); necrotic tissue; granulation; epithelialization; and periwound skin condition.

## GENERAL NURSING INTERVENTIONS:

- **Optimize venous return:** elevate legs above the level of the heart; compression therapy (stockings, bandages, pumps); exercise (walking); weight management (sensible eating to avoid being overweight); smoking cessation.
- **Treat infection:** consult with physician to determine need for antibiotic therapy, debridement, cleansing and dressing approach.
- **Debride:** this is based upon condition of the wound and patient. Methods of debridement include autolytic, mechanical, sharp and enzymatic.
- **Perform daily skin inspection and care:** this may include cleansing, moisturizing and use of protective barriers.
- **Provide adequate nutritional intake.**
- **Manage pain.**
- **Provide education:** patient, family and caregiver.
- **Document** assessments and interventions.
- **Reassess** at regular intervals per agency protocol.

# H O L L I S T E R P R O D U C T S

for improved outcomes

## Healed Ulcer or Skin at Risk

Restore Clean `N Moist  
Hollister Skin Cleanser  
Restore Barrier Creme  
Hollister Skin Conditioning Creme  
Hollister Moisture Barrier Ointment  
Hollister Skin Gel  
Restore Extra Thin Hydrocolloid  
EpiFlex Heel and Elbow Protectors

## Partial-Thickness Ulcer

### SKIN CARE

Restore Clean `N Moist  
Hollister Skin Cleanser  
Restore Barrier Creme  
Hollister Skin Conditioning Creme  
Hollister Moisture Barrier Ointment  
Hollister Skin Gel  
EpiFlex Heel and Elbow Protectors

### WOUND CARE

Restore Wound Cleanser  
Restore Extra Thin Hydrocolloid  
Restore Cx Hydrocolloid  
Restore Plus Hydrocolloid  
Restore Hydrogel (gel, sponge, packing strip)  
Restore CalciCare Calcium Alginate  
Hollister Odor-Absorbent Dressing  
Hollister Deodorizer Germicide

## Full-Thickness Ulcer

### SKIN CARE

Restore Clean `N Moist  
Hollister Skin Cleanser  
Restore Barrier Creme  
Hollister Skin Conditioning Creme  
Hollister Moisture Barrier Ointment  
Hollister Skin Gel  
EpiFlex Heel and Elbow Protectors

### WOUND CARE

Restore Wound Cleanser  
Restore Plus Hydrocolloid  
Restore Hydrogel (gel, sponge, packing strip)  
Restore CalciCare Calcium Alginate  
Hollister Odor-Absorbent Dressing  
Hollister Deodorizer Germicide

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Photography courtesy of Ms. Rolstad

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