TIMING AND REGENERATION FOR WOUND CARE

TIMER

HYALO4 Skin

Favors wound re-epithelialization[1]

CE 0123
Medical Device

Hyaluronic Acid

PROMOTES CELLULAR PROCESSES ESSENTIAL IN TISSUE REPAIR[2]

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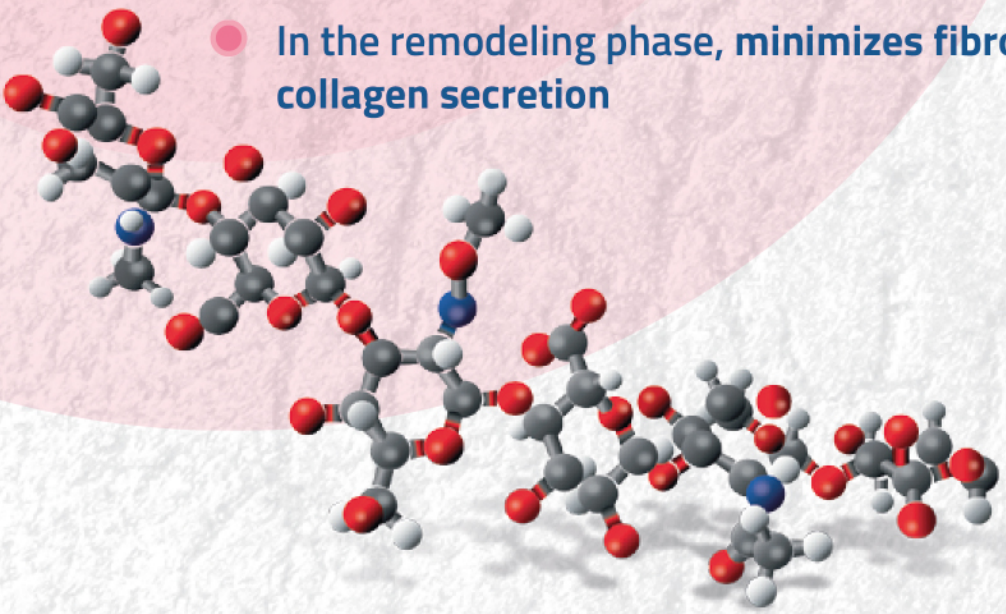
Favors cell migration to ensure healing[1]

LMW-Hyaluronic acid[1]

- **Favors tissue hydration** and maintains a most environment
- **Promotes migration and proliferation of fibroblasts and endothelial cells**
- In the inflammatory phase, **acts as a scavenger** of free radicals and activates negative feedback
- In the remodeling phase, **minimizes fibrosis** and **stimulates collagen secretion**

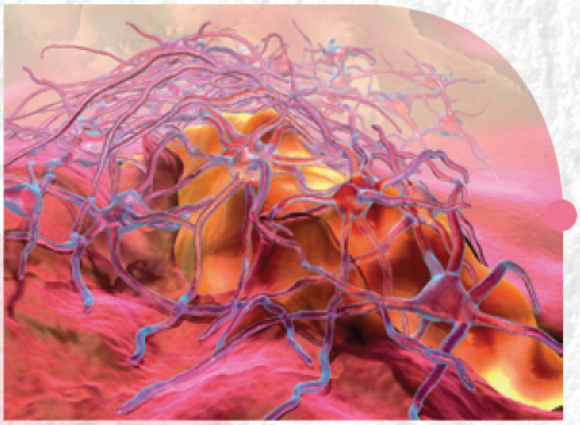


Hyaluronic acid plays a multifaceted role at each stage of wound healing[3]

- **Increases** formation of granulation tissue
- **Stimulates** organized deposition of collagen by fibroblasts
- **Promotes** neoangiogenesis
- **Favors** re-epithelialization

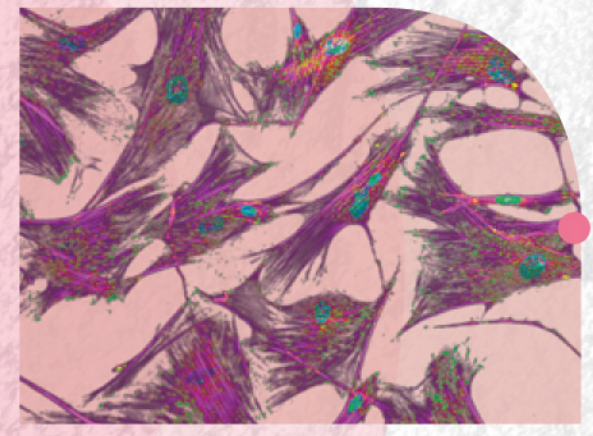
Role of HA in

Promotion of neoangiogenesis



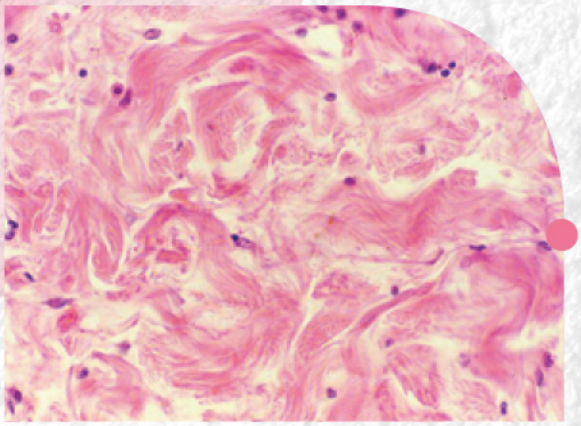
HA promotes neoangiogenesis via endothelial cell surface receptors CD44 and RHAMM. The formation of new vessels is a major step in tissue repair and wound healing.[3]

Migration and proliferation of fibroblasts



HA increases migration and proliferation of fibroblasts and formation of granulation tissue. Fibroblast proliferation is essential in tissue repair and HA-induced expression of TGF beta 3 may favor scarless healing.[2,3]

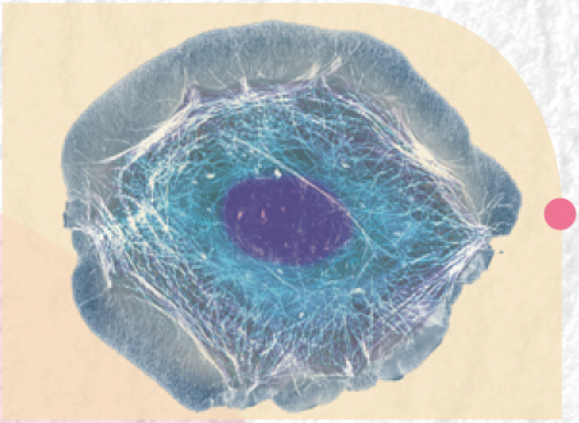
Promotes deposition of ECM components



HA promotes organized deposition of essential components of the extracellular matrix (e.g. collagen fibers, etc.), thereby contributing to remodeling and wound healing.[6-3]

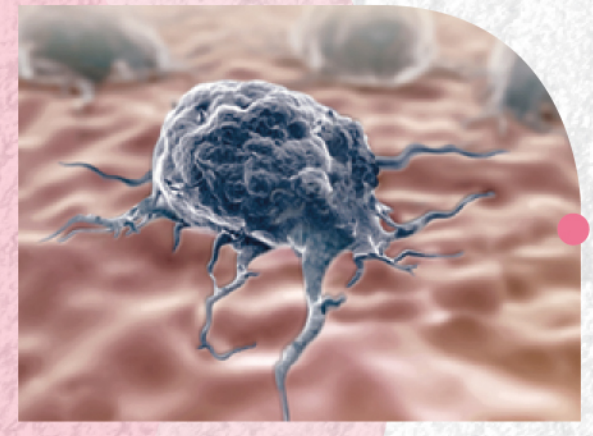
tissue repair

Migration and proliferation of keratinocytes



HA stimulates migration and proliferation of keratinocytes through interaction with CD44 receptors. Keratinocytes are responsible for restoring the epidermis after injury.[3]

Production of antimicrobial peptides



HA interacts with the TLR2 and TLR4 (Toll-like receptors) receptors in order to mediate the production of the antimicrobial peptides beta-defensin2 by epithelial cells[4], thus promoting early activation of tissue repair.[5]

Hyalo4® Skin:

Cream containing:

- **%0.2 hyaluronic acid**

INDICATIONS[1]: Hyalo4® Skin cream is indicated for the management of cutaneous irritations and lesions. In particular, it is intended to cover acute and chronic wounds (abrasions, donor sites and post-operative incisions, first and second degree burns, vascular and metabolic ulcers and pressure sores) and to provide a moist wound environment, thus protecting against abrasion, friction and desiccation.[7]

Clinically-demonstrated efficacy

Female patient, -69years-old, with saphena bilateral venous insufficiency and very painful vascular ulcers.

RESULTS

Baseline
After aggressive surgical debridement and application of a dermal substitute Hyalo4® Skin was applied daily.

Final observation (25 days)
Wound is completely healed.
Notice the extention of tissue repair, with no evident scarring.

Key points

Hyalo4® Skin promotes proliferation and migration of cells involved in tissue repair[3-1]

- **Promotes** re-epithelialization[3]
- **Induces** neoangiogenesis[3]
- **Stimulates** remodeling[5-3]
- **Favors** scarless healing[3]
- **A wide range of formulations** for the most diverse needs[7]

Hyalo4® Skin

Product description

Hyalo4® Skin Cream is a topical preparation constituted by hyaluronic acid as its principal component. Hyaluronic acid is a biological polysaccharide (glycosaminoglycan) distributed in the extracellular matrix of most tissues. Due to its hydrophilic properties it provides hydrated space around and between cells, thus facilitating the migration of cells. Hyalo4® Skin Cream is available in different forms (Hyalo4® Skin Cream, Gauze-pads, Spray and Gel).

Indications

Hyalo4® Skin Cream is indicated for the management of cutaneous irritations and lesions. In particular, it is intended to cover acute and chronic wounds (abrasions, donor sites and post-operative incisions, first and second degree burns, vascular and metabolic ulcers and pressure sores) and to provide a moist wound environment, thus protecting against abrasion, friction and desiccation.

Advantages

- Hyaluronic acid stimulates the healing processes which are faster and improved[3].
- Wide ranges of formulations for the most diversified requirements[1].

Mechanism of action

Hyaluronic acid aids the migration of the fibroblasts and endothelial cells. Hyaluronic acid alters the inflammatory phase by acting as a scavenger of the free radicals and activating a negative feedback. In the remodelling phase, it reduces fibrosis and regulates the collagen secretion.

Composition

Cream, Gel, Spray. Principal component: Hyaluronic acid sodium salt at %0.2
Gauze-pads. Principal component: Hyaluronic acid sodium salt at %0.05

Product description	Format	Articles per pack
Hyalo4® Skin	15 g tube cream	1
Hyalo4® Skin	25 g tube cream	1
Hyalo4® Skin	30 g tube cream	1
Hyalo4® Skin	100 g tube cream	1
Hyalo4® Skin	30 g tube gel	1
Hyalo4® Skin	100 g tube gel	1

HYALO4 Skin

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