

# EVIDENCE BASED STATEMENT

DOMAIN **8**, Statement **9**

TOPIC: “MEDICAL HONEY EVIDENCE-BASED USE IN CHRONIC VENOUS DISEASE MANAGEMENT”

## SEARCH TERMS & SOURCES

(honey) AND ((vein) OR (ulcer))  
PubMed, Embase and Cochrane Library

## INCLUSION CRITERIA

Indexed Journal, English Language, lower limb  
Reviews, <10 y.

## SEARCH RESULT BEFORE - AFTER SELECTION

65 (before) - 15 (after selection)

## PERTINENT LITERATURE NOT IDENTIFIED BY THE LITERATURE SEARCH

1. Hermanns R, Mateescu C, Thrasyvoulou A, et al. Defining the standards for medical grade honey. J Apicult Res. 2020;59(2):125–35. Hermanns R, Mateescu C, Thrasyvoulou A, Tananaki C, Wagener FA, Cremers NA. Defining the standards for medical grade honey. J Apicult Res. 2020;59(2):125–35.
2. Gethin G, Cowman S. Bacteriological changes in sloughy venous leg ulcers treated with manuka honey or hydrogel: an RCT. J Wound Care. 2008 Jun;17(6):241-4, 246-7.

# EVIDENCE BASED STATEMENT

## Domain 8; Statement 9

### IDENTIFIED REFERENCES

(from the most recent down)

1. Tashkandi H. Honey in wound healing: An updated review. *Open Life Sci.* 2021 Oct 6;16(1):1091-1100.
2. Prasathkumar M, Sadhasivam S. Chitosan/Hyaluronic acid/Alginate and an assorted polymers loaded with honey, plant, and marine compounds for progressive wound healing-Know-how. *Int J Biol Macromol.* 2021 Sep 1;186:656-685.
- 3: Zhang F, Chen Z, Su F, Zhang T. Comparison of topical honey and povidone iodine-based dressings for wound healing: a systematic review and meta-analysis. *J Wound Care.* 2021 Apr 1;30(Sup4):S28-S36.
- 4: Navaei-Alipour N, Mastali M, Ferns GA, et al. The effects of honey on pro- and anti-inflammatory cytokines: A narrative review. *Phytother Res.* 2021 Jul;35(7):3690-3701.
- 5: Talebi M, Talebi M, Farkhondeh T, Samarghandian S. Molecular mechanism-based therapeutic properties of honey. *Biomed Pharmacother.* 2020 Oct;130:110590.
- 6: Rojczyk E, Klama-Baryła A, Łabuś W, et al. Historical and modern research on propolis and its application in wound healing and other fields of medicine and contributions by Polish studies. *J Ethnopharmacol.* 2020 Nov 15;262:113159.
- 7: McNamara SA, Hirt PA, Weigelt MA, et al. Traditional and advanced therapeutic modalities for wounds in the paediatric population: an evidence-based review. *J Wound Care.* 2020 Jun 2;29(6):321-334.
- 8: Siadat AH, Isseroff RR. Prolotherapy: Potential for the Treatment of Chronic Wounds? *Adv Wound Care (New Rochelle).* 2019 Apr 1;8(4):160-167.
- 9: Beers EH. Palliative Wound Care: Less Is More. *Surg Clin North Am.* 2019 Oct;99(5):899-919.
- 10: Niaz K, Maqbool F, Bahadar H, Abdollahi M. Health Benefits of Manuka Honey as an Essential Constituent for Tissue Regeneration. *Curr Drug Metab.* 2017;18(10):881-892.
- 11: Samarghandian S, Farkhondeh T, Samini F. Honey and Health: A Review of Recent Clinical Research. *Pharmacognosy Res.* 2017 Apr-Jun;9(2):121-127.
12. Jull AB, Cullum N, Dumville JC, Westby MJ, Deshpande S, Walker N. Honey as a topical treatment for wounds. *Cochrane Database Syst Rev.* 2015 Mar 6;(3):CD005083.
- 13: Yaghoobi R, Kazerouni A, Kazerouni O. Evidence for Clinical Use of Honey in Wound Healing as an Anti-bacterial, Anti-inflammatory Anti-oxidant and Anti-viral Agent: A Review. *Jundishapur J Nat Pharm Prod.* 2013 Aug;8(3):100-4.
- 14: O'Meara S, Al-Kurdi D, Ologun Y, et al. Antibiotics and antiseptics for venous leg ulcers. *Cochrane Database Syst Rev.* 2014 Jan 10;(1):CD003557.
- 15: Vandamme L, Heyneman A, Hoeksema H, et al. Honey in modern wound care: a systematic review. *Burns.* 2013 Dec;39(8):1514-25.

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## Domain 8; Statement 9

### TEXT FOR INCLUSION IN THE DOCUMENT

(300 words, not counting the references)

DOMAIN 8, Statement 9, TOPIC: “MEDICAL HONEY EVIDENCE-BASED USE IN CHRONIC VENOUS DISEASE MANAGEMENT”

Honey natural medical properties have been considered valuable in wound healing since the Sumerian times, 2000 years before Christ.

**[Molan PC. Potential of honey in the treatment of wounds and burns. Am J Clin Dermatol. 2001;2(1):13–9].**

Honey contains different sugars (fructose, glucose, sucrose and various di and tri-saccharides) and active compounds such as flavonoids, phenolic acid, vitamins, organic acids and enzymes involved in wound healing and anti-oxidant activities. Fibroblasts activity and collagen deposition found to be promoted by honey aminoacids. Its viscosity counteract the bacteria wound infiltration. Its high sugar content creates an osmotic gradient that stimulates the drainage of the accumulate fluids around the ulcer, while offering an energy source for the cellular components involved in tissue restoration. Moreover, tissue oxygenation is favored by the honey low pH of honey. Honey stimulates the production of hydrogen peroxide resulting in an antimicrobial activity as well as in a release of vascular endothelial growth factor (VEGF).

**\*[Tashkandi H. Honey in wound healing: An updated review. Open Life Sci. 2021 Oct 6;16(1):1091-1100].**

Honey properties can vary significantly based on the different types of it. Identifying the proper product is therefore mandatory.

Defining the standards of the validated medical honey is fundamental in order to avoid use of not properly certified products.

**[Hermanns R, Mateescu C, Thrasyvoulou A, et al. Defining the standards for medical grade honey. J Apicult Res. 2020;59(2):125–35]**

Two trials reported a potential benefit in honey use for venous ulcer healing, but a related Cochrane pointed out the fragility of the data, requesting further investigations before coming to solid recommendation.

**[Jull AB, Cullum N, Dumville JC, Westby MJ, Deshpande S, Walker N. Honey as a topical treatment for wounds. Cochrane Database Syst Rev. 2015 Mar 6;(3):CD005083 ].**

Reporting a final conclusion in honey role as topical treatment for improving wound healing is challenging because of the heterogenous nature of both products and study populations.

Honey seems to favor healing in partial thickness burns more quickly than conventional treatment and infected post-operative wounds. Nevertheless, further statements require properly conducted future investigations

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### STATEMENT FOR PUBLIC EVIDENCE-BASED AWARENESS

DOMAIN 8, Statement 9

“Specific topicals containing medical honey demonstrated to be useful in partial thickness burns and infected post-operative wounds, while no robust evidence support their use in other type of lesions at the current moment.”

### 4 SELECTED REFERENCES

1. Molan PC. Potential of honey in the treatment of wounds and burns. *Am J Clin Dermatol.* 2001;2(1):13–9
2. \*Tashkandi H. Honey in wound healing: An updated review. *Open Life Sci.* 2021 Oct 6;16(1):1091-1100
3. Hermanns R, Mateescu C, Thrasyvoulou A, et al. Defining the standards for medical grade honey. *J Apicult Res.* 2020;59(2):125–35
4. Jull AB, Cullum N, Dumville JC, Westby MJ, Deshpande S, Walker N. Honey as a topical treatment for wounds. *Cochrane Database Syst Rev.* 2015 Mar 6;(3):CD005083

### identified LITERATURE BIAS

Different types of honey and heterogenous populations

### SUGGESTED NEXT LINES OF RESEARCH

Specific honey types head to head comparison  
Well projected and conducted RCT trials on VLU healing