



Innovations in Wound Care

Healing Wounds with Collagen

Knowing the Difference, Makes All the Difference

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Moderator

Julie Cullen, Managing Editor (contact: jcullen@healthcommedia.com)
WoundCareAdvisor.com and *American Nurse Today*



Agenda For Today:

This 30-minute presentation will feature learning opportunities that will provide in-depth instruction and demonstration in wound care treatments.

A full replay of the webinar will be available within the next two days. A link will be sent to you and posted on www.woundcareadvisor.com for on-demand viewing.

If you have any questions that are not addressed, a contact name and email will be posted at the end of the webinar.

Speaker

Martha R. Kelso, RN, LNC, HBOT,
Wound Care Plus, LLC



Martha R. Kelso, RN, LNC, HBOT, is the founder and Chief Executive Officer of Wound Care Plus, LLC (WCP).

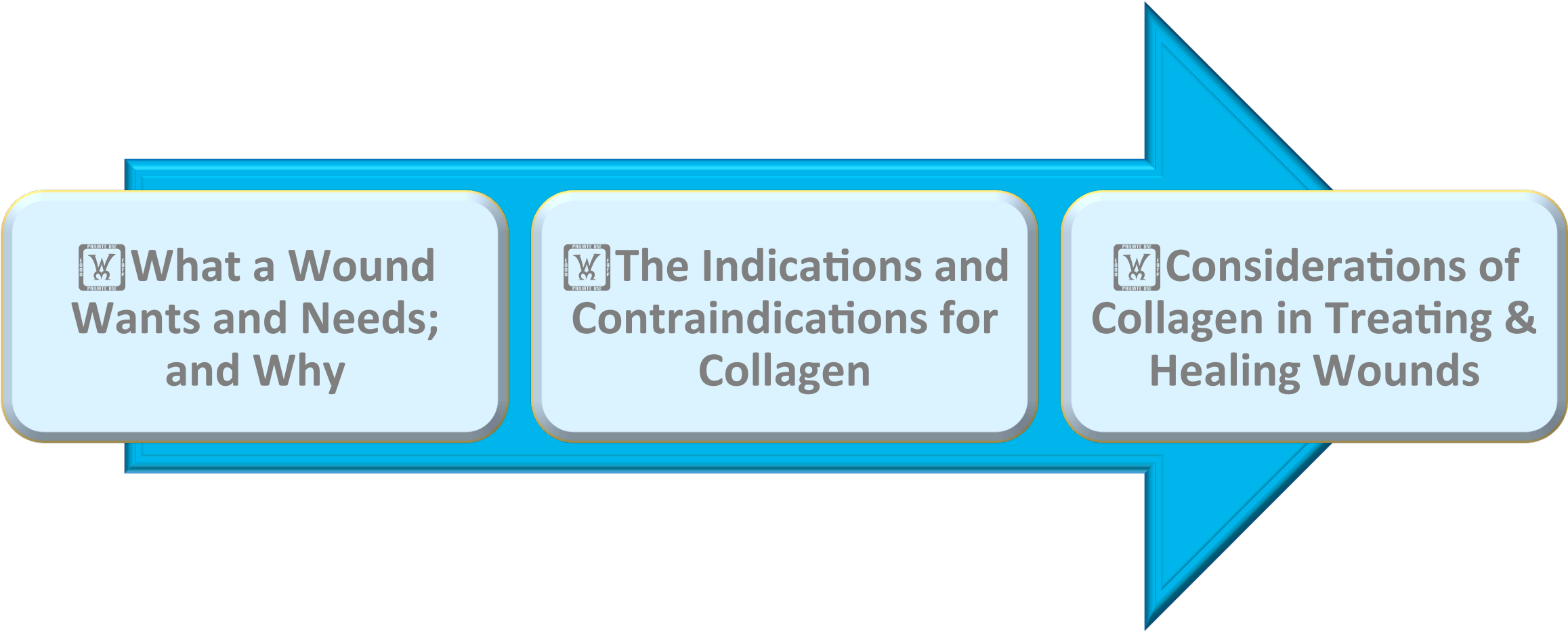
As a visionary and entrepreneur in the field of mobile medicine, she has operated mobile wound care practices nationwide for many years.


She enjoys educating on the art and science of wound healing and how practical solutions apply to healthcare professionals today.


Martha enjoys being a positive change in healthcare impacting clients suffering from wounds and skin issues of all etiologies.

Agenda

This 30-minute presentation will feature learning opportunities that will provide in-depth instruction and demonstration in wound care treatments. After this webinar, you will understand:



 **What a Wound
Wants and Needs;
and Why**

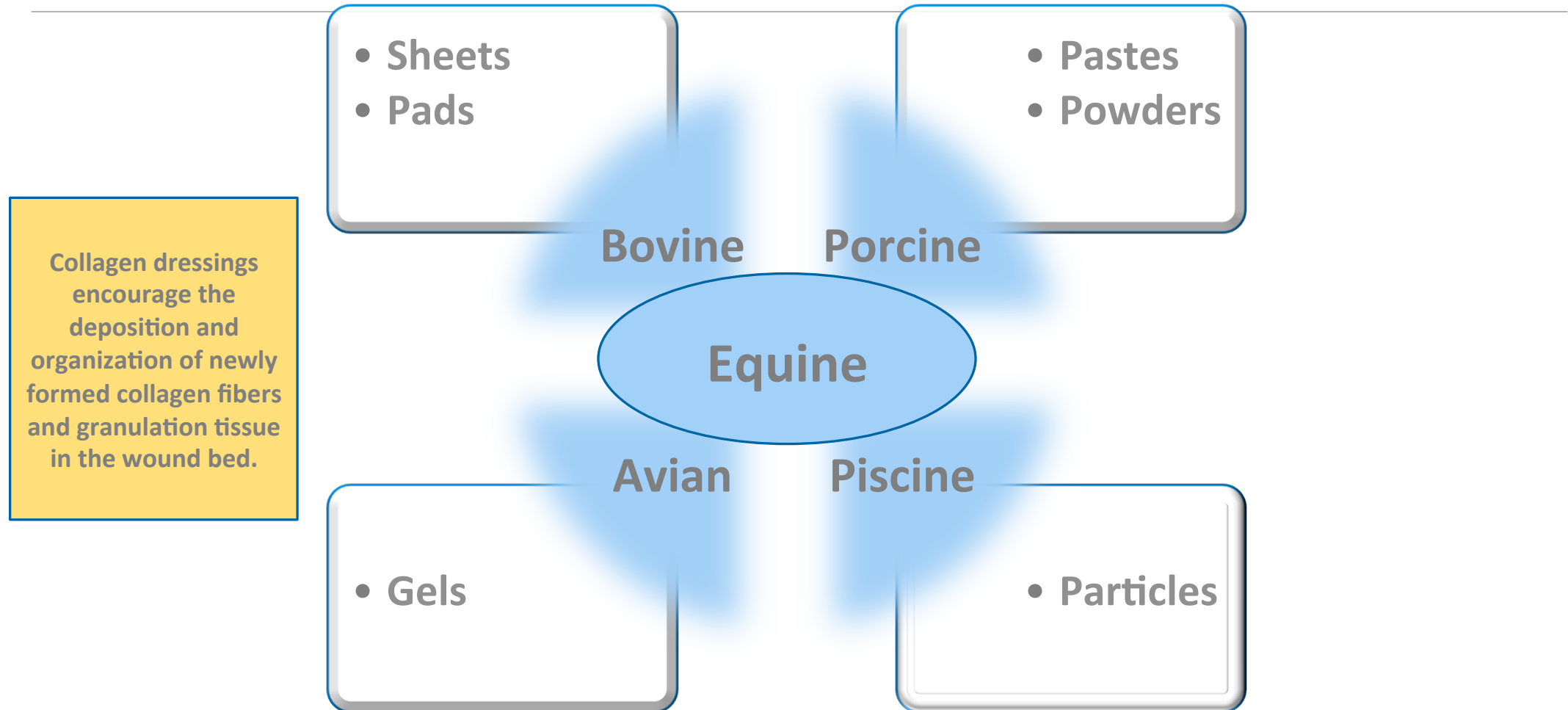
 **The Indications and
Contraindications for
Collagen**

 **Considerations of
Collagen in Treating &
Healing Wounds**



What a Wound Wants and Needs; and Why

What is Collagen?



Why Would We Use Collagen for Wound Healing?

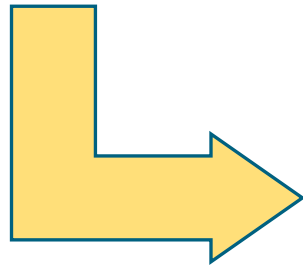
Collagen dressings stimulate new tissue growth and encourage deposits and organization of collagen fibers and granulation tissue that have newly formed in the wound bed.

Collagen dressings bind to matrix metalloproteinases (MMPs). MMPs are commonly found in the extracellular fluid of wounds and can attack and break down collagen.

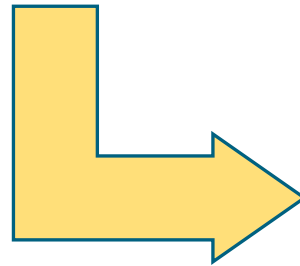
Generally, wound specialists accept the theory that collagen wound dressings provide MMPs an alternative collagen source to attack or digest leaving the body's natural collagen intact and available for wound progression.

Additionally...

Collagen introduced to the wound bed attracts cells, such as fibroblasts and keratinocytes into the wound.



Fibroblasts and keratinocytes encourage debridement, angiogenesis, and reepithelialization.



These items need a scaffold or substrate for new tissue growth -- collagen dressings provide that.



Indications & Contraindications of Collagen

Indications for Collagen

• **Partial-thickness Pressure Ulcers**

• **Full-thickness Pressure Ulcers**

• **Venous Ulcers**

• **Donor Sites**

• **Surgical Wounds**

Vascular Ulcers

• **Diabetic Ulcers**

• **Second-degree Burns**

• **Abrasions**

• **Traumatic Wounds**

Contraindications for Collagen

Third-degree burns



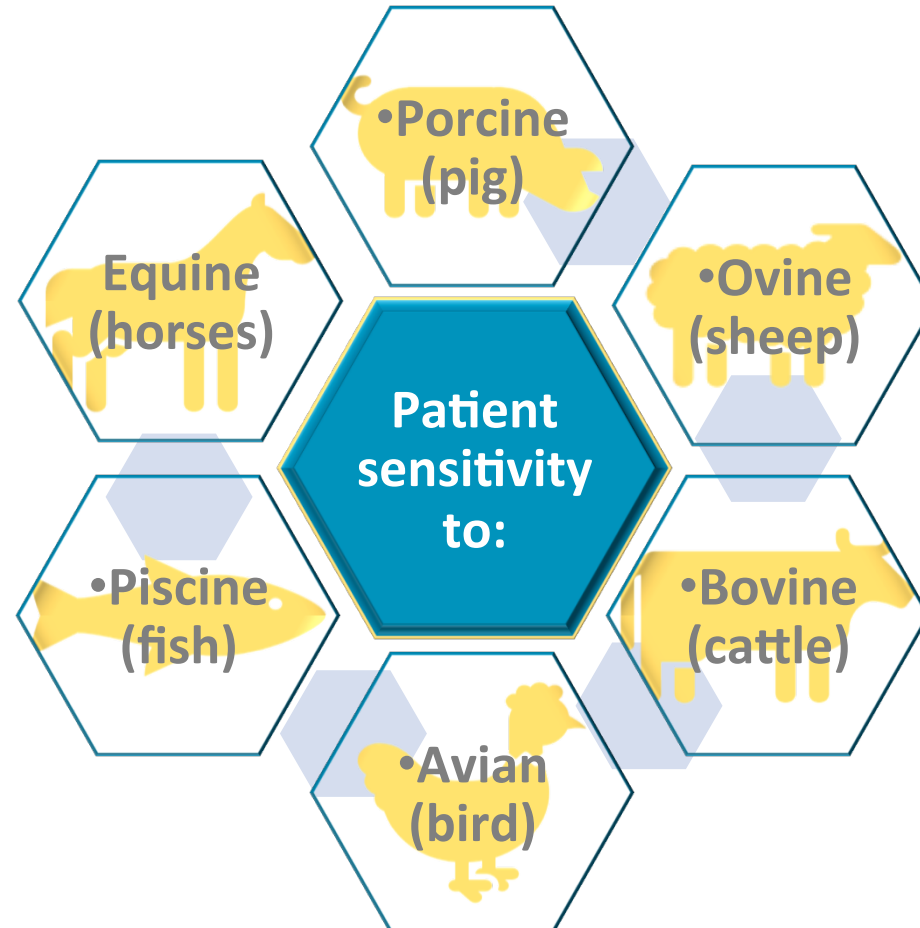
Wounds covered in dry eschar





Considerations of Collagen in Treating & Healing Wounds

Origin of Collagen





BioPad's Role in Wound Healing

What Happens in Chronic Wound Healing?

Deposition of the new collagen is delayed¹

In diabetic patients, the hyperglycemia reduces the collagen production and induces the formation of abnormal rigid collagen²

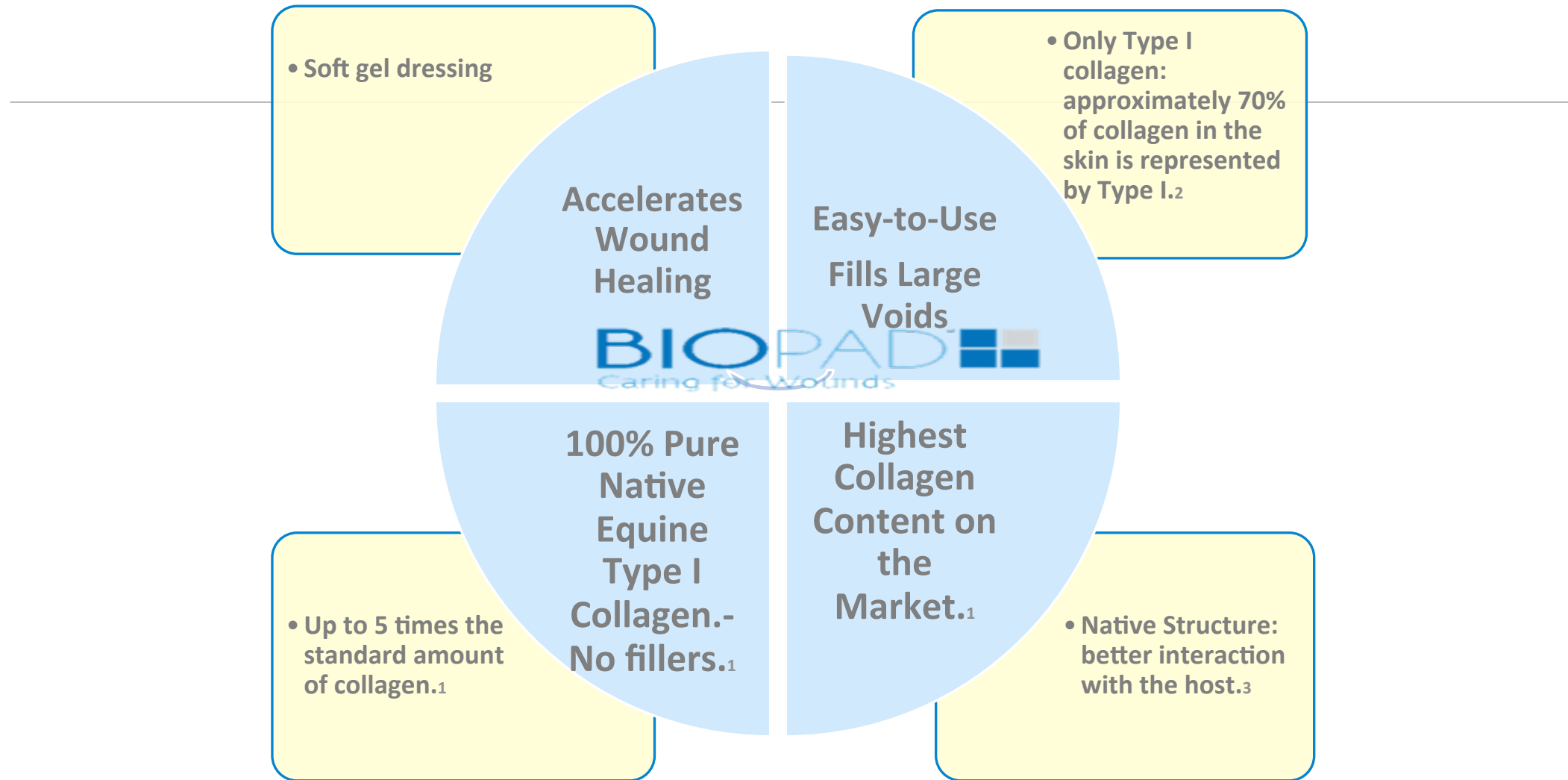


Recruitment of fibroblasts (that synthesize collagen) is delayed¹

The age-related delayed wound healing is caused by impaired collagen synthesis and increased degradation²

Elevated levels of MMPs and elastase are responsible for proteolytic degradation of collagen¹

Introduction to BIOPAD™



1. JC. Karr et al (2011): *Adv Skin Wound Care* 24:208-216; 2. Rangaraj A et al. (2011): *Wounds uk*, 7/2:54-63;
3. Laghezza V et al. (2017): Poster session – SAWC Spring 2017

The Indications for BIOPAD™



- Partial-thickness Wounds
- Full-thickness Wounds
- Surgical Wounds
- Traumatic Wounds
- Draining Wounds
- Podiatric Wounds
- Other Bleeding Surface Wounds

- Pressure Ulcers
- Venous Insufficiency Ulcers
- Diabetic Ulcers

- Dehisced Surgical Incisions
- Post-laser Surgery

- Donor Sites
- Lacerations

How BIOPAD Works

HOW IT WORKS

11

BIOPAD™ protects the wound bed from the external environment, acting as a barrier against exogenous infective agents.

Thanks to the high amount of collagen, BIOPAD™ can sacrifice some of its content to feed MMPs and elastase.

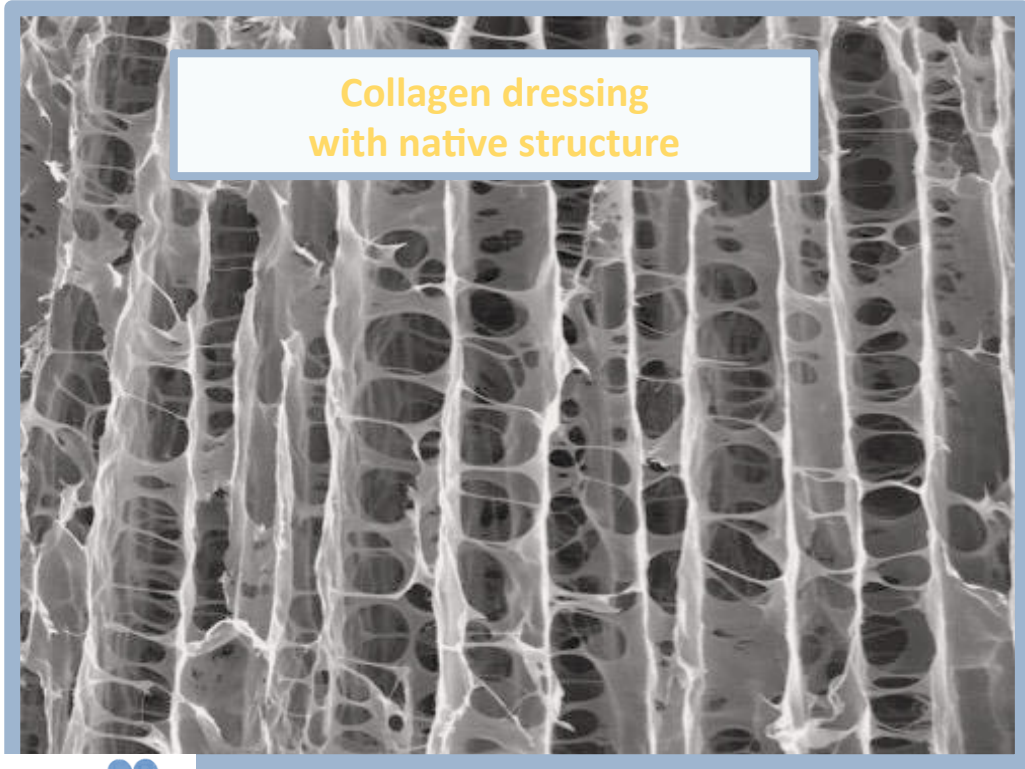


BIOPAD™ stimulates the formation of new granulation tissue, the migration and proliferation of fibroblasts, and the deposition of new collagen fibers.

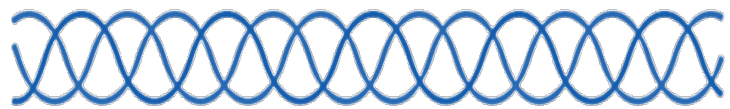
Thanks to the porosity, BIOPAD™ acts like a sponge able to absorb small amounts of exudate.

(11) Rangaraj A et al (2011): Wounds UK, 7/2: 54-63

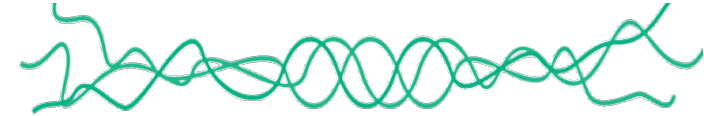
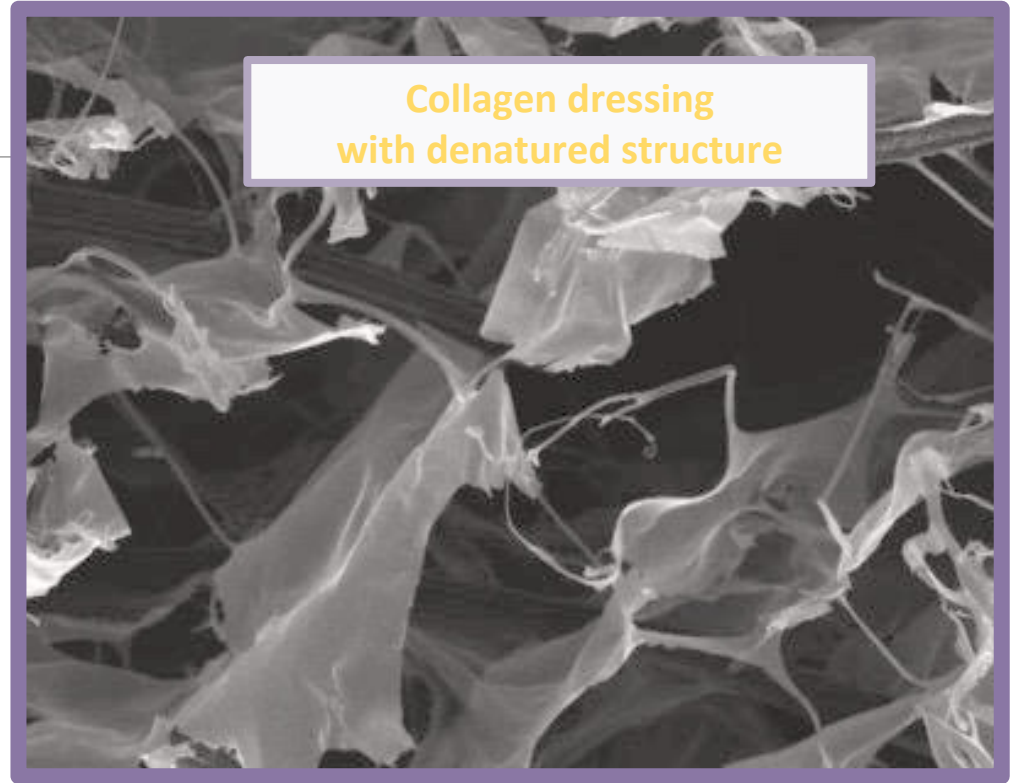
A Solution



NATIVE COLLAGEN



The native structure is correlated to the capacity of the collagen to interact with biological tissues^{1,4}



DENATURED COLLAGEN

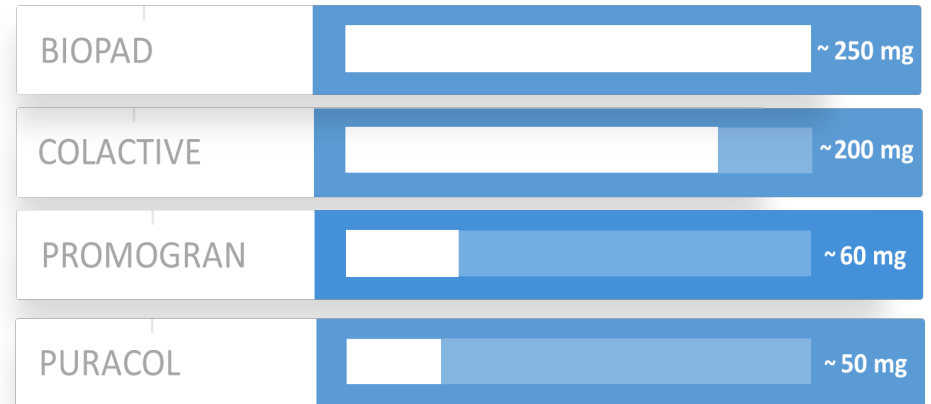
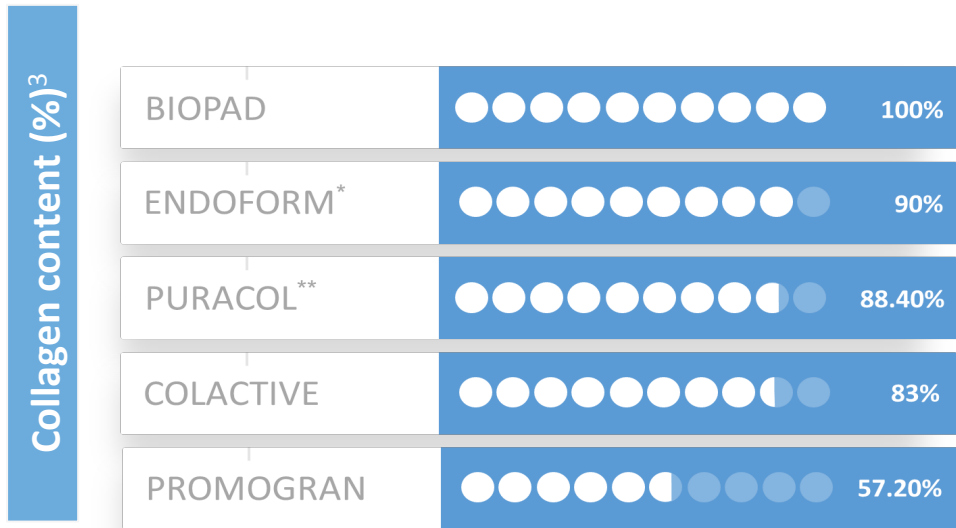
Some of the benefits may be lost if the collagen is denatured in the manufacturing process^{1,4}

A Solution

WHAT IS BIOPAD?



- ✓ **BIOPAD®** is an ivory-white soft sponge made **exclusively** of a **Type I collagen** of equine origin that keeps its **native** structure
- ✓ **BIOPAD®** has the **highest collagen content** currently on the market (250 mg of collagen)³



Collagen content (mg)³

* Manufacturer's statement

** Puracol collagen content determined under this method was 88.4%, which differs from the manufacturer's statement of 100% collagen content

	BIOPAD™	ENDOFORM®	PROMOGRAN®	PURACOL®	COLACTIVE®
Type of collagen	TYPE 1	TYPE 1 TYPE 3 TYPE 4	--	TYPE 1	GELATIN
Collagen content (%)	100%	90%	55%	88,4%	83%
Collagen content (mg)	250 mg	--	60 mg	50 mg	200 mg
Thickness	5 mm	0.4 mm	3 mm	--	--
Native structure	YES	YES	NO	YES	NO
Source	EQUINE	OVINE	BOVINE	BOVINE	PORCINE

PREPARATION

- 1 Prepare the wound bed per the facilities wound care protocol and debride the wound when necessary
- 2 **Cut** BIOPAD[®], if necessary, to fit the size of the wound
 - **Wound with limited exudate:** hydrate BIOPAD[®] with sterile saline
 - **Wound with heavy exudate:** Do not hydrate BIOPAD[®]. Rinse out the wound bed with saline solution prior to application

APPLICATION

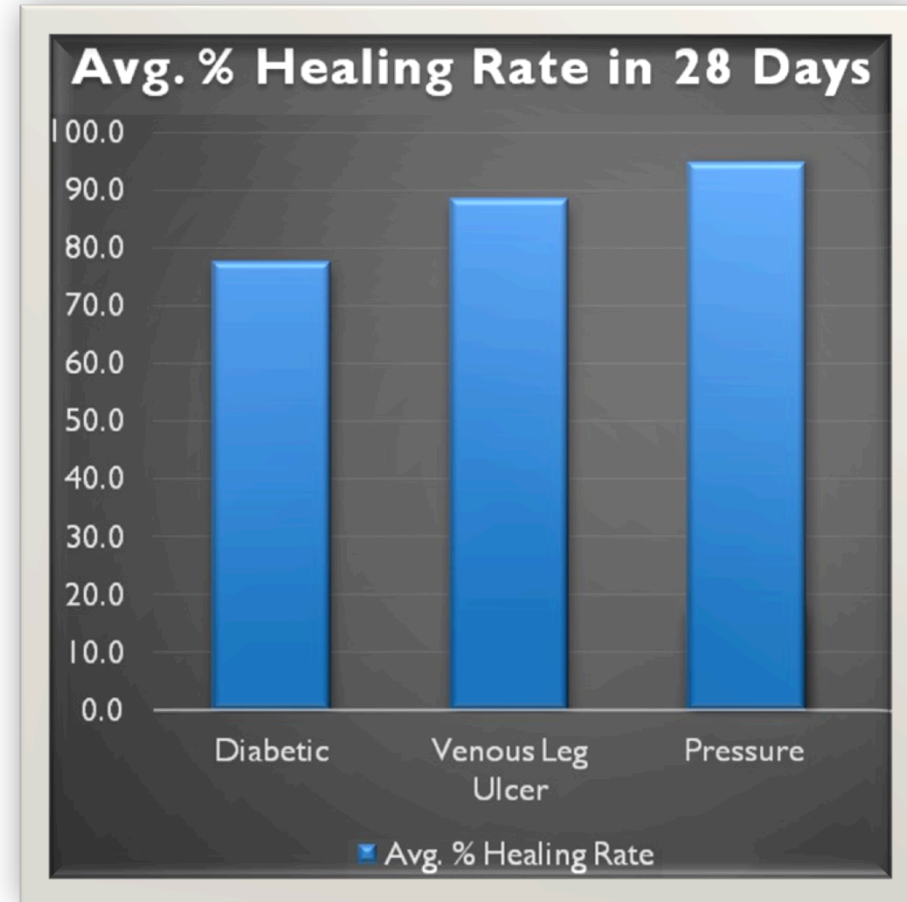
- 3 Apply it **directly to the wound bed**, covering the entire wound; do not overlap the edges of the wound
 - The gel that is formed with the wound exudate is **biodegradable** and does not need to be removed
- 4 Apply a **secondary dressing** per physician protocol to cover the BIOPAD[®]
 - Depending on the amount of exudate, BIOPAD[®] can be reapplied **every day** or per physician protocol
 - If the wound has a **small amount** of exudate, BIOPAD[®] can be reapplied **every 48 hours** or per physician protocol

Case Studies

Wound Healing Rates

Wound healing rates were tracked for 28 days in patients with Chronic non-healing wounds using BioPad Equine Collagen Dressing as a primary wound dressing.

Total Average Healing Rate of 87% was achieved in 3 chronic wound types; Diabetic Ulcers, Venous Leg Ulcers, and Pressure Ulcers.



Case Study 1– Diabetic Ulcer

Age of Patient: 53

Wound Location: Left Plantar Great Toe

Age of Wound: 4.5 years

Co-morbidities: Diabetes, CAD, CHF, CVI

Previous Treatments: Standard of Care, Apligraf™, HBOT, Endoform™

Current Treatments: BioPad



Day 0



Day 28



Case Study 2 -- Veneous Leg Ulcers

Age of Patient: 48

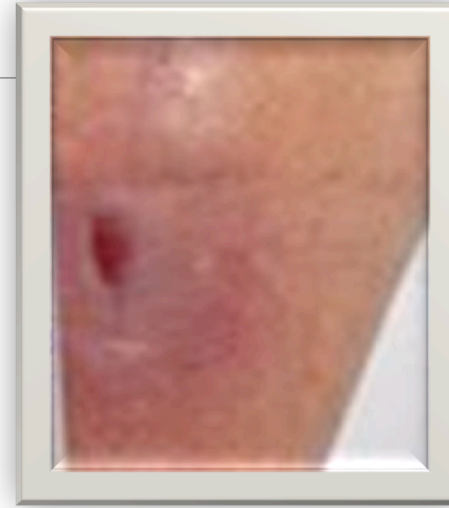
Wound Location: Left Medial Lower Leg

Age of Wound: 3.5 Months

Co-morbidities: CVI, DVT Left Leg

Previous Treatments: Compression, Silver Alginate, Systemic Antibiotics, Xeroform™

Current Treatments: BioPad



Day 0



Day 28



Case Study 3 -- Pressure Ulcer

Age of Patient: 82

Wound Location: Left Plantar Heel

Age of Wound: 6 Months

Co-morbidities: Colectomy

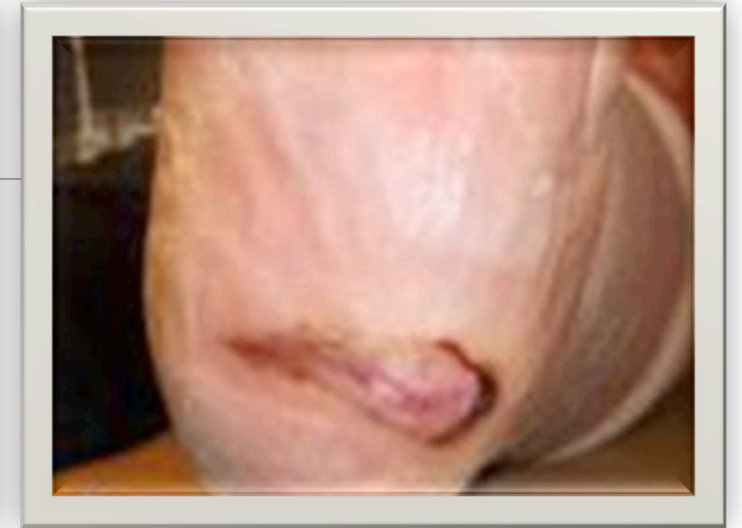
Previous Treatments:

Debridement, CelluTome™, Off Loading, Collagen, Silver Alginate

Current Treatments: BioPad



Day 0



Day 28



Ordering Information



PRESENTATION AND SIZES

BioPad is packaged in a transparent waterproof blister pack and is sterilized by gamma irradiation.

2" x 2" - 3 per box | Order Code: 132622

4" x 4" - 1 per box | Order Code: 132644B

Biopad is covered by Medicare part B - HCPCS code: A6021

WHERE TO BUY



advanced
tissue

MCKESSON

HENRY SCHEIN®



Byram Healthcare



mooremedical



**Mercy
Surgical
Dressing
Group, Inc.**

The Right Tools Make all the Difference for Your Patients





Questions





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