

Results from practical studies





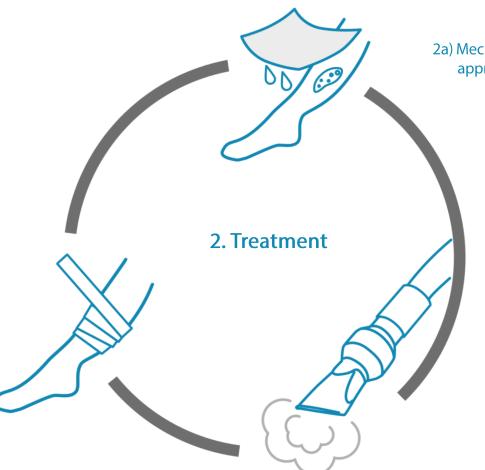
Procedure in the practical studies - treatment of the wound 2x a week

PLASMO®HEAL as an integral part of modern wound care

1. Preparation

- Fill water tank with operating water
- Place disposable applicator on the hose
- Connect the device to the power

2c) Cover with dressing & secondary dressing according to appropriate standard



2a) Mechanical cleaning according to appropriate standard

2b) Application of PLASMOHEAL over 3 minutes at a distance of approx. 5-10 cm from the wound.

3. Post treatment

- Remove applicator
- Clean the hose from the outside by wiping disinfection
- Switch off device



Cold plasma aerosol

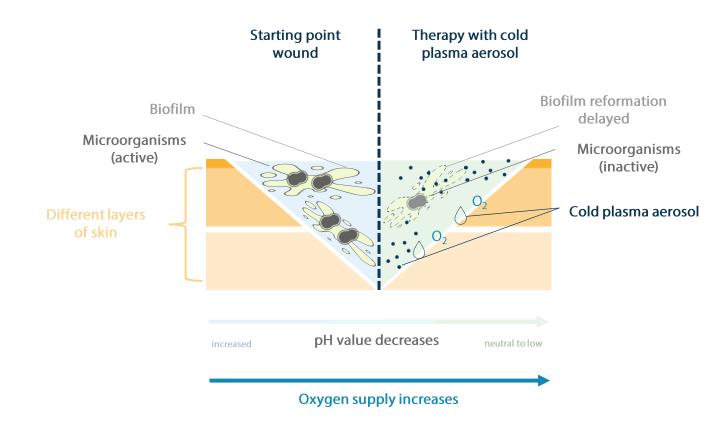
Disinfects the wound & delays the reformation of the harmful biofilm

Starting point wound:

- Tendentially increased pH value provides optimal milieu for pathogenic microorganisms
- Wound bed is covered with biofilm

By therapy with cold plasma aerosol:

- + Microorganisms are eliminated
- + pH value decreases
- + Reformation of biofilm is delayed
- + Better oxygen supply
- + Moist milieu & longer "adhesion" of the cold plasma in the wound





14 weeks after bypass surgery







Day 0

- a lot of exudate (bloody, greenish)
- Wound bed mostly occupied, granulation, adipose tissue
- Infection with Gram bacteria

Day 14

- Decrease in exudate
- Removal of fibrin deposits, granulation
- slightly reddened

Day 28

- Epithelization
- No signs of infection
- → Almost complete wound closure with beautiful scarring



2 weeks after bypass surgery



Day 0

- A lot of exudate
- Wound bed heavily occupied
- Fibrin
- 0.5 cm below skin level



Day 21

- Moderate exudate
- Wound bed mostly clean (little fibrin)
- Granulation up to skin level



Day 28

- Moderate exudate
- Granulation and epithelialization



7 weeks old venous leg ulcer







Day 0

- A lot of exudate
- Redness, amount of exudate, pain
- Wound bed covered
- Redness, slight maceration

Day 14

- Moderate exudate
- Wound bed: slightly occupied, granulation, insertion of epithelialization
- no local signs of infection

Day 28

→ Wound bed almost completely healed
→ Decrease in signs of infection and reduction of the amount of exudate after a short time; Sharp decrease in wound area

Additional therapy: Compression



5 weeks old venous leg ulcer







Day 0

- a lot of exudate (yellowish, cloudy)
- Wound bed covered
- Redness, pain
- Wound area slightly macerated

Day 14

- Exudate moderate
- granulation, significant reduction of wound area
- No more signs of infection

Day 28

Granulation, epithelialization
→ rapid decrease in the wound area,
pain is significantly reduced after the
2nd treatment

Additional therapy: Compression



14 weeks old venous leg ulcer







Day 0

Day 14

Day 28

- moderate exudate
- no epithelialization
- Wound bed slightly covered

- Low exudate
- Mostly epithelialization

Wound bed almost completely healed
→ Almost complete wound closure; Due to rapid reduction of the wound area, quantity of exudate decreases



5 weeks old venous leg ulcer







Day 0

Day 14

Day 28

- little exudate
- occupied wound bed
- local redness

- Wound bed occupied, granulation
- no local signs of infection

→ Rapid reduction of signs of infection; removal of the coverings; Unusually rapid epithelialization almost to wound closure

Additional therapy: Compression



3 weeks old venous leg ulcer







Day 0

- moderate exudate
- dark fibrin deposits, redness

Day 14

- moderate exudate
- wound bed lightly occupied, granulation,
- no local signs of infection

Day 28

→ Rapid decrease in plaque and signs of infection; rapid increase in epithelialization.

Additional therapy: Compression



9 weeks old ulcus cruris arteriosum



Day 0

- moderate exudate,
- Wound bed: necrosis, fibrin, granulation
- Redness and pain



Day 21

- Low exudate
- Wound bed: fibrin, granulation
- No redness and no pain



Day 35

- Low exudate
- Wound bed: granulation, mostly epithelialization

11 weeks old ulcus cruris mixtum



Day 0

- A lot of exudate
- Wound bed: fibrin, granulation
- Wound environment: unstable skin conditions



Day 21

- Low exudate
- Wound bed: fibrin, granulation, epithelialization
- Wound environment: more stable skin conditions



Day 28

- No exudate
- Epithelization
- Skin quality significantly improved

3 weeks old toe ulcer (peripheral arterial occlusive disease stage II)







Day 0

Day 21

Day 35

- Exudate a lot
- Wound bed occupied, necrosis
- Redness, pain
- Infection with Gram bacteria

- Exudate moderate
- No toppings
- Granulation
- No redness, no pain

→ Almost complete wound closure

5 weeks old diabetic ulcer







Day 0

- Exudate moderate
- Fibrin coating, granulation
- Reddening
- The edge of the wound is slightly macerated

Day 14

- Exudate moderate
- Granulation in the wound bed
- No more signs of infection
- Wound area without special features

Day 28

→ Rapid decrease in signs of inflammation and rapid onset of epithelialization



17 weeks old Malum perforans Plant., DM II –

MVZ recommendation: Amputation of the 5th toe strand







Day 0

- Day 14
- a lot of exudate
- Granulation, wound pocket (approx. 2 cm) distal
- Wound edge macerates, surroundings slightly keratinized

- Low exudate
- Large-scale epithelialization, granulation
- no wound pockets, superficial
- Surroundings slightly keratinized

Day 28

→ Complete wound closure

Example 13 (1)

3 weeks after amputation







Day 0

Day 14

Day 28

- Exudate moderate
- Fibrin coating, granulation
- No local signs of infection

- Exudate moderate
- Fibrin coating, granulation and epithelialization

→ After a very short time, reduction of the wound area and increase in epithelialization

Beispiel 13 (2)

Amputation



Day 75

- → Complete healing→ Structured scar tissue

- → No pain→ No sensory disturbances



4 weeks - metal removal after infection of the implant







Day 0

- A lot of exudate
- Redness, pain, smear: staphylococci, streptococci
- Weeping, inflammatory, eczematous
- Wound bed covered

Day 1

- Moderate exudate
- slight redness at the edge of the wound
- significant improvement in the condition of the skin

Day 3

→ After 3 days of use with cold plasma, skin condition is almost normal



3 traumatic injury - skin transplant







Day 0

- moderate exudate
- no epithelialization
- Wound bed covered
- Area: dry, scaly, wound edge edematous

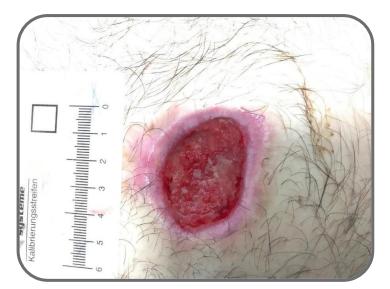
Day 14

- Moderate exudate
- Granulation, epithelialization

Day 28

→ Rapid cleansing, granulation and epithelialization of the wound; Almost complete closure during the observation period

3 weeks old; traumatic due to self-inflicted injury to abdomen







Day 0

- a lot of exudate
- Signs of infection gram sticks
- Approx. 1 cm deep

Day 14

- moderate exudate
- granulation, progressive epithelialization
- no local signs of infection

Day 28

- Granulation, increasing epithelialization, wound area significantly smaller
- Rapid decrease in microbial load; conspicuously rapid epithelialization



Example 17 (1)

2 weeks old wound after removal of squamous cell carcinoma & split skin graft (rejection)







Day 0

- Squamous
- Removal and coverage with mesh graft
- Total detachment of the skin graft

Day 30

- 50 % new epithelium
- Occupied, partly encrusted
- Bony structure palpable

Day 60

- Progressive epithelium and granulation
- Bony structure palpable



Example 17 (2)

Wound after removal of squamous cell carcinoma & split skin graft (rejection)







Day 90

- 75 % epithelialized
- Granulation
- Bony structure palpable

Day 120

- 90% Epithelialized
- Tissue over bony structure

Day 150

- → Further epithelialization
- → Bony structure no longer palpable
- → Almost healed with OWN SKIN



3 weeks post radiation - Vulvar carcinoma





Day 0 Day 9

→ Significant improvement after only four therapy with PLASMOHEAL

5 weeks old decubitus grade III







Day 0

- A lot of exudate
- Wound bed: Fibrin
- Depth: 0.5 cm
- Wound area: macerated & reddened

Day 14

- Low exudate
- Wound bed: granulation, fibrin
- Depth: already skin level
- Wound environment stabilized

Day 21

→ Epithelialization, beautiful scarring



Special example 1

Healing process acne







Day 0 Day 4 Day 10

Initial situation

After 2nd treatment

After 4th treatment

Procedure:

- 1. Apply compress soaked with Actimaris to the skin. Actimaris Forte for 3 minutes or Actimaris sensitive for approx. 10 minutes.
- 2. Place the compress under the nose so that the aerosol is not inhaled.
- 3. Application of PLASMO®HEAL in areas with acne, e.g. on left and right cheek, forehead (3x 3 minutes, 9 minutes in total)
- 4. Daily cleansing with Actimaris sensitive (analog to a facial toner)
- 5. Application of PLASMO®HEAL 2x per week



Special example 2

Healing process acne





Day 0 Day 3

Procedure (daily):

- 1. Cleansing with Actimaris sensitiv (application analogous to a facial toner).
- 2. Place a compress under the nose so that the aerosol is not inhaled.
- 3. Application of PLASMO®HEAL in the areas with acne (here: on the left & right side of the face and on the forehead corresponds to 3 x 3 minutes).

WK-MedTec

Our interdisciplinary team



Marketing & Sales

Isabel Oberbeck





ProductionJens Schwarz

(Sensatronic GmbH)



Medical Advisory Board

u.a. Dr. Jürgen Reiß Dr. Maik Brandes



Nordring 27a | 31675 Bückeburg +49 5722 / 28698964 info@wk-medtec.de



Plasma & Elektronics

Ralf Büker

Become a partner now







Let's rethink hygiene together



Wound therapy

Hand disinfection

Air and surface disinfection