

Wound Healing - Old Solution for an Old Problem

How long has honey been used for wounds?

Paintings on cave walls from over 8,000 years ago have shown people using honey on wounds.¹ Honey has been used throughout time by the Egyptians, Greeks, and Chinese for its ability to help heal wounds and decrease infections.

How does honey work?

Honey allows the wound to stay moist while decreasing the amount of bacteria in the wound. It does this by slightly increasing the acidity in the wound, making it so the bacteria can't grow. Also, the sugar content of the honey is so high that the bacteria cannot survive in it.¹⁻¹³

Honey also helps to decrease the amount of drainage from the wound and swelling around the area by decreasing inflammatory factors, much like anti-histamines do for allergies.^{2,5} By doing these things, it helps to decrease the odor from the wound.^{2,12}

Additionally, it helps the wound heal faster by increasing the blood flow to the area and the growth factors necessary to repair the wound.^{2,5,8,12}

What kinds of wounds does it work for?

Honey has helped the following types of wounds to heal:

- New cuts^{3,11}
- Scrapes¹¹
- Burns on the top layers of the skin^{4,11}
- Open wounds from cancer⁵
- Pressure ulcers⁶
- Ulcers from diabetes^{9,12}
- Non-healing surgical wounds^{9,11}

Do medical experts agree that honey can be used to help wounds heal?

Opinions differ regarding the use of honey. There are many reports in medical journals on the helpfulness of honey to heal wounds.¹⁻¹³ Yet, two highly regarded sources note that there is not yet enough evidence to recommend honey for this purpose.^{11,14} Honey is a promising option for wounds that are healing poorly. If you have a serious wound, please seek medical advice from your clinician.

What type of honey can I use?

All types of honey seem to help wounds heal.¹⁵ Researchers have looked at different types of honey from around the world. Some that have been found to be the most helpful in healing wounds include Manuka honey from New Zealand, Jambhul honey from India, and Tualang honey from Malaysia.¹⁶ Raw honey has been processed the least. It was used in most of the case studies reported in medical journals.¹⁵ Honey that can be purchased at the supermarket has also been found to help wounds heal.^{15,17} The type of honey that is the best studied and understood is Medihoney®. This honey contains honey from New Zealand. It has been processed to remove bacterial spores that can cause wound infections.¹⁻¹³ Medihoney® is available over the counter at most pharmacies. It usually costs around \$19 for 1.5 ounces.¹⁸



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How do I apply honey?

First, run cold water on the wound for 20 minutes. (DO NOT use ice, alcohol or hydrogen peroxide on the wound. These can cause the wound to take longer to heal and even harm the good skin around the wound.³) Remove blisters if larger than 6 millimeters (¼ of an inch). Soak some gauze with the honey wiping off the excess and leave it on the wound for 12-24 hours at a time. You can change the dressing as needed if there is still a lot of drainage. Once the wounds stops draining, the dressing can be left for as long as one week.² If the wound is deeper than the top layer of skin, make sure to get a tetanus shot if you have not had one within the last five years.

What are the side effects?

Depending on how deep and painful the wound is, there may be some discomfort when applying the honey.² Many patients say that it feels soothing once it has been applied. If you are allergic to honey, you should not use it on wounds. There is a possible risk of an infection of the wound if non-FDA honey is used.

Why might I want to try honey instead of antibiotic ointment/cream?

Antibiotic resistance is becoming more common and, as a result, the bacteria are getting harder to treat. Currently, there aren't any bacteria that are resistant to honey – even the ones like MRSA, VRE, and Pseudomonas that are resistant to many of the drugs we use.¹² Honey also helps the wound heal faster, which antibiotic ointments typically will not.^{12,13} It is usually less costly than other creams as well.¹²

How can I learn more about Medihoney®?

You can find more information on Medihoney® at the following website:

<http://www.dermasciences.com/products/advanced-wound-care/medihoney/inside-the-u-s/>

References

1. Bittmann, S, Luchter, E, Thiel, M, Kameda, G, Hanano, R, & Langler, A. Does honey have a role in paediatric wound management? *British Journal of Nursing*. 2010 (Tissue Viability Supplement); 19 (15):S19-S24.
2. Seiter, D. Maggots, honey, and...sildenafil? *Nursing*. 2012 Jan; 42(1):67-8.
3. Brolmann, FE, Ubbink, DT, Nelson, EA, van der Horst, CMAM, & Vermeulen, H. Evidence-based decisions for local and systemic wound care. *British Journal of Surgery* 2012;99:1172-1183.
4. Lloyd, ECO, Rodgers, BC, Michener, M, & Williams, M. Outpatient Burns: Prevention and Care. *American Academy of Family Physicians*. 2012;85(1):25-32.
5. Lund-Nielsen, B, Adamsen, L, Kolmos, HJ, Rorth, M, Tolver, A, & Gottrup, F. The effect of honey-coated bandages compared with silver-coated bandages on treatment of malignant wounds – a randomized study. *Wound Repair and Regeneration*. 2011;19:664-670.
6. Biglari, B, vd Linden, PH, Simon, A, Aytac, S, Gerner, H.J, & Moghaddam, A. Use of Medihoney as a non-surgical therapy for chronic pressure ulcers in patients with spinal cord injury. *Spinal Cord* 2012;50:165-169.
7. Ratcliffe, NA, Mello, CB, Garcia, ES, Butt, TM, & Azambuja, P. Insect natural products and processes: New treatments for human disease. *Insect Biochemistry and Molecular Biology*. 2011; 41:747-769.
8. Al-Waili, NS, Salom, K, & Al-Ghamdi, A. Honey for Wound Healing, Ulcers, and Burns; Data Supporting Its Use in Clinical Practice. *The Scientific World Journal*. 2011;11:766-787.



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References (con't.)

9. Lee, DS, Sinno, S & Khachemoune, A. Honey and Wound Healing: An Overview. *American Journal of Clinical Dermatology*. 2011;12(3):181-190.
10. Song, JJ & Salcido, R. Use of Honey in Wound Care: An Update. *Advances in Skin and Wound Care*. 2011;24:40-4.
11. Jull AB, Walker N, & Deshpande S. Honey as a topical treatment for wounds. *Cochrane Database of Systematic Reviews* 2013, Issue 2. Art. No.: CD005083. DOI: 10.1002/14651858.CD005083.pub3.
12. Moghazy, AM, Shams, ME, Adly, OA, Abbas, AH, El-Badwy, MA, Elsakka, DM, Hassan, SA, Abdelmohsen, WS, Ali, OS, & Mohamed, BA. The clinical and cost effectiveness of bee honey dressing in the treatment of diabetic foot ulcers. *Diabetes Research and Clinical Practice*. 2010;89: 276-281.
13. Malik KI, Malik MAN, Aslam A. Honey compared with silver sulphadiazine in partial-thickness burns. *International Wound Journal*. 2010;7:413–417.
14. Natural Standard. Honey. *Natural Standard® Patient Monograph*, www.naturalstandard.com. Accessed 6/5/2013.
15. Eddy JJ, Gideonsen MD, Mack GP. Practical considerations of using topical honey for neuropathic diabetic foot ulcers: A review. *Wisconsin Medical Journal*. 2008;107(4):187-190.
16. UW Family Medicine. Jennifer Eddy speaks at international conference on medical uses of honey. Board of Regents of the University of Wisconsin System, School of Medicine and Public Health: 2010. Accessed at <http://www.fammed.wisc.edu/our-department/newsletter/spring-2010/medical-uses-honey> on 6/5/2013.
17. Eddy JJ, Gideonsen MD. Topical honey for diabetic foot ulcers. *Journal of Family Practice*. 2005;54(6): 533-535.
18. <http://www.saveritemedical.com/product/medihoney-hydrocolloide-wnd-fill-paste-15oz.html>.

The information in this handout is for general education. It is not meant to be used by a patient alone. Please work with your health care practitioner to use this information in the best way possible to promote your health.

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