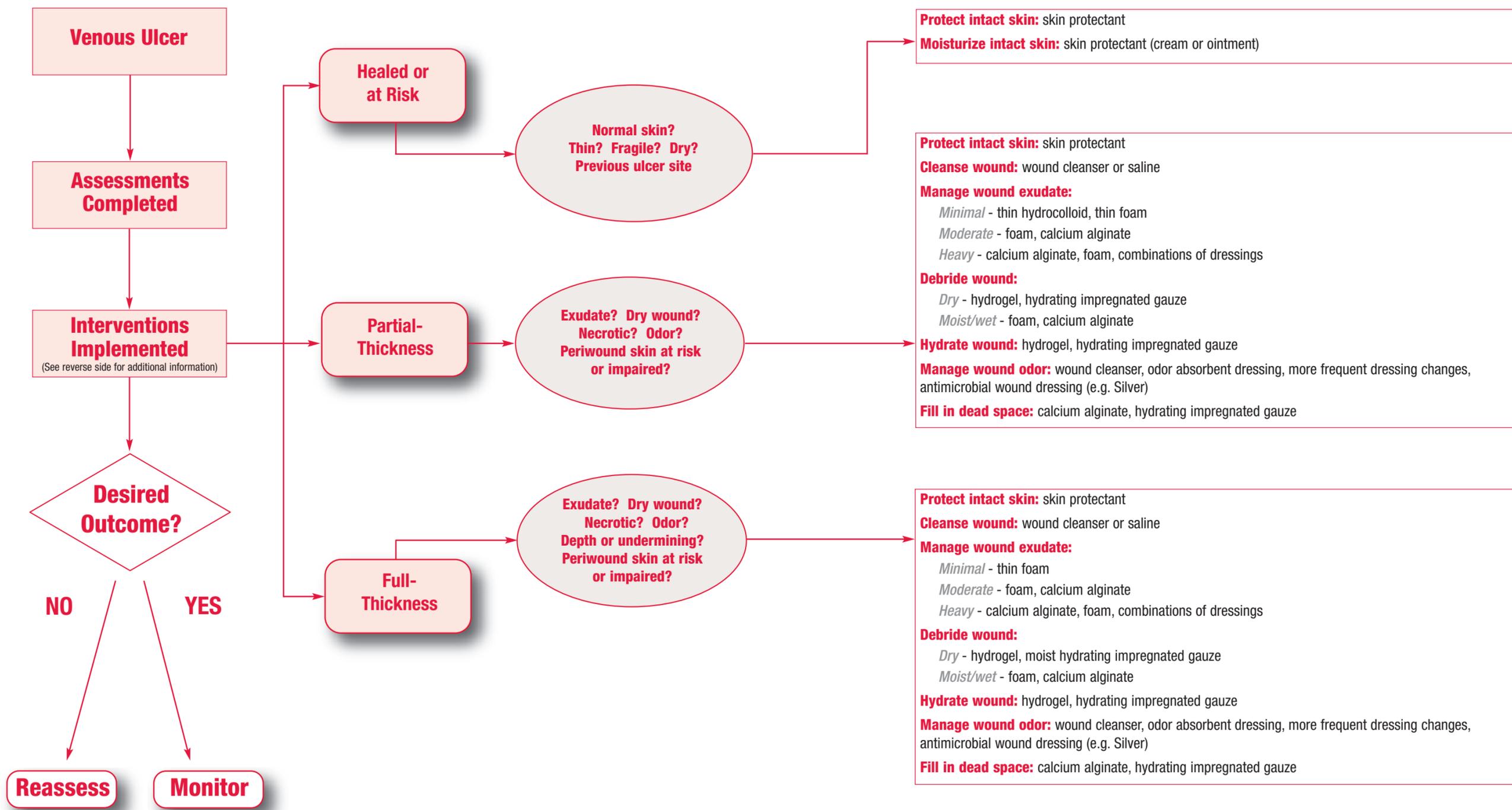


V E N O U S U L C E R S

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. Skin at risk 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.*



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, manage infection 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

BACKGROUND INFORMATION:

Venous ulcers account for approximately 90% of ulcers found in the lower limbs. 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
- Irregular shaped borders
- Shallow
- 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
- Varicose veins

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 a WOC/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 and prevent infection:** debridement, cleansing.
- **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 facility protocol.

HOLLISTER WOUND CARE PRODUCTS

for improved outcomes

Healed Ulcer or Skin at Risk

- Restore Cleanser & Moisturizer (cleanse & moisturize)
- Restore Skin Cleanser (cleanse)
- Restore DimethiCreme (protect & moisturize)
- Restore Skin Conditioning Creme (moisturize)
- Restore Moisture Barrier Ointment (protect & moisturize)

Partial-Thickness Ulcer

PERIWOUND SKIN CARE

- Restore Cleanser & Moisturizer
- Restore Skin Cleanser
- Restore DimethiCreme
- Restore Skin Conditioning Creme
- Restore Moisture Barrier Ointment

WOUND CARE

- Restore Wound Cleanser
- Restore Extra Thin Hydrocolloid (manage minimal exudate)
- Restore Hydrogel Dressing (gel, sponge, packing strip) (hydrate)
- Restore Calcium Alginate Dressing with/without Silver (manage exudate)
- Restore Contact Layer Dressing with/without Silver
- Restore Foam Dressing with/without Silver (manage exudate)
- Restore Odor-Absorbent Dressing (manage odor)

Full-Thickness Ulcer

PERIWOUND SKIN CARE

- Restore Cleanser & Moisturizer
- Restore Skin Cleanser
- Restore DimethiCreme
- Restore Skin Conditioning Creme
- Restore Moisture Barrier Ointment

WOUND CARE

- Restore Wound Cleanser
- Restore Hydrogel Dressing (gel, sponge, packing strip) (hydrate)
- Restore Calcium Alginate Dressing with/without Silver (manage exudate)
- Restore Contact Layer Dressing with/without Silver
- Restore Foam Dressing with/without Silver (manage exudate)
- Restore Odor-Absorbent Dressing (manage odor)

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REFERENCES

- Ennis WJ, Meneses P. Leg ulcers: a practical approach to the leg ulcer patient. *Ostomy/Wound Management* 41(7A) Suppl 52S-63S.
- Falanga V. Venous ulceration. In: Krasner D, Kane D. *Chronic Wound Care*, Second Edition. Wayne, PA: Health Management Publications, Inc., 1997, pp165-171.
- Hess Cathy Thomas. *Nurse's Clinical Guide to Wound Care*. Springhouse, PA: Springhouse Corporation, 1997.
- Krasner D, Kane D (eds). *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Second Edition. Wayne, Pennsylvania: Health Management Publications, Inc. 1997.
- Maklebust J. Using wound care products to promote a healing environment. *Critical Care Nursing Clinics of North America* 1996 8(2) 141-158.
- Morison M, Moffatt C: *A Colour Guide to the Assessment and Management of Leg Ulcers*, Second Edition, London: Mosby 1994.
- Rolstad BS. Wound dressings: Making the right match. *Nursing* 97 June 32h1-3.
- Wound, Ostomy and Continence Nurses Society. *Standards of Care, Patient with Dermal Wounds: Lower Extremity Ulcers*. Laguna Beach, CA 1993.
- Wound, Ostomy and Continence Nurses Society. *Clinical Fact Sheet: Venous Insufficiency (Stasis)*. Laguna Beach, CA 1996



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