

## User Manual

**Woulgan® Bioactive Beta-Glucan Gel** is a treatment for both acute and chronic wounds where wound healing is stalled, or is anticipated to heal slower than normal or is at high risk of becoming stalled. Woulgan has a unique formulation with gel properties and beta-glucan which reactivates stalled healing and accelerates the healing process.<sup>1,2</sup>

It is recommended to initiate Woulgan treatment after 4 weeks with standard care when the response is not satisfactory.

It has been documented that a diabetic foot ulcer showing less than 40% size reduction in 4 weeks has a 91% risk of not healing in 12 weeks<sup>3</sup>.

Additionally, in VLU's a published algorithm suggests that <40% healing in 4 weeks indicates the risk of non-healing with standard care<sup>4</sup>.

### Indications

When wound healing is stalled or is anticipated to be slower than expected in:

- Diabetic foot ulcers
- Leg ulcers
- Pressure ulcers
- Open post-operative wounds
- Partial thickness burns
- Graft and donor sites
- Abrasions and lacerations

### Wound conditions suitable for Woulgan treatment

- Dry to medium exuding.
- Partial to full thickness. Full thickness wounds might not heal with secondary intention.
- Fibrin – up to 75 % of the wound surface can be covered with dry or moist fibrin. The hydrogel properties will dissolve the fibrin.
- Necrosis – the wound can be covered with up to 75% yellow or black necrotic tissue. Before applying Woulgan debride according to local practice.
- Fistulas – Woulgan can be used in fistulas, although some fistulas will not heal without surgery.
- Tendons and bones can be exposed. Woulgan will not harm these structures, but when tendon and bone are visible, the wound might not heal with secondary intention.
- Undermining – can be present.

### Precautions

- The effect of Woulgan might be reduced if the patient is treated with systemic steroids or immune suppressive treatment.
- Infection; a clinical infection should be treated according to local guidelines, but Woulgan can be used in conjunction with antimicrobial therapies.

### Contraindication

- Known allergy to any of the components in Woulgan.

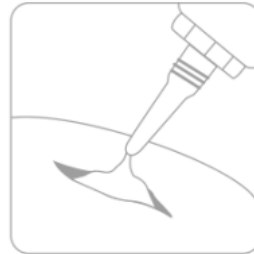
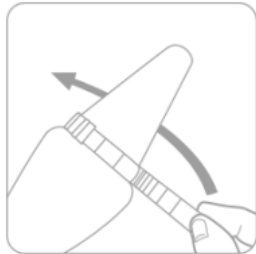
### How to apply

- Wound cleansing according to local practice
- Debride if appropriate
- Protect the wound edges, if applicable
- Cover the wound surface with a thin layer of Woulgan

#### References:

1. Can activation of body's own key cells in wound healing, wound macrophages, make a positive contribution in the treatment of chronic wounds? Ingrid Skjæveland and Rolf E Engstad, SAR, volume 21 no 4.
2. Macrophage stimulating agent soluble yeast B-1,3/1,6-glucan as a topical treatment of diabetic foot and leg ulcers: A randomized, double blind, placebo-controlled phase II study. Zykova et al, Journal of Diabetes Investigation Volume 5, Issue 4 2014.
3. Sheehan P, Jones P, Giurini JM, et al. Percent changes in wound area of diabetic foot ulcers over a 4 week period is a robust predictor of complete healing in 12 week prospective trial. Plast. Reconstr Surg 2006; 117(7 suppl): 239S-244S
4. An evidence based algorithm for treating venous leg ulcers utilizing the Cochrane database of systematic reviews, Howard M Kimmel et al. WOUNDS. 2013;25(9):242-250.

- Apply a suitable secondary dressing of choice and fixate
  - Any foam dressing or wound contact layer can be used
    - Avoid using superabsorbent dressings
- Apply compression or offloading if indicated
- Apply new Woulgan at every dressing change
  - Typically twice per week



### Look for these clinical improvements:

- Cleaner wound bed
- Healthier wound tissue
- Smaller size
- Less depth

### Treatment period

- Reassess after 4 weeks of Woulgan treatment and holistic patient care.
- When improvements are evident, then continue for 4-week periods (or until healed) and reassess.
- If none of the above improvements are seen, consider discontinuing Woulgan treatment.
- If the wound deteriorates, the treatment should be discontinued. Assess possible reasons for deterioration; clinical infection, changes in use of compression/ off loading or changes in use of cleansing agents or cover dressings.
- If the healing progression stalls or plateaus, stop Woulgan treatment and use standard care for a couple of weeks, then start Woulgan again.
- When the wound is almost healed, it can be more practical to revert to a standard dressing.

### Clinical observations when Woulgan is used

- An increase in signs of inflammation can be expected, do not confuse this with infection.
- Sometimes an increase in exudate may occur after a few days.

### Woulgan is not:

- A biofilm remover.
  - But Woulgan can be used after debridement and may prevent new biofilm formation.
- A treatment for infected wounds, if the wound is clinically infected:
  - Treat the infection according to local practice.
  - Woulgan may be used at the same time as long as exudate level is low to moderate.

#### References:

1. Can activation of body's own key cells in wound healing, wound macrophages, make a positive contribution in the treatment of chronic wounds? Ingrid Skjæveland and Rolf E Engstad, SAR, volume 21 no 4.
2. Macrophage stimulating agent soluble yeast B-1,3/1,6-glucan as a topical treatment of diabetic foot and leg ulcers: A randomized, double blind, placebo-controlled phase II study. Zykova et al, Journal of Diabetes Investigation Volume 5, Issue 4 2014.
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