## **Products used in Case Studies:**

- \* Stimulen<sup>™</sup> Collagen Powder
- Silvercel<sup>™</sup> Silver Dressing
- \* Coban 2<sup>™</sup> Stretch Wrap
- \* Elasto-Gel<sup>TM</sup> glycerin hydrogel sheet
- \* Iodoflex\* antimicrobial
- \* **Profore**\* **Compression** Wrap

# References

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# **THE EFFECTS OF POWDERED COLLAGEN ON CHRONIC WOUNDS**

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### At the conclusion of this presentation the participant will be able to:

- 1. Identify 2 types of wounds that can be treated with powdered collagen.
- List different cover dressings that are compatible with powdered collagen. 2.
- 3. Describe the frequency of dressing changes in effective powdered collagen use.

Powdered collagen can be used in wound care to stimulate fibroblast production and growth factors that create angiogenesis. There are many types of wounds that can benefit from powdered collagen application; it can be used in a cavity and it can be used anywhere on the body.

Case Study #1: A very active 55 year old patient with chronic venous insufficiency and a history of DVT Factor V Leiden. Patient has a history of previous chronic wounds. This wound first presented as dry, fibrin-filled with significant hemosiderin staining in the LLE. The wound was cleansed with saline; powdered collagen was applied under a glycerin hydrogel sheet; and then an unna boot compression wrap was applied twice weekly. Case Study #2: This 55 year old patient had initial trauma to the right pretibial area and has had an open wound since 1990. After the trauma, it was used as an injection site for black tar heroin. Comorbidities include sleep apnea, COPD, asthma, hypertension, chronic pain, chronic nicotine use, venous insufficiency, and polysubstance abuse. Patient's wound was cleansed with a hypoclorous acid solution for 10 minutes prior to each dressing change and/or debridement; powdered collagen covered with foam and later a cadexomer iodine pad was applied to the wound bed under an unna boot compression wrap twice weekly. This product prepared a sufficient granular base for a split thickness skin graft.

# Conclusion

During our trial, we observed rapid improvement of granulation tissue in two chronic wounds. We used powdered collagen to promote granulation tissue and encourage epithelial growth from the wound edges. We would recommend collagen use for stalled wounds, chronic wounds and wounds that are slow to heal anywhere on the body.

### Purpose

Two case studies demonstrating the effectiveness of powdered collagen on chronic wounds.

# **Objectives**

### Abstract

# **Case #1:**

This 55 year old patient has chronic venous insufficiency with a history of DVT Factor V Leiden. He is an extremely active individual and is also self-pay. His significant other was taught to wrap the lower extremity with an unna boot and when the wound stalled 1/25/11, she was taught to used Coban 2 compression wrap. The wrap was changed twice weekly. We used a powdered collagen dressing under the compression wraps. His wound progressed nicely to closure 3/8/11.

This 55 year old patient had initial trauma to the right pretibial area when it was hit with a lead pipe in 1990. After the trauma, it was used as an injection site for black tar heroin. The wound has been open since 1990. Comorbidities include sleep apnea with CPAP treatment, COPD with chronic bronchitis, asthma, hypertension, chronic pain, chronic nicotine use and a history of polysubstance abuse. He has a 40 year history of smoking 2.5 ppd. Patient was wrapped two times a week with unna boots. The patient was thrilled with his result because he healed more in 2 months with this product than he had with any product used in 10 years. This product prepared a sufficient granular base for his split thickness skin graft.

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Photo #1 (7-6-10): Early photo, treated with bi-weekly \*silver dressing, \*compression wrap

LLE Dermagraft. 1-877-bernagraft 13.14.10

Photo #3 (12-14-10): **Bi-weekly \*collagen powder**, \*antimicrobial, \*compression wrap



Photo #1 (10-12-10): **Bi-weekly \*collagen powder with** \*compression wrap

Photo #2 (11-23-10): Bi-weekly \*collagen powder, \*glycerine gel sheet with *\*compression* wrap



Photo #3 (1-25-11): Bi-weekly \*collagen powder, secured with \*stretch wrap



Closed



# **Case #2:**



**Photo #2 (11-2-10):** Bi-weekly \*collagen powder, foam, \*compression wrap



Photo #4 (1-11-11): Stopped \*collagen powder, \*antimicrobial, \*compression wrap(planned skin graft)