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That's A Wrap On Chronic Wounds: Using An Advanced, Non-cytotoxic Wound Therapy Approach To Heal Venous Leg Ulcers With Compression

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Canadian Consensus Statement: Management of Venous Leg Ulcers

The Canadian Consensus Statement: Management of Venous Leg Ulcers was drafted in January/ February and finalized in June 2024. Nineteen health-care providers with experience in treating venous leg ulcers (VLUs) and in new therapies were involved in the development process. This Conesus document was intended to serve as an up-to-date guide for health-care providers managing patients with VLUs. It incorporates the following key elements of VLU management:

- Clinical assessment
- Investigations
- Diagnosis
- Treatment of underlying cause (i.e., impaired calf muscle pump function)
- Management of the ulcer
- Options when not entering a healing trajectory
- Management post-ulcer healing.

The Consensus document also includes new clinical research findings for VLU management – for example, Neuromuscular Electrical Stimulation.

Neuromuscular Electrical Stimulation of the common peroneal nerve using a muscle pump activator (MPA) has been shown to improve venous and arterial flow, microcirculation and VLU healing in conjunction with standard of care.[1] The Consensus document also highlights the T.I.M.E. principle (i.e., tissue, infection, moisture, edge) for wound bed preparation and outlines an algorithm for advanced therapies in progressive steps when VLUs are not healing as expected despite optimal care. These sequential steps include addressing biofilm and bacteria; reducing protease activity; improving the wound bed; adding growth promoting factors; and addition of new cells.[2]

Management Of Venous Leg Ulcers Using The T.I.M.E. Principle

The Consensus document outlines the wound bed preparation strategies for VLUs. These strategies are founded on the aforementioned T.I.M.E. principle. The recommendations are as follows:

- **Cleanse the ulcer and surrounding skin** using an antimicrobial solution (e.g., hypochlorous acid)
- **Debride devitalized tissue** if vascular perfusion is normal
- **Treat infection in deep and surrounding tissue** with antibiotics and antimicrobial dressings
- Apply a dressing that ensures **adequate moisture balance**
- **Manage pain** if present (i.e., may need to reduce or delay compression until pain is reduced)
- **Treat surrounding skin** irritation or dermatitis; protect surrounding skin from excess exudate; and maintain good skin care
- **Measure and re-evaluate wound** with a consistent method weekly or at each visit if seen less often.

Treat The Cause – Compression Therapy

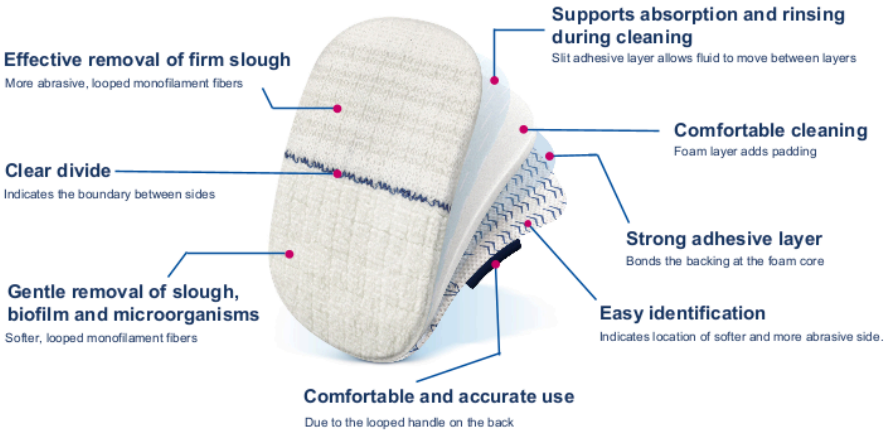
Compression therapy is one of, if not the, most important component of VLU management as it addresses the underlying causes of the disease. Practitioners must first evaluate the patient's arterial status prior to applying compression. There are various modes of compression therapy, including but not limited to multi-layer bandaging systems and adjustable compression garments. Practitioners must always remember that when indicated, any compression is better than no compression in the management of VLUs. Also, the best compression system is one that the patient can tolerate and will actually wear.

The JOBST® Compri2 is a two-layer, short stretch bandaging system. It has a high working pressure (for when the patient ambulates) and a low resting pressure. It has a long wear time (seven days) and can be repositioned. There are clinical indicators for ease of application. These features enhance patient independence and improve adherence. The JOBST® Compri2 lite offers a lower compression for those unable to tolerate or wear optimal compression.

The JOBST® FarrwoWrap® is an adjustable compression garment that can be used for the management and prevention of VLUs. It is a compression system made with special short-stretched bands of multi-layered fabrics. It provides sustained resting compression and augments the calf muscle pump to deliver high working pressure. It is easy to apply and re-apply, which promotes patient independence and improve adherence.

Addressing the T(issue) of T.I.M.E. - Cutimed® DebriClean®

Wound hygiene (e.g., cleansing and debridement when appropriate) is essential to wound healing and the management of VLUs. The Cutimed®



DebriClean® is an innovative product for wound debridement. It consists of both gentle looped monofilaments and more abrasive looped monofilaments (Product Update - The old version of Cutimed Debriclean had Blue and white sides, the new & upgraded version is white with an abrasive side and soft side separated by a blue line).[3] It can absorb bacteria and remove slough from the wound bed. It allows for gentle, mechanical debridement of the wound bed and peri-wound skin. Practitioners can safely "scrub" the wound as part of wound hygiene practices without the use of sharps.

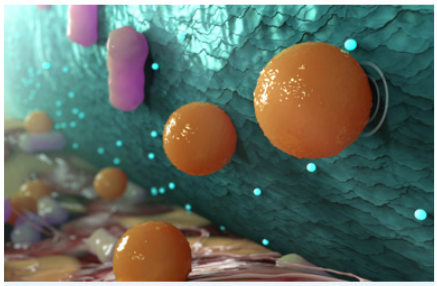
The efficacy of Cutimed® Sorbact® is based on the hydrophobic properties of its special coating.

Addressing the I(nfection) of T.I.M.E. - Cutidmed® Sorbact® -

Cleansing of the wound and peri-wound skin and debridement of devitalized tissue when appropriate can aid in the management of bacteria burden. Antimicrobial dressings can also be used to lower bacterial burden and prevent wound infections. Cutimed® Sorbact® is a non-cytotoxic antimicrobial dressing. The Sorbact® technology binds bacteria with a purely physical mode of action (i.e., hydrophobic interaction). The dressing removes bacteria without releasing active substances into the wound – development of antimicrobial resistance is not expected and there is no risk of skin allergies.

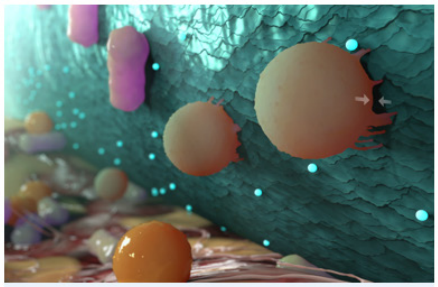
Addressing the M(oisture) of T.I.M.E. - Cutimed® Sorbion® Border and Sorbion® Sachet XL

VLUs are typically exudative due to the underlying disease processes. Compression therapy, an essential treatment for VLUs, can further increase wound exudate. Excessive exudate can cause wound and peri-wound maceration, slowing down wound closure. It promotes bacterial growth and increase the risk of infections as well. Not to be neglected, excessive wound exudate can affect the patient's quality of life. The Cutimed® Sorbion® Border and Sorbion® Sachet XL are engineered with a hydration response® technology. They contain hydroactive gel forming polymers that adapt to varying levels of exudate. These dressings can maintain a moist wound healing environment and facilitate soft (autolytic) debridement. They have excellent fluid absorbency and retention under compression – this extends the wear time and allows the wound to rest (i.e., undisturbed wound healing).



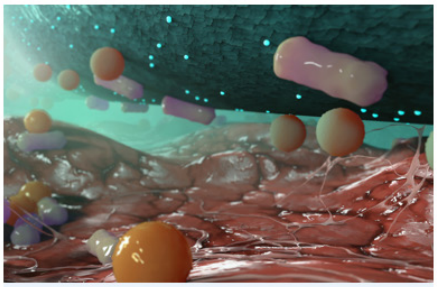
Bind

Bacteria naturally bind and anchor to the unique Sorbact® surface.



Inhibit

Bacteria are irreversibly bound, and growth is inhibited. Development of bacterial or fungal resistance is not expected.



Remove

Bound bacteria, fungi and endotoxins are safely removed.

Addressing the E(dge) advancement of T.I.M.E. - Hydrofera blue CLASSIC®

For proper healing to occur, careful attention must be paid to not just the wound bed but the edge of the wound. When applied slightly beyond the margins of the wound, Hydrofera blue CLASSIC® can help flatten the wound edge and facilitate epithelial migration. This dressing can remove debris from the wound bed and wick moisture from the wound bed and peri-wound skin. It is non-cytotoxic and has antimicrobial properties.

Maintenance Compression – Edema Management Made Simple for Self-Care

Patients must have lifelong compression therapy to prevent recurrence of VLUs. Ideally, patients should wear fitted compression stockings (below knee in most cases). The JOBST® UlcerCare™ 2-in-1 system is available in ready-to-wear or made-to-measure versions.[4] It is a two part system that provides 40 mmHg of graduated compression.[4] It contains a silky liner and a low-friction stocking for easy donning.[4] It is compatible with common footwear and is less bulky than conventional compression bandages. These features support patient independence and improve adherence. In addition to maintenance compression therapy, practitioners must reinforce patient education regarding venous disease and prevention of ulcer recurrence. Patients should also be encouraged to ambulate and perform calf muscle contraction exercises.

Dr. Michael Stacey MBBS Doctor of Surgery FRACS is a vascular surgeon who came to Canada from Australia in 2014 as the Surgeon in Chief at Hamilton Health Sciences and Professor in the Department of Surgery at McMaster University. He was the Chief Medical Executive and Executive Vice President Academic at Hamilton Health Sciences until mid-2023. He completed his medical degree at the University of Western Australia, is a Fellow of the Royal Australasian College of Surgeons, and is licensed with the College of Physicians and Surgeons of Ontario.

Amanda Loney BScN RN IIWCC NSWOC WOCC(C) earned a BScN from the University of Western Ontario, acquired her WOCN designation from Albany Medical Center in New York and has completed the IIWCC at the University of Toronto Amanda has spent the last 23 years specializing in the areas of wound, ostomy, and continence and is currently a Certified Nurse Specialized in Wound, Ostomy and Continence. In her role with Bayshore Home Care Solutions, as well as in her private practice, Amanda is known as a passionate educator, consultant, and for her extensive clinical knowledge.

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3. Back to Basics: Debridement – Guide to wound bed preparation. Essity.
4. "UlcerCare." n.d. Jobst. Accessed November 2, 2024. https://www.jobstcanada.com/products/medical-compression/venous-solutions/jobst-ulcercare.html.

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