



**VET  
EXPERT**

BASED ON EVIDENCE

## **Healing Gel**

News June 2019

Diagnostics  
Medicines  
Nutrition  
Cosmetics





# HEALING GEL

Gel for the care and support of the healing process of various types of wounds in dogs and cats.



50 ml



# Healing gel

- A wound is an interruption of the anatomical continuity of tissues or their damage under the influence of a damaging factor. The process of restoring its continuity after injury is called healing.
- It is a process that combines physical, chemical and cellular mechanisms that rebuild a damaged structure or replace it with connective tissue.

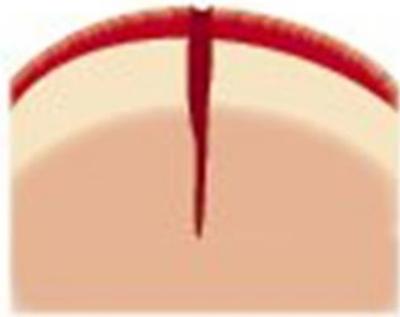


# Wound healing

- The wound can heal by quickly **priming the edges** (per primam intentionem) - the edges of the wound stick together, the continuity of the skin is recreated, a linear scar is created. It applies to clean wounds, properly sewn and takes up to 6-8 days. This is the most beneficial way to heal wounds
- Healing by **granulation** (per secundam intentionem) is a longer process and occurs when for various reasons the wound was not initially closed. Applies to untreated, often infected wounds. At the bottom of the wound a granulation tissue is formed from ingrowing blood vessels. Grain is a substrate for the regeneration of superficial layers of the skin and the epidermis, which grows from the edges of the wound onto the granulation tissue. Such wound healing requires careful care and frequent dressing changes. The scar left after the wound has healed is large and visible.

# Wound care

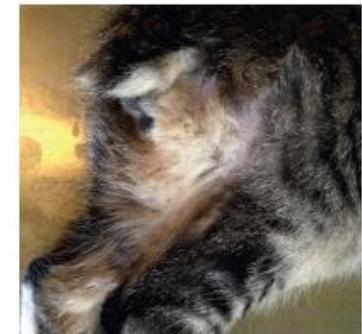
Open wounds, not surgically closed, often go through granulation:



1. Per primam intentionem
2. Per secundam intentionem



1. Rana w fazie oczyszczenia. 2. Rana w fazie naprawczej.



3. Rana w fazie naprawczej. 4. Rana w fazie proliferacji.

1. wound during the cleansing phase
- 2 - 3. wound in the recovery phase
4. wound in the proliferation phase



## Local factors that inhibit the healing process

- Infection in the wound - the presence of necrotic, crushed, foreign bodies, serous or purulent secretions in the wound promotes the development of infection.
- Inadequate blood supply to tissues - lack of oxygen, immune cells, antibodies, energy substrates.
- Wound drying \* - release of granulation and skinning.
- Excessive exudate in the wound \* - proteolytic enzymes, infection.
- Wound injury - antiseptics destroying granulation tissue (iodine and chlorine preparations, spirit), incorrect dressings.

\* Modern dressings prevent drying, drain discharge.



# The best conditions for healing are created

- A moisture environment.
- The right temperature (35-37 ° C).
- A small amount of bacteria and toxins.
- Low pH - about 6, inhibiting the multiplication of bacteria.



# Healing Gel

## Features:

- Ensures proper hydration of the wound.
- Supports cleansing the wound.
- It favors the processes of angiogenesis.
- It has a positive effect on the healing process.



# Healing Gel ingredients

- water,
- betaine,
- chitosan,
- polyhexanide,
- lactic acid,
- Sodium hyaluronate.





# Ingredients

## BETAINE

It is a surface active substance with a mild effect, effectively removes mechanical impurities from the wound area and has the ability to destroy the integrity of the bacterial biofilm.

## POLYHEXANIDE

The polymer with antiseptic properties has a broad spectrum of antibacterial properties: *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Streptococcus faecalis*, *Escherichia coli*, *Pseudomonas putida*, *Klebsiella aerogenes*, including high efficacy against MRSA (*Staphylococcus aureus* strains resistant to methicillin).



# Ingredients

## CHITOSAN

It is a hydrophilic biopolymer with a wide spectrum of properties. It has the ability to activate macrophages and neutrophils; stimulates cellular activity, e.g. fibroblasts, promotes angiogenesis processes and shows antibacterial properties. All the above features make chitosan conducive to the process of wound healing and reduces the formation of scars.

## HYALURONIC ACID

Glycosaminoglycan naturally occurring in the tissues of the whole organism, where it plays an integral role in the extracellular matrix. In the wound healing process, the wound environment is maintained naturally moisturized, supporting vitality and cell migration. Attracts water and nutrients to the wound from surrounding tissues, causes them to concentrate around the wound, which has a positive effect on the wound healing process.



# Ingredients

## LACTIC ACID

It regulates skin cell renewal - stimulates the production of ceramides, thanks to which the skin is moisturized and better protected against too fast aging. Lactic acid removes residual layers of skin and keratinized, dry epidermis. Lactate actively participates in the healing process by activating several molecular pathways that jointly promote angiogenesis. It stimulates the migration of endothelial cells and the formation of tubes in vitro as well as the recruitment of circulating progenitor cells and vascular morphogenesis in vivo.



## Usage

- It is recommended to thoroughly clean the wound before applying the gel.
- Using a tube, squeeze the gel, apply a thin layer (3-5 mm) directly to the wound.
- The frequency of dressing change depends on the procedure, nature and condition of the wound.
- Use as a support element throughout the wound healing process.
- Wash your hands thoroughly before and after use.