

News



Clinical

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Honey eliminates refractory skin-colonizing bacteria

by David Douglas

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NEW YORK (Reuters Health) - Medical grade honey kills antibiotic-resistant bacteria in vitro and eradicates skin colonization in healthy volunteers, Dutch researchers report in the June 1st issue of *Clinical Infectious Diseases*.

Given these findings, senior investigator Dr. Sebastian A. J. Zaat told Reuters Health, "Medical grade honey might be used to prevent or treat infections of skin, burns, catheters and other skin-penetrating medical devices."

Dr. Zaat and Dr. Paulus H. S. Kwakman of Academic Medical Center, Amsterdam, and other colleagues note that few new antibiotics are being developed and the frequency of antibiotic-resistant bacteria is increasing.

They add that honey has been used since ancient times to successfully treat infected wounds. Moreover, there have been no reports of microbial resistance to honey. However, large variation in the antibacterial property of various honeys has hampered current medical acceptance.

To investigate further, the researchers used the medical grade honey Revamil (Bfactory) which is produced in greenhouses under standardized conditions.

In tests using 11 batches of the honey, the team found a less than twofold batch-to-batch difference in bactericidal activity against *Bacillus subtilis*.

The researchers also established that antibiotic-susceptible and antibiotic-resistant isolates of *Staphylococcus aureus*, *S. epidermidis*, *Enterococcus faecium*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Enterobacter cloacae*, and *Klebsiella oxytoca* were killed within 24 hours after incubation with the honey.

To examine the potential to decrease microbial skin colonization, the investigators studied 42 volunteers in whom two patches of skin on the left forearm 2 cm in diameter were sampled. Honey was applied to one of the patches and both were covered by dressings.

After application for 48 hours, the extent of skin colonization was reduced 100-fold. Moreover, 81% of the honey-treated skin patches yielded negative skin culture results compared to 21% of control patches.

Following these encouraging results, continued Dr. Zaat, "We are presently investigating whether honey can be used to prevent line sepsis in intensive care patients. This potentially life-threatening infection is often caused by bacteria from the skin, which can be eradicated with honey."

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