SmithNephew

SANTYLOCOLLAGE
Collagenase
Ointment 250 units/gram



Debridement that delivers more

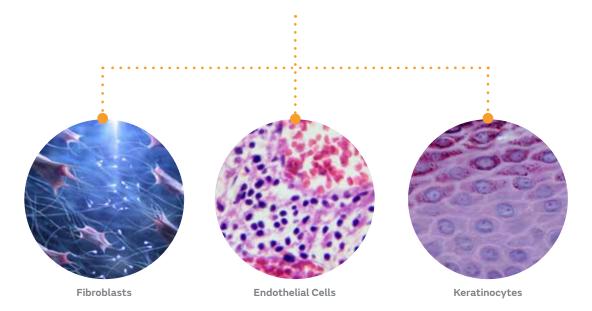
SANTYL Collagenase Ointment is a biologic debridement agent which has shown to uniquely help move wounds toward closure.¹⁻⁴

Unlike endogenous methods that only cleave at a single site, 5,6 SANTYL Ointment debrides by cleaving necrotic tissue at 7 specific sites along the denatured collagen strand. The result is an increased number of bioactive peptide byproducts that really make the difference. 1-4

These collagen byproducts induce a cellular response that stimulates **fibroblast**, **endothelial cell and keratinocyte** migration to the wound bed; these cell types are associated with the proliferative phase of wound healing.¹⁻⁴

Endogenous debridement
Cleaves denatured collagen at 1 site

Exogenous debridement Cleaves at 7 sites

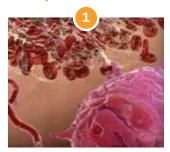


Wound bed preparation is just the beginning¹⁻⁶

Comorbidities such as diabetes, hypertension and vascular disease can disrupt the normal healing process and cause wounds to stall, most notably in the inflammatory phase. Stalled wounds are often addressed through wound bed preparation methods such as debridement.



Four phases of wound healing



Hemostasis

This phase is characterized by clot formation, which features a dynamic matrix of proteins and cells that provide critical support for incoming endothelial cells, fibroblasts and growth factors.8



Inflammation

Neutrophils, macrophages and mast cells serve to remove debris, foreign particles and bacteria; produce collagen; and secrete growth factors.⁸



Proliferation

As inflammation resolves, granulation tissue begins to form and fibroblasts, endothelial cells and keratinocytes migrate to the wound site.⁸



Maturation

Collagen remodeling and epithelialization characterize this final phase of wound healing.⁸

Enzymatic debridement with SANTYL^o Ointment gets you closer to closure¹⁻⁴

While all forms of debridement play an important role in wound bed preparation by removing barriers to healing,⁵ only SANTYL Ointment features a unique enzymatic mechanism of action that signals changes in the wound environment that are conducive to wound closure¹⁻⁴ while also offering patients convenient, at-home application.

Based on this new information, how would you consider expanding your use of SANTYL for debriding chronic wounds?

†SANTYL[†] Collagenase Ointment - DIN 02063670

IMPORTANT SAFETY INFORMATION:

Indications: SANTYL Collagenase Ointment ("SANTYL") is indicated for debriding chronic dermal ulcers and severely burned areas. Contraindications: SANTYL is contraindicated in patients who have shown local or systemic hypersensitivity to collagenase. Warnings and Precautions: The optimal pH range of collagenase is 6 to 8. Higher or lower pH conditions will decrease the enzymer's activity and appropriate precautions should be taken. The enzymatic activity is also adversely affected by certain detergents, and heavy metal ions such as mercury and sliver which are used in some antiseptics. As such, the wound should be properly cleansed prior to application of SANTYL. Debilitated patients should be closely monitored for systemic bacterial infections because of the theoretical possibility that debriding enzymes may increase the risk of bacteremia. A slight transient erythema has been noted occasionally in the surrounding tissue, particularly when SANTYL was not confined to the wound. SANTYL is not indicated for wound closure. Discontinue use of SANTYL after granulation tissue is well-established. Adverse Reactions: No allergic sensitivity or toxic reactions have been noted in clinical use when used as directed.

†Public Drug Coverage will vary in each province. Private insurance coverage will vary depending on individual's private plan

References: 1. Herman, I. Stimulation of human keratinocyte migration and proliferation in vitro: insights into the cellular responses to injury and wound healing. Wounds. 1996; 8:33-40. 2. Riley et al. Collagenase promotes the cellular responses to injury and wound healing in vivo. J Burns Wounds. 2005; 4:112-124. 3. Shi et al. Degradation of human collagen isoforms by Clostridium collagenase and the effects of degradation products on cell migration. Int Wound J. 2010; 7: 87-95. 4. Sheets AR, Demidova-Rice TN, Shi L, Ronfard V, Grover KV, Herman IM (2016) Identification and Characterization of Novel Matrix-Derived Bioactive Peptides: A Role for Collagenase from Santyl® Ointment in Post-Debridement Wound Healing? PLoS ONE 11(7): e0159598. 5. Enoch S, Harding K. Wound bed preparation: the science behind the removal of barriers to healing. Wounds. 2003;15:213-229. 6. Kim M, Hamilton S, Guddat L, Overall C. Plant collagenase: unique collagenolytic activity of cysteine proteases from ginger. Biochim Biophys Acta. 2007;1770:1627-1635. 7. Anderson, K., & Hamm, R. L. (2014). Factors That Impair Wound Healing. The journal of the American College of Clinical Wound Specialists, 4(4), 84–91. doi:10.1016/j.jccw.2014.03.001. 8. Baum, C.L. and Arpey, C.J. Normal cutaneous wound healing: Clinical correlation with cellular and molecular events. Dermatologic Surgery, 2005; 31: 674-686

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