

Spray to heal chronic wounds



Granulox®


Mölnlycke®

All wounds need oxygen to heal

Oxygen is required in all stages of wound healing – especially in chronic wounds¹. This is often overlooked in wound care, causing a delay in healing, unnecessary patient suffering and a significant financial burden on hospitals, care institutions and society.

Granulox® offers an effective method of oxygenating the wound with an intuitive spray that can even be applied in a home setting.

DID YOU KNOW...

...that the wound bed of a chronic wound is often covered by exudate, hindering it from capturing oxygen from the air?

...that most existing oxygenation therapies are complex, inaccessible and costly?

Combating chronic wounds with oxygen

Granulox® is a topical haemoglobin spray with proven benefits, that by means of diffusion provides oxygen to wounds with poor blood supply. It transports oxygen from the surrounding air down to the wound bed to accelerate the healing process.

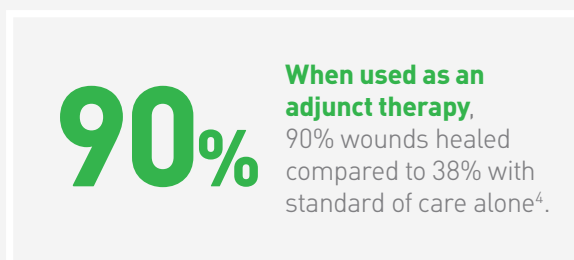
Granulox® acts like a shuttle for oxygen molecules

When Granulox® is sprayed on a wound, highly purified haemoglobin is released. This binds with oxygen from the environment and diffuses through the wound exudate, supplying the wound with oxygen. This process supports wound healing and improves patient outcomes.



Faster healing

Studies show a 50% reduction in time to heal foot ulcers with Granulox². Additionally, there is a 99% reduction in slough in chronic wounds after **4 weeks**, compared to 33% in standard of care³.



Granulox should be used as an adjunct therapy **if a wound is not healing after four weeks of standard care**⁷. It can also be considered earlier for patients at a high risk of delayed wound healing.

Easy to use. For patients too.

The haemoglobin spray takes up fewer resources for both clinicians and patients⁸. Thanks to its simplicity, it also takes up fewer resources than traditional methods of oxygenating wounds – which are usually complex, costly, may reduce patient mobility or require to keep a patient in the hospital.

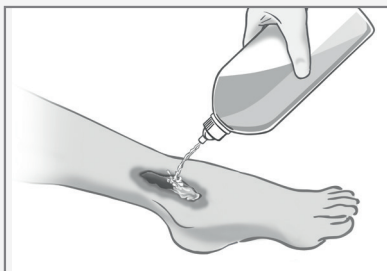
Reduced cost

37% **lower cost of dressings** compared to standard of care alone⁴.

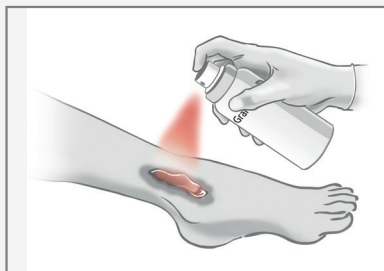
At least 40% **lower treatment costs** in diabetic foot ulcers compared to standard of care⁶.

Application

The application of Granulox[®] can be adjusted to the frequency of changing the corresponding wound dressing. Apply Granulox every time the dressing is changed, at least every 3 days.



1. Clean and debride the wound as clinically appropriate. HOCl/NaCl products (e.g. Granudacyn[®]) are recommended.



2. Spray a thin and even layer of Granulox from 5–10cm distance. One spray for 1–2 seconds covers a wound of 2x3cm.



3. Cover the wound with breathable, non occlusive wound dressing e.g. Mepilex[®], Mepilex[®] XT or Mepilex[®] Border Flex.

M.O.I.S.T. concept

An educational model to help healthcare practitioners feel confident in making well-balanced, independent decisions in the topical treatment of chronic wounds, as well as improving the care that their patients receive. It was developed independently by leading wound care researchers and practitioners at Wund-DACH (the umbrella organisation of German-speaking wound healing societies)⁹.

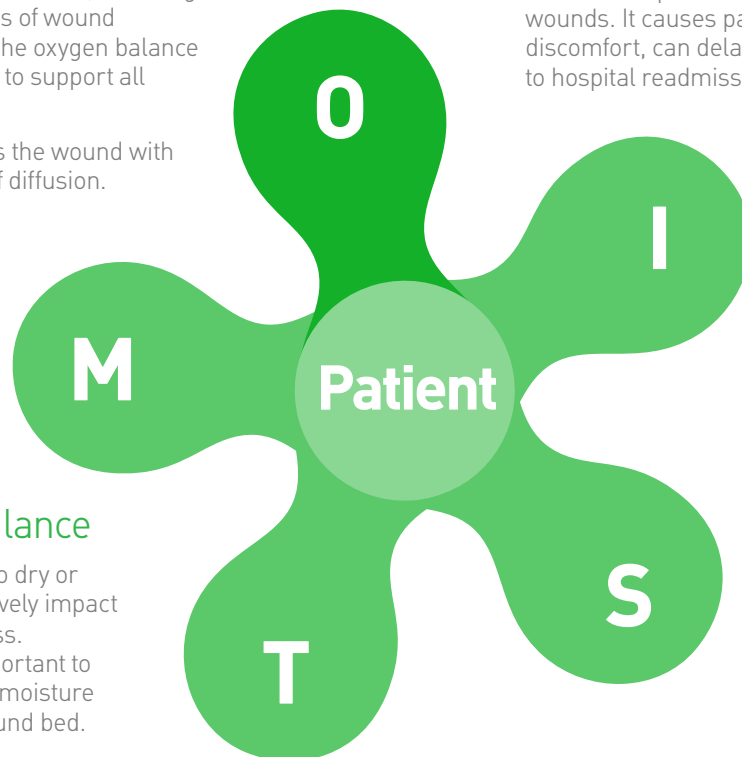
Oxygen balance

It is recognised that oxygen aids the body's metabolic processes, including the complex process of wound healing. Restoring the oxygen balance is a critical element to support all phases of healing.

Granulox® provides the wound with oxygen by means of diffusion.

Infection control

Infection is as an ever-present risk and serious potential complication of chronic wounds. It causes patients additional pain and discomfort, can delay wound healing and lead to hospital readmission.



Moisture balance

A wound that is too dry or too wet will negatively impact the healing process. Therefore it is important to create an optimal moisture balance in the wound bed.

Support the wound bed

When chronic wounds do not heal as expected despite appropriate care, strategies to rebalance the environment inside the wound bed can get healing back on track.

Tissue management

A healthy wound bed is essential to the wound healing process. Cleaning and preparing the wound bed by removing dead cells and tissue can be achieved through different types of debridement.

Product information

Ref. No.	Content	Treatments per can*
360001	12ml	30

* Depending on the size of the wound, one spray for 1–2 seconds is normally sufficient to cover a wound area of 2x3cm.



References:

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2. Hunt, SD, Elg, F. Clinical effectiveness of hemoglobin spray (Granulox) as adjunctive therapy in the treatment of chronic diabetic foot ulcers. *Diabetic Foot & Ankle.* 2016; 7(1):33101. <https://doi.org/10.3402/dfa.v7.33101>.
3. Hunt, SD, Elf, F, Percival, SL. Assessment of clinical effectiveness of haemoglobin spray as adjunctive therapy in the treatment of sloughy wounds. *J Wound Care.* 2018; 27(4): 210-219.
4. Elg, F, Bothma, G. Cost effectiveness of adjunct haemoglobin spray in the treatment of hard-to-heal wounds in a UK NHS primary care setting. *J Wound Care.* 2019; 28(12).
5. Hunt, SD, Elg, F. The clinical effectiveness of haemoglobin spray as adjunctive therapy in the treatment of chronic wounds. *J Wound Care.* 2017; 26(9).
6. Brüggjenjürgen, B, Hunt, SD, Eberlein, T. Wound management in diabetic foot ulcer (DFU) – incremental cost-analysis of treating diabetic neuropathic foot lesions with adjunct hemoglobin contact spray in Germany. *Gesundh ökon Qual manag.* 2017; 22: 1-8.
7. Chadwick, P, et al. Expert panel report: the role of topical oxygen in the management of diabetic foot ulcers. *The Diabetic Foot Journal.* 2019; 8-9019.
8. Granulox CMM Data on file (Ref 2).
9. Dissemond, J, et al. M.O.I.S.T. – a concept for the topical treatment of chronic wounds. *Journal of the German Society of Dermatology.* 2017.

Find out more at www.molnlycke.com

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