

## Doctors Unlock Healing Power of Honey

When a barefoot John Collins stepped outside his New Zealand home last spring and suffered a quarter-inch gash on his left foot, he had no idea he'd be walking into a new world of medical research rooted in an ancient natural remedy. But first, things got worse, not better, for the 52-year-old automotive diesel engineer. His wound became infected. Then gangrene set in. Two of Collins' toes were amputated, along with part of the ball of his foot. And conventional antibiotics couldn't clear the wound of a bacterium that was causing his gangrene.

Then Collins heard that his local community health center was conducting experimental trials with unadulterated bee honey to treat wounds—specifically manuka honey, which is native to New Zealand. “It does sting a little bit,” says Collins, “but it was very effective. It keeps the wound very clean.” Within six months, Collins had few problems with the bacteria infecting his foot, the wound started to heal, and he reduced his use of antibiotics by about 90 percent.

The idea of honey as medicine isn't new. It has been used for more than 4,000 years as a folk medicine to treat a wide range of ailments, from wounds to digestive problems. But now, scientists and doctors are beginning to unlock honey's medicinal secrets. They're discovering that applying honey directly to wounds and burns may be the best way to help the body heal itself, while protecting it from infection.

### Big Research Down Under

At the same time, research is revealing that honey has potential as an antibiotic—so much so that somebody it may be used with powerful drugs like methicillin and vancomycin to treat bacteria that causes food poisoning, strep throat, and even flesh-eating disease. At the forefront of honey research is Peter Molan, a biochemist at the University of Waikato in Hamilton, New Zealand. He's looked at more than 30 different types of honey found in New Zealand. But folk medicine and laboratory tests agree that manuka honey, which bees make from the nectar of the manuka bush, is the best antiseptic. When honey is diluted with fluids like the blood in a cut, the fluid combines with an enzyme added by bees to produce hydrogen peroxide—the same substance you can buy at a pharmacy to disinfect wounds.

What Molan found is that when honey is applied full strength to a wound, and combines with fluid from damaged tissues, it slowly releases hydrogen peroxide in far lower concentrations than commercial antiseptics—“not enough to cause any damage or inflammation.”

An unknown component in honey also appears to stimulate skin growth, cutting back the need for skin grafts. And honey is fairly acidic, which creates a hostile environment for bacteria. In fact, a 1993 study in the British journal *Lancet* described how skin grafts could be stored in honey for up to 12 weeks with an 80 percent success rate when the skin was finally grafted.

### A Bacteria Buster

Bolstered by clinical traits, the use of honey as medicine is blossoming in Australia and New Zealand. Active manuka honey is being tested on leg ulcers, diabetic foot ulcers, bedsores, eye infections and burns, with encouraging results.

Across the Tasman Sea, Craig Davis, a biochemist at the Centre for Food Technology in Brisbane, Australia, is focusing on honey's antibacterial properties, which may explain why honey can kill bacteria like the one that causes flesh-eating disease. Davis has found honey that killed 100 different strains of methicillin-resistant *Staphylococcus aureus*—a “superbug” that has closed hospital wards. Davis has also determined that manuka honey, at a 5 percent concentration, can kill *enterococci*, a bacterium resistant to vancomycin—an antibiotic of last resort. This could pave the way for the use of honey in tandem with existing antibiotics to combat aggressive bacterial infections. “People who are looking for natural medicines are keen to use it,” Molan says. In New Zealand and Australia, it's now officially registered as a medicinal therapy. “Even people who don't want to use complementary medicines are still interested” in honey, he says.

### What To Do

Keep in mind that the honey used for medicinal purposes has not been heated or pasteurized, which would destroy certain antibacterial elements. The honey you can buy at the supermarket has been treated this way to extend its shelf life. And it's not made from the manuka bush.

For more information on honey's medicinal uses, check the *American Apitherapy Society*, the *Centre for Food Technology* or the *University of Waikato Honey Research Unit*.