



## Topical Treatment for Venous Leg Ulcers: Current Evidence Review Clinical Insights and Practical Recommendations

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## Disclosure

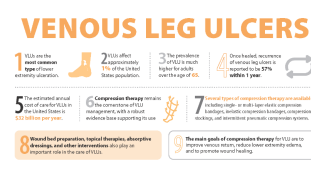
- No disclosures




### Clinical Relevance of Venous Leg Ulcers

- Venous leg ulcers (VLUs) are common chronic wounds with a high recurrence rate.
- Impact on quality of life: pain, limited mobility, social isolation.
- High costs for healthcare system; efficient management is essential.

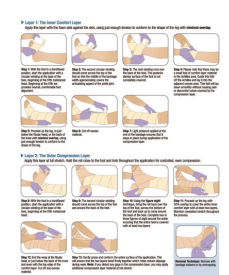
#### VENOUS LEG ULCERS






### Compression Therapy

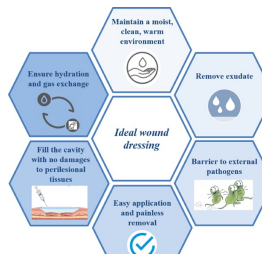
- Compression therapy is the primary and most effective treatment for VLUs.
- Dressings and topical agents support compression therapy.
- Select dressings: based on wound characteristics, patient comfort, and cost.






### Role of Moisture-Retaining Dressings

- Moisture promotes wound healing by supporting cell activity and preventing dehydration.
- Occlusive dressings retain moisture and warmth, aiding healing.
- Suitable for superficial wounds; avoid maceration in heavily exudative wounds.







### Cochrane Review of Specific Dressings

- Silver dressings: May increase healing probability; moderate evidence.
- Sucralfate: Potentially effective, but limited evidence.
- Collagenase: Effective for debridement in chronic ulcers; moderate evidence.
- Hydrocolloid and foam dressings: No clear superiority; choice depends on the patient.

Wound Type	Description	Characteristics	Relative evidence
Hydrocolloid (partial-thickness)	These dressings adhere to the wound bed and maintain a moist environment, allowing for autolytic debridement.	Adhesive, occlusive, moist.	Best evidence for partial-thickness wounds.
Hydrocolloid (full-thickness)	These dressings adhere to the wound bed and maintain a moist environment, allowing for autolytic debridement.	Adhesive, occlusive, moist.	Best evidence for full-thickness wounds.
Alginates	These dressings are made from natural seaweed and form a gel-like matrix when in contact with wound exudate.	Adhesive, occlusive, moist.	Best evidence for partial-thickness wounds.
Foams	These dressings are made of polyurethane or polyethylene foam and are highly absorbent.	Adhesive, occlusive, moist.	Best evidence for full-thickness wounds.
Hydrogels	These dressings are made of water-soluble polymers and are highly absorbent.	Adhesive, occlusive, moist.	Best evidence for partial-thickness wounds.
Collagenase	This is an enzyme that breaks down fibrin and other proteins in the wound bed, promoting debridement.	Non-adhesive, non-occlusive.	Best evidence for chronic ulcers.

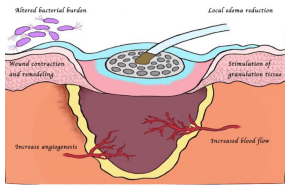
#### Dressings for Debridement





### Negative Pressure Wound Therapy (NPWT)

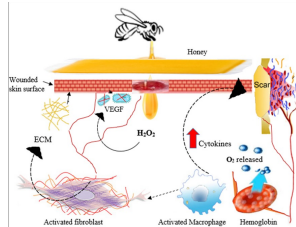
- Mechanism: Vacuum application removes excess exudate and promotes blood flow.
- Evidence: Several studies suggest NPWT can help with complex and chronic wounds.
- Often combined with other therapies for non-healing wounds.



*Quintillo M, Mason C, Chhabra S. Negative pressure wound therapy for partial thickness burns. Cochrane Database of Systematic Reviews. 2016; 2016(12):CD1022.*

### Honey Dressings

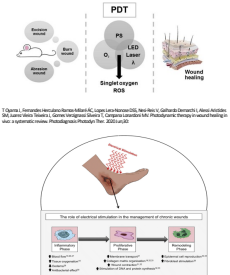
- Mechanism: Antimicrobial and anti-inflammatory properties, beneficial for wound healing.
- Evidence: Honey dressings, like Medihoney, may be effective, especially for infected and chronic wounds.
- Mixed evidence; effectiveness varies by wound type.



*Talibani, H. Honey in wound healing: An updated review. Open J Biomed Sci, vol. 16, no. 1, 2021, pp. 1891-189.*

### Photodynamic and Electrical Stimulation Therapies

- Photodynamic Therapy (PDT): Combines light with a photosensitizer to kill bacteria.
- Effective for chronic wound infections, especially antibiotic-resistant cases.
- Electrical Stimulation Therapy (EST): Uses electrical impulses to promote cell growth and improve blood circulation.
- May accelerate healing in non-healing wounds, but further research is needed.

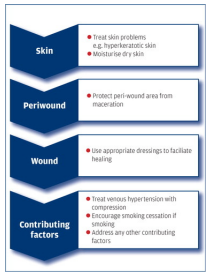


*Diaper, J. Overview non-pharmacologic wound care. UpToDate [Internet]. Waukesha, WI: UpToDate; 2023. Available from: https://www.uptodate.com/contents/overview-non-pharmacologic-wound-care. Accessed 11/21/24.*

*Harwood, D., et al. Electrical stimulation in the management of chronic wounds. Wound Care, 2018, 13(1): 10-15.*


### Practical Recommendations for Clinicians

- Use compression therapy as the foundation of treatment.
- Choose dressings that match the wound type and patient needs.
- Reserve antibacterial dressings for clinically infected wounds or high-risk cases.



### Research Gaps and Future Directions

- Need for larger, high-quality studies to confirm the effectiveness of dressings.
- Focus on complete healing and long-term benefits.
- Patient-centered outcomes: cost, comfort, preference.



### Conclusion

- Compression therapy remains the primary intervention for VLU.
- Dressings play a supportive role; tailored selection is essential.
- Further research is needed to provide definitive evidence for specific topical treatments.

*Conclusion* 