

# Stimulation of Healing of Non-Infected Stagnated Diabetic Wounds by Copper Oxide Impregnated Wound Dressings

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The first clinical trial to evaluate the influence on healing of antibacterial wound dressings impregnated with copper-oxide microparticles.

The trial showed a statistically significant influence of copper dressings on healing (decreased wound size, increased granulation tissue, and decreased fibrin) of non-infected stagnated wounds in diabetic patients

The trial was divided into the three following phases:

- Screening: the patients were treated with standard of care (SOC) dressings
- Treatment: the copper dressing was applied twice weekly
- Follow-up: the patients were again treated with SOC dressings.

Following 1 month of copper dressing treatment, there was:

- Reduction in the mean wound area (53.2%;  $p = 0.003$ )
- Increase in granulation tissue (43.37;  $p < 0.001$ )
- Reduction in fibrins (47.8%;  $p = 0.002$ ).
- In patients with non-weight-bearing wounds, the reduction in wound size was even more dramatic (66.9%;  $p < 0.001$ )

All patients asked to continue being treated with the copper dressing and all non-plantar wounds closed within 1–15 weeks (average  $7.5 \pm 3.5$  weeks) after the completion of the trial.

“.. treating these non-infected, hard-to-heal wounds with COD [copper-oxide dressings] improved all wound-healing parameters, including granulation tissue formation, epithelialization, and wound size reduction. The reduction in wound size was especially dramatic and statistically significant in the non-plantar wounds.”

Melamed, E.; Rovitsky, A.; Roth, T.; Assa, L.; Borkow, G. Stimulation of Healing of Non-Infected Stagnated Diabetic Wounds by Copper Oxide-Impregnated Wound Dressings. *Medicina* 2021, 57, 1129. <https://doi.org/10.3390/medicina57101129>

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