

# Honey, an Old Remedy Creating a New “Buzz” in Wound Care

BY Catherine Harley

For centuries, honey has been used as an effective treatment for leg ulcers, pressure ulcers, diabetic ulcers, burns and infected acute wounds.<sup>1,2</sup> In more recent years, however, honey has fallen out of favour in mainstream medical care.

*There are many features in honey that, in combination, contribute to its anti-microbial properties.*

With clinical evidence mounting on the use of honey in wound management, several manufacturers are ready to launch, or are developing, various types of honey-based wound dressings. So the use of honey in wound treatments may be closer than you think.

The main components of honey are glucose (40 per cent) fructose (40 per cent) and water (20 per cent); it also contains amino acids.<sup>3</sup> Research has shown that wounds treated with honey have resulted in debridement of necrotic tissue, clean wound beds, reduction of edema, growth of granulation tissue and re-epithelialization.<sup>3,4</sup> A major benefit of honey, however, has been the antimicrobial effect that it appears to have when used

in the wound bed.<sup>5</sup>

It has been established that honey inhibits a broad spectrum of bacterial species, and reports have shown both bacteriocidal as well as bacteriostatic activity.<sup>6</sup> The antibacterial activity can be explained through the following mechanisms of action. Honey has a high osmolarity due to the fact that it is a saturated or supersaturated solution of sugars that have a powerful interaction with water molecules. The lack of “free water” helps to inhibit the growth of micro-organisms. Honey has an acidic pH that ranges between 3.2 and 4.5. This acidic pH assists in inhibiting bacterial growth. The literature shows, however, that there are different sources for honey around the world and that not all types of honey have the same bacteriocidal action.<sup>7</sup> Honey from Manuka trees (*Leptospermum scoparium*) in New Zealand has been shown to have a high level of phytochemicals that have an antibacterial mechanism.<sup>7,8</sup> Generally, honey is used only when the wound is non-responsive to conventional anti-bacterial treatment with systemic antibiotics and antiseptics. Studies have shown that recalcitrant wounds



respond well to honey-based dressings.<sup>3</sup> When using honey in wound care, it is important that a sterilized, laboratory-tested, medical-grade honey cleared commercially for medicinal purposes be selected.<sup>1</sup>

Modern wound-care dressings containing honey may be part of a combination product—for example, with an alginate or hydrogel, or in an amorphous gel format. Additional controlled research is warranted, particularly studies pertaining to validating cost effectiveness. Future watchers need to keep an eye out for the new “buzz” on an old remedy. 🐝

*references listed on page 47*

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1) Principles of best practice: Minimising pain at wound dressing-related procedures.  
A consensus document. London: MEP Ltd, 2004 Downloadable on [www.tendra.com](http://www.tendra.com)  
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