



# Kollagen™ Technology featuring Medifil™ II and SkinTemp™ II

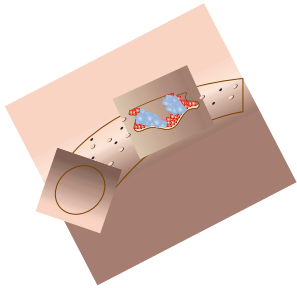


Using *true* collagen for  
wound management



*Kollagen*™  
Because the body heals itself.

# Fibrillar Collagen Helps in Every Phase of Wound Management



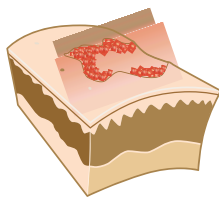
## Hemostasis (stops bleeding)

- Collagen binds to specific receptor sites on platelet membranes which swell and release substances to initiate hemostasis.
- Collagen binds to fibronectin, causing platelet adhesion and aggregation.



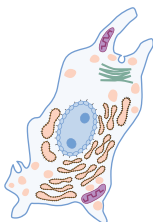
## Wound Debridement (cleanses the wound)

- Collagen is chemotactic to monocytes and leukocytes. Monocytes transform into macrophages which scavenge and phagocytize foreign bodies and debris.



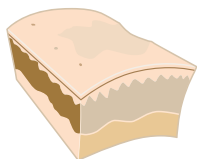
## Granulation & Angiogenesis (establishes new tissue and blood vessels)

- Collagen attracts monocytes which transform into macrophages. Macrophages release substances that result in fibroplasia and angiogenesis.
- Collagen provides support for the growth of new capillaries.
- The presence of new capillaries is essential for the deposition of new fibers.



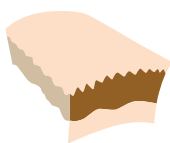
## Fibroblastic Activity (creates structural matrix)

- Collagen binds with fibronectin which promotes cell binding and fibrillogenesis, influences fibril dimensions, and stimulates fibroblast proliferation and migration.
- Collagen is chemotactic to fibroblasts, which govern the restoration of new tissue by depositing oriented and organized fibers. Collagen provides a substrate for directed migration and permeation of fibroblasts.



## Re-epithelialization (closes the wound)

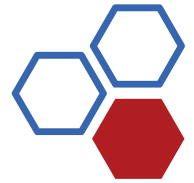
- Collagen directly supports the growth, attachment, differentiation, and migration of keratinocytes.
- By binding with fibronectin, collagen provides a provisional matrix for keratinocyte migration.



## Wound Remodeling (Regains original integrity)

- Collagen reduces scarring by depositing oriented and organized fibers and by regulating the amount of collagenase expressed by keratinocytes.

# Activate the healing process with Kollagen™



Kollagen™ technology represents one of the more efficient modalities for wound management. By mimicking the body's own collagen, it helps create a biological response — attracting the cellular components necessary to stimulate the healing process.

## What is collagen?

Constituting 60% of a body's dry weight, collagen is found in every connective tissue ranging from membranes in the eye to the fibrous component of bone. There are 29 types of collagen that have a variety of responsibilities, such as aiding cellular activity and providing an organized matrix in the skin. Collagen fibers give strength and structure to tissues in the body. The most common type of collagen is called "Type I collagen" and it can be found in the skin, tendons and bone. And for healing wounds, Type I collagen is also the most important.

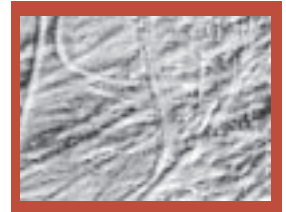
## What makes Type I collagen so essential?

It is necessary for every phase of wound healing. It acts as a conductor, directing the entrances and exits of each performer in the wound healing process. Without collagen, wounds will not heal.

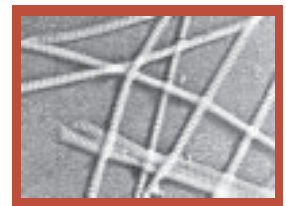
If the body has difficulty supplying its own collagen to the wound site, it often leads to delayed healing or chronic wounds. That's when a collagen product, like Medifil™ or SkinTemp™, can help make a difference by "jump starting" the wound healing process.

## Why "Kollagen™" Equals "Collagen"

Medifil™ and SkinTemp™ contain "Kollagen" a bovine source of Type I collagen that closely mirrors the body's own collagen. The amino acid chain sequences between human and bovine collagen are very similar. In fact, the genetic difference between bovine and human collagen is about 5%, similar to the range of variance found within the human body. Porcine collagen has a much greater variance. With this small variance, it elicits the same biological response as the body's natural collagen — stimulating the body's own natural healing process.



Kollagen™  
(Skin Temp™):  
Magnification  
10,000x



Collagen:  
Magnification  
33,000x

Under the microscope, even at different magnifications, you can see the fibrillar structure of collagen is also present in Kollagen™. This structure is necessary for a true biological effect on wound healing.

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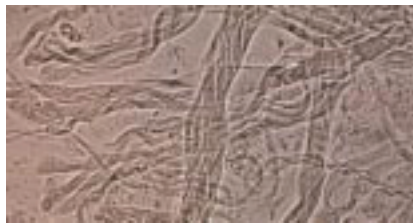
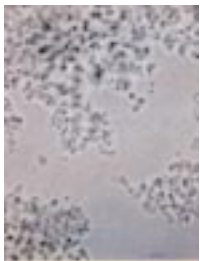
# All Collagen is not created equal



Collagen has a specific chemistry and structure. When creating a collagen product, the most important task is to maintain that chemistry and structure. Many products on the market claim to be collagen, and while they may start with Type I collagen, their processing alters the molecular structure to the point where, under a microscope, it is no longer identifiable as true collagen. When a product lists “denatured” or “hydrolyzed” collagen as one of its ingredients, it means the structure has been changed to the point where it fails to meet the scientifically accepted definition of collagen. These products exhibit limited biological responses that aid in wound healing. The term “biological response” is an important distinction. Collagen products maintain the chemistry and structure of collagen. They contain complete molecules and fibrils. They form aggregates with a triple-helix, rope-like structure, and most importantly, they elicit a biological response necessary to promote wound healing.

## Proper vs. Improper Collagen Form

While many products claim to contain collagen, the structure is destroyed during processing, creating a substance which is not true collagen.



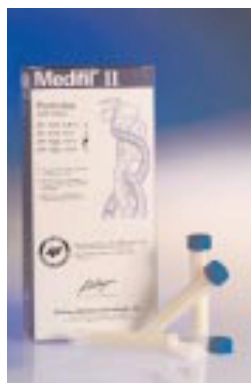
### Improper form

Lacks non-helical domains, forms disorganized fibrils (left) or no ordered structural matrix (right).

### Proper form

Fibers self-assemble into aggregates which resemble rope-like structures.

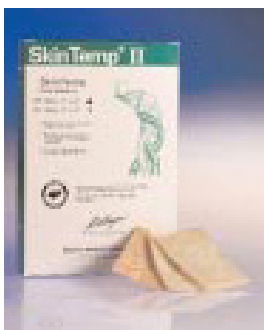




## Medifil™ II Particles

- Type I fibrillar bovine collagen particles lay down a collagen matrix in the wound bed, attracting the cellular components necessary to stimulate the healing process.
- Indicated for deep tunneling wounds with minimal-moderate exudate.

Item Number	Description	HCPCS Code	Packaging
MF1010	5 mL vial (0.5 gm)	A6010	5/bx
MF1020	10 mL vial (1.0 gm)	A6010	5/bx
MF1030	15 mL vial (1.5 gm)	A6010	5/bx



## SkinTemp™ II Sheets

- Consists of a porous collagen sheet attached to a non-adherent backing. Sheets consist of a fibrous collagen network similar to the dermis.
- Indicated for minimal-heavily exudating wounds.

Item Number	Description	HCPCS Code	Packaging
ST1001	2" x 3" sheet	A6021	5/bx
ST1002	3" x 4" sheet	A6021	5/bx
ST1003	8" x 12" sheet	A6023	5/bx

### Using Kollagen technology to help heal.

Through extensive research the Kollagen technology has been developed into collagen wound dressings that are practical, affordable and effective. The Kollagen technology is currently available in two forms: Medifil Particles, and SkinTemp Sheets. Although each product has a different delivery system, they both contain intact Type 1 fibrillar bovine collagen that encourages wound healing. As fibrillar collagen, these products interact with the wound bed to lay down a matrix of collagen which attracts the cellular components necessary to stimulate the body's own natural healing process.

### Kollagen dressing are indicated for:

- Partial and full-thickness wounds
- Tunneling or undermining wounds
- Minimal to heavy exudate
- Acute and chronic wounds
- 1st and 2nd degree burns

### Features of Kollagen dressings include:

- Promotes granulation tissue formation
- Highly absorptive
- Helps maintain a moist wound environment
- Can be used in combination with topical agents
- Non-adherent
- Easy application and removal

