

# Compression is Key: Silver, Elastic Compression Stockinet, and Hyper-absorbent Felt in Direct Contact with VLU Granulation Tissue Reverses Comorbid Inflammation, Pain and Exudate that Delays Effective Compression Therapy

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**Problem**  
The triad, bacterial inflammation, painful dermatitis, and exudate with skin maceration, can delay effective wound clinic compression for months resulting in nonhealing venous leg ulcer (VLU) "outliers."<sup>1</sup> At the first visit, we employ three wound contact dressings to tame the terrible triad, enabling, robust compression therapy: antimicrobial ionic & metallic silver resorbable matrix,<sup>2</sup> compressive force delivered by fuzzy wales that form furrows in moist granulation tissue,<sup>3,4,5</sup> and negative hydrostatic pressure from highly absorbent polymer fiber scrim backed felt dressings in contact with wet granulation tissue protruding between fuzzy wales.<sup>6,7</sup>

**Methods**  
Six refractory VLU and mixed ulcer outliers in aggregate suffered from pain, exudate, malodor and depression which prevented effective treatment in the wound clinic. Ulcers were treated with debridement, antimicrobial silver,<sup>2</sup> fuzzy wale elastic compression stockinet<sup>8</sup> from metatarsals to patella, absorbent felt<sup>9,10</sup> on top of the stockinet to cover ulcers and areas of inflamed, painful or wet dermatitis, short stretch wraps, and instructions for leg exercises and elevation.

**Results**  
Topical silver, elastic compression stockinet, and absorbent felt in direct contact with ulcer granulation tissue controls comorbid pain, exudate, and maceration to enable the delivery of effective compression therapy. Ulcer epiboly, peri-wound dermatitis, wound drainage, and pain resolved rapidly. Photos document ulcer presentation, treatment, complications, and wound closure.

**Conclusion**  
Three therapeutic modalities intimately sharing the granulating ulcer surface appear to deliver effective antimicrobial silver, elastic compression force and negative hydrostatic pressure to control the triad of inflammation, exudate, and pain. This therapeutic triad enables rigorous compression therapy at the first visit to heal six refractory VLU and mixed ulcer outliers with comorbidities that prevented effective elastic compression using standard of care kits compression dressing kits.

**References**  
1. G Bohn, M Ostler et al, Proactive and Early Aggressive Wound Management: A Shift in Strategy Developed by a Consensus Panel Examining the Current Science, Prevention, and Management of Acute and Chronic Wounds. Wounds: A Compendium of Clinical Research and Practice [01 Nov 2017, 29(11):S37-S42]  
2. A Agarwal, PR Kierski, Reduction in wound bioburden using a silver-loaded dissolvable microfilm construct. Advanced Healthcare Materials, 3(6), 916-928, 2014.  
3. M Winkler, Five Novel Therapeutic Contact Dressings Appear to Improve Elastic Compression Therapy Results. Symposium of Advanced Wound Care May 2018 poster. <https://compressiondynamics.com/wp-content/uploads/2018/05/PosterRise-of-the-Contact-Layer-Clones-Novel-Therapeutic-Contact-Dressings-Appear-to-Improve-Elastic-Compression-Therapy-Result.pdf> (Accessed May 22, 2019).

**Products**  
\* MicroLyte® Ag (ultrathin resorbable polymeric matrix containing both ionic and metallic silver), Imbed Biosciences Inc., Fitchburg, Wisconsin 53711  
\*\* EdemaWear®, EdemaWear® LITE (fuzzy wale elastic compression stockinet, medical nylon and Lycra® spandex), Compression Dynamics LLC, Omaha, Nebraska 68102  
\*\*\* Drawtex® (highly absorbent viscose rayon felt with scrim), Urgo Medical North America, Fort Worth, Texas 76107  
\* Vacutex™ (highly absorbent polyester and polycotton felt with scrim) Protex Healthcare Ltd., Warwick, United Kingdom