

Leptospermum Honey: A Case Study

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Image: <https://www.pestworld.org/pest-guide/stinging-insects/honeybees/>

Objectives



- State medical grade honey history
- Explain medical grade honey mechanism of action
- Compare medical grade honey to other wound care modalities
- Describe a successful use of medical grade honey within a case study format

History of Honey in Wound Healing



- Earliest evidence is on rock paintings and hieroglyphs
- Honey used by Ancient Egyptians, Greeks, and Romans.
- Ancient use included using as a “binder” and mixed with herbs to promote wound healing.

Honey – Mechanism of Action

- Antimicrobial properties due to enzymatic release of peroxide
- Glucose in the honey oxidizes into gluconic acid raising the pH
- Higher pH reduces protease activity which increases O₂ release in the hemoglobin in the wound bed
- Manuka honey has methylglyoxal, an additional antibacterial agent
- Flavenoids and aromatic acids scavenge free radicals in the wound helping reduced/prevent tissue damage and increases tissue oxygenation.



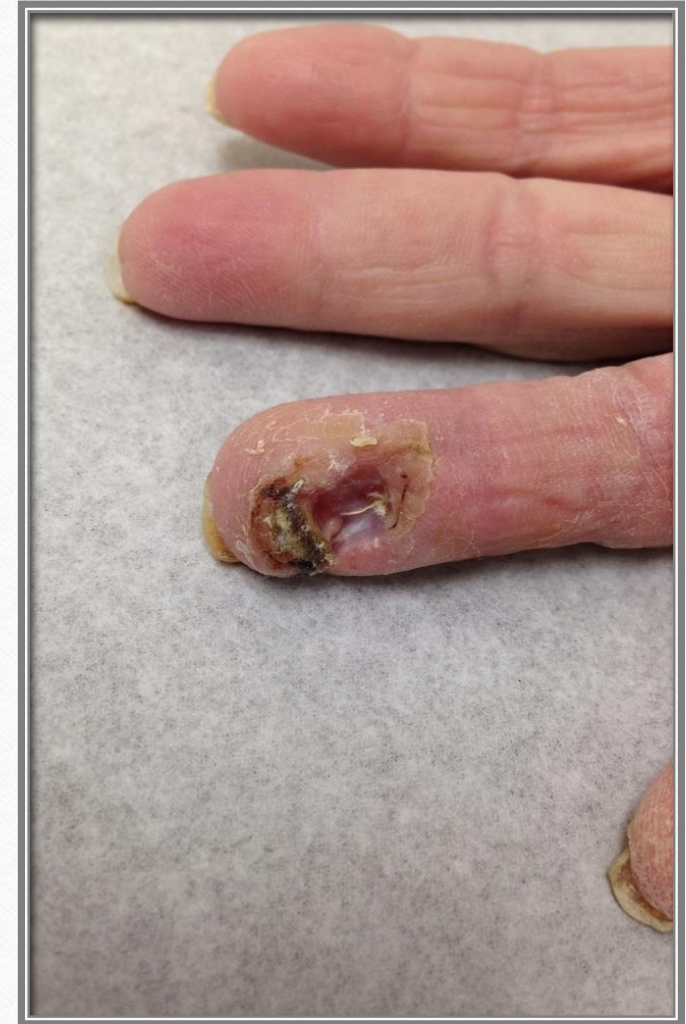
Honey in Wound Healing

- Most study is being targeted at the honey bees in New Zealand who pollinate the *Leptospermum Scopartum* shrubs AKA Manuka.
- Effective against *Staph.*, *E. coli.*, *Pseudomonas a.*, and *Helicobacter pylori.*
- Viscous consistency provides a good barrier.
- Osmotic action "pulls" fluid from underlying tissue.



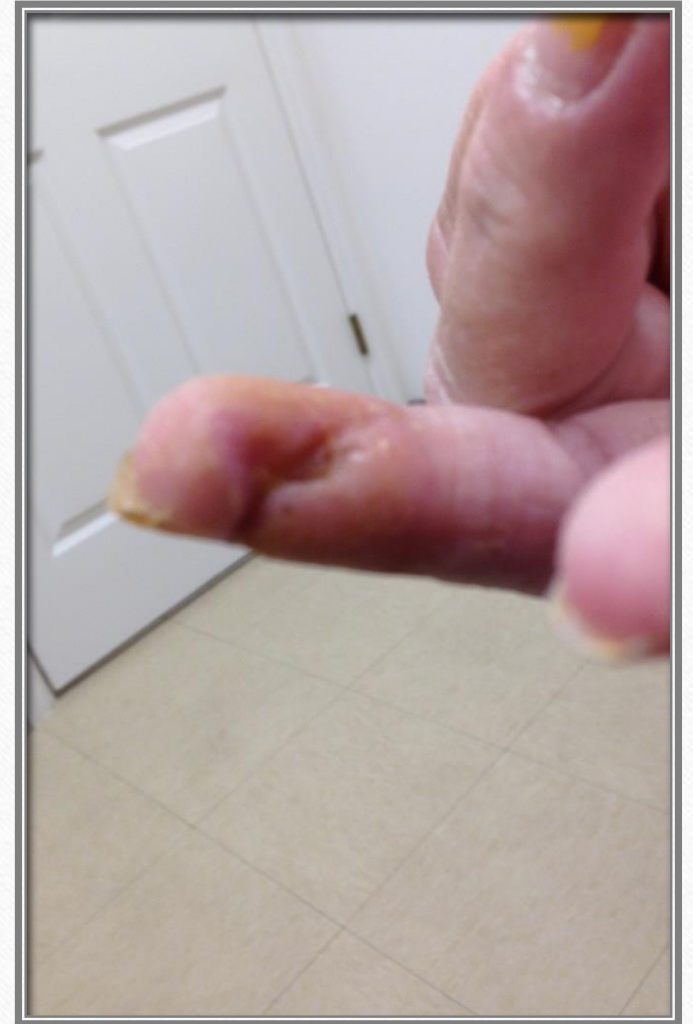
Our Case Study – Patient Background

- Infectious Disease Physician calls asking for a wound care recommendation with a wound and she sends the photo.
- She states the patient pricked herself with a thorn while working in her garden.
- Patient was seen in ED where a surgeon told her that she needed to be surgically debrided. She declined due to lack of insurance.
- The surgeon referred the patient to the ID physician.
- The wound is several weeks old, and failing home treatment.
- I suggested trying a honey gel and covering it for a week and have her return to the ID physician's clinic.



ONE WEEK LATER

- We see great improvement.
- The patient is so impressed and pleased that she did not need to have a surgical intervention.
- She feels the ID Physician saved her thousands of dollars in medical bills.



Honey helps!

Before



After



Reasons to use Honey

- Effective
- Inexpensive
- Antimicrobial
- Natural/homeopathic
- May be used in patients of all ages
- Typically easy to remove and replace dressings



References

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Image: <https://depositphotos.com/121595338/stock-photo-bee-holding-question-mark.html>



Image: <https://www.amazon.com/Chevron-Yellow-Neutral-Folding-Envelopes/dp/B074TMCCQ>