

Manuka Honey

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Manuka honey is derived from bees that feed on the floral source *Leptospermum scoparium*, a native flowering plant in New Zealand and southeast Australia. Manuka honey is claimed to have notable antibacterial effects and is used medicinally in wound care.

PREPARATIONS: Most commonly available as a pot of honey, manuka honey also comes in lozenges, capsules, gels, creams, breast pads, soaps and numerous cosmetic preparations. The unique manuka factor (UMF[®]) is a rating system that indicates the strength of manuka honey compared to the antiseptic potency of phenol. Another grading system is used by Manuka Health New Zealand, which measures the amount of methylglyoxal (MGO[™]) in mg/kg of honey.

COMMON NAMES: Manuka honey is produced by bees from the nectar of the manuka bush, also known as manuka myrtle, tea tree or New Zealand tea tree.

LATIN NAME: *Leptospermum scoparium* (manuka bush).

ACTIVE CONSTITUENTS: The main active antimicrobial properties in manuka honey are attributed to methylglyoxal (MGO) and leptosin. Hydrogen peroxide, a known antibacterial agent, is present in all honey.

MANUFACTURER CLAIMS: Manuka honey is most notably claimed to promote wound healing through its purported antimicrobial activity. Other claims include antioxidant and anti-inflammatory activity, ability to enhance the growth of bifidobacterium, and relief from indigestion and dyspepsia, amongst others.

EVIDENCE FOR EFFICACY: Several studies have indicated that honey expedites the healing process by making the wound environment less favourable for bacteria and destructive proteases. *In vitro* assays have overwhelmingly been positive, with manuka honey inhibiting a large array of problematic pathogens, including MRSA. Furthermore, acquired resistance to honey has

Summary message

Manuka honey has shown significant antimicrobial activity *in vitro*, and has proven superior to most other honey due to its high methylglyoxal content. Although animal and human trials have shown promise, many published studies were of low quality and further research is required to support the use of manuka, and other honey, in wound care. No significant interactions have been documented, but care should be taken with hypoglycaemic agents and honey should not be used by pregnant or breastfeeding women in amounts greater than that found in food. Caution is advised in children under 12 months of age due to the risk of botulism.

Herbal medicines are a popular health care choice, but few have been tested to contemporary standards. **POTION OR POISON?** summarises the evidence for the potential benefits and possible harms of well-known herbal medicines.

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not been reported. Case reports in animal and human studies have shown significant improvement in wound healing with resolution of infection; however there is still a lack of robust clinical data to fully support this. A Cochrane review identifying 26 eligible trials, found that honey healed infected post-operative wounds and partial thickness burns quicker than some conventional dressings, but mostly the studies were of low quality and overall conclusions were difficult to draw.

ADVERSE EFFECTS: Honey that is not irradiated has the potential to be contaminated by *Clostridium botulinum*. While allergy is uncommon, some people with pollen allergies may develop sensitivity reactions to honey. Honey is likely to be safe in food quantities but care should

be taken in pregnancy and breastfeeding due to limited information. Honey is possibly unsafe in infants and children under the age of 12 months due to risk of botulism toxicity.

DRUG INTERACTIONS: Currently there is no evidence of significant drug-drug interactions, although caution is advised in patients using oral hypoglycaemic agents or insulin.

Key references

1. Jull AB, Cullum N, Dumville JC, et al. Honey as a topical treatment for wounds. *Cochrane Database Syst Rev* 2015;(3): CD005083.
2. Carter DA, Blair SE, Cokcetin NN, et al. Therapeutic Manuka Honey: No longer so alternative. *Front Microbiol.* 2016;7:569. doi:10.3389/fmicb.2016.00569
3. Molan P, Rhodes T. Honey: a biologic wound dressing. *Wounds.* 2015;27(6):141–51.

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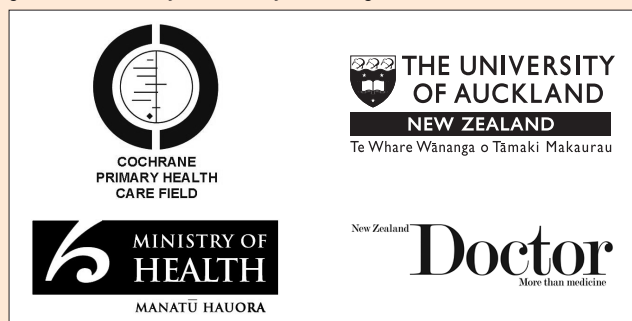
Practical Evidence About Real Life Situations


About Pain

Prepared by Anne Buckley, Medical Editor, for the Cochrane Primary Care Field

PEARLS are succinct summaries of Cochrane Systematic Reviews for primary care practitioners—developed by Prof. Brian McAvoy for the Cochrane Primary Care Field (www.cochraneprimarycare.org), New Zealand Branch of the Australasian Cochrane Centre at the Department of General Practice and Primary Health Care, University of Auckland (www.auckland.ac.nz/uoa), funded by the Ministry of Health (www.health.govt.nz), and published in *NZ Doctor* (www.nzdoctor.co.nz).

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- Limited benefit from NSAIDs for chronic low back pain
 - Over-the-counter analgesics effective for acute postoperative pain
 - Topical NSAIDs effective for acute musculoskeletal pain
 - Topical rubefacients ineffective for musculoskeletal pain
 - No evidence for efficacy of NSAIDs for neuropathic pain
 - Herbal medicines of some benefit for low back pain
 - Caffeine effective as an analgesic adjuvant