

Honey – Nature’s Antibiotic

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You may have noticed that your honey never seems to develop mold or bacterial contamination, even when it isn't refrigerated after opening.

We now know why this is:

Honey has innate anti-microbial (**natural antibiotic**) activity!!

Who knew?

Honey has innate anti-microbial (natural antibiotic) activity!!

Who knew?

Well, it seems that ancient humans knew: For over 2 thousand years humans have used honey applied topically to treat a variety of ailments. Only recently have we found scientific evidence to help understand honey's antibiotic activity.

It is now well established that honey helps inhibit the growth of a wide variety of **bacteria**. There are even honey-containing wound gels that help eliminate the dreaded **MRSA** (see ManukaMedical in resources, below).
Cool.

And you may have heard about the role of **biofilms** in chronic infections (including **rhinosinusitis**)? Well, honey has been shown to be effective in killing **drug-resistant, biofilm-forming** bacteria that are implicated in **chronic rhinosinusitis**, including **MRSA** and **pseudomonas**.

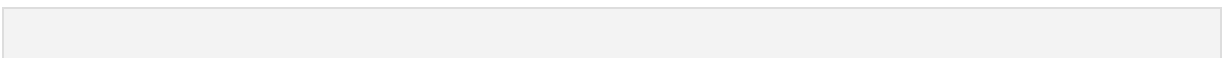
Very cool !!

Why is honey such a great antibiotic?



4 Reasons:

1. **Osmotic effect** – high concentration of 2 monosaccharides (sugars), with low water content – draws water out of bacteria (dehydrates them), making it extremely difficult for them to grow in the presence of honey
2. **Hydrogen peroxide** – the glucose oxidase in honey slowly generates hydrogen peroxide from the sugars; as you know, hydrogen peroxide is an excellent **antiseptic**. Thus, honey is a natural slow-release antiseptic
3. **The acid** - low pH (acidity) of honey naturally prevents growth of bacteria
4. It's got **Mojo**: honey has variable amounts of methylglyoxal (**MGO - let's just call it "mojo"**), which is another natural antibacterial agent



How to use this information:

What does this mean for you or your little one's sinusitis? Well, **adding honey** to your sinus **saline rinses** can be hugely beneficial, especially for those with **chronic** and **recurrent sinusitis**.

In my clinical practice, I recommend this for children who never seem to completely recover from their sinusitis. The addition of honey (along with some other tricks) has proven to be beneficial for these kids.

Check out recent blog post, "[Sinus Rinses: if once/day is good, is 4x/day even better?](#)," for making your own saline rinse recipe that includes Manuka honey.

Alternatively, simply add some honey (same proportions as recipe in blog post) to your store-bought saline solution. Either way, this may be just the ticket to eliminating the bacterial **biofilm** that is causing your (or your child's) chronic sinusitis problem.

Honey is being used now in a variety of wound-care products for difficult-to-heal wounds. Search online for the latest applications in wound care.

Not all honey is created equal:

In fact, the **Manuka** honey from New Zealand, and **Sidr** honey from Yemen, seem to have antimicrobial properties above and beyond your *average* honey. Medicinal-grade Manuka has **more mojo**, and is reported to have other (as yet unidentified) micronutrient agents that act to enhance its antibiotic activity.

Exotic:

Note that these specialty, medicinal honeys can get very pricey. They can be difficult to find locally. The explosion in alternative and natural remedies (like those reviewed on this blog) has increased demand for Manuka honey in the past year. Check the boogor doctor's Amazon Store on the right column (disclaimer: Amazon affiliate) for quality Manuka honey at moderate price (still steep).

Local:

You might try your local farmer's market for more reasonably-priced varieties collected close to home. It is also suggested, though *not proven*, that eating *raw* local honey can help build immune tolerance

to **local** allergens. Though not as potent as Manuka, they will still have antibiotic activity, like all honey does for the reasons outlined above. Also, you will be helping your local economy, and helping an *apiarist* (the term for a beekeeper; beekeeping = apiculture) to stay in business. We won't go into the difficulties that honey bees are having right now, but support them in any way possible.

Summary:

This article does not even touch on the many, many other uses for Manuka honey that are being discovered, or re-discovered. Check some of the resources below for more.

Note that “*pasteurizing*” honey by heating it kills the hydrogen peroxide and any other active enzymes in it. **Therefore, whether using Manuka or locally grown honey, use it raw.**

NOTE: when adding Manuka honey to saline sinus rinse, warm gently to dissolve - over-heating will kill useful enzymes and proteins.

Check the [boogor doctor's Amazon Store](#) (right side of blog) for a couple reasonably-priced (for Manuka) samples of Manuka honey and other resources for doing saline nasal rinses. The Sidr honey from Yemen is much more difficult to obtain, and there is much less scientific medical information available about Sidr honey than there is for Manuka honey.

Thanks for visiting, and see you here again. I appreciate your comments and questions. Keep 'em coming. And please, "be excellent to one another."

If this information was helpful for you, please **subscribe** to my medical education blog:

<http://wp.me/PR4iB-3H>

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Stay informed, stay healthy.

Best of health and success to you and your families.

Until next time, remember ... you can pick your friends, and you can pick your nose, but you can't pick your friend's nose (unless you're a boogor doctor :~D)

Resources:

<http://bio.waikato.ac.nz/honey/special.shtml> for what's so special about Manuka honey.

Effectiveness of honey on *Staphylococcus aureus* and *Pseudomonas aeruginosa* biofilms. Alandejani, et al. (2009). Otolaryngology – Head and Neck Surgery, vol. 141: 114-118.

Honey: nutritional and medicinal value. Khan, et al. (2007) International Journal of Clinical Practice, vol. 61(10): 1705-1707.

A Comparison Between Medical Grade Honey and Table honeys in Relation to Antimicrobial Efficacy: <http://bit.ly/bcv8lO> (Online Journal, WOUNDS; publication date: Feb. 12, 2009)

Great review of honey's history and medicinal uses: <http://digg.com/u1QgOp>

<http://www.benefits-of-honey.com/>

<http://www.manukamedical.com>

<http://www.medicalhoney.com/>

<http://manukahoneyproducts.com/>

How bacteria build a “shield” against your immune system – BIOFILM: <http://bit.ly/2mv2La>