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## Management of superficial burn injuries

*Sandeep Moola. Evidence Summaries - Joanna Briggs Institute. Adelaide: Oct 22, 2009.*

1 pgs

### Abstract (Summary)

This Evidence Summary answers the question: What is the best available evidence regarding the management of superficial burn injuries?

### Full Text

(597 words)

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#### [Headnote]

Superficial burns, treatment, dressings, antimicrobial, guaze, honey, first-degree burn, 1st degree burn, aloe vera, Diclofenac-Na

#### QUESTION

What is the best available evidence regarding the management of superficial burn injuries?

#### CLINICAL BOTTOM LINE

A superficial burn injury involves only the epidermal layer of the skin and it can progress to a deeper burn if the wound becomes infected.<sup>1</sup> These types of burn injuries can be managed safely and heal without the necessity for surgical intervention.<sup>1</sup>

In a systematic review, it was found that dressing superficial burn wounds with hydrogels, silicon coated dressings and antimicrobial dressings was more effective when compared to dressing with silver sulphadiazine and chlorhexidine impregnated guaze dressings in terms of rapid healing.<sup>1</sup>(Level I)

In patients presented to the emergency department with superficial burns, it was found that topical morphine sulphate was not as effective in reducing pain associated with superficial burns when compared to pain associated with chronic inflammatory wounds.<sup>2</sup>(Level II)

A systematic review conducted to determine the efficacy of honey in superficial burn wound management provided conclusive evidence that honey was effective in treating

superficial burn wounds in terms of producing significantly more healing at 15 and 21 days than alternative dressing treatments.<sup>3</sup>(Level I)

A systematic review that compared aloe vera to conventional treatments such as vaseline gauze and silver sulphadiazine cream in the management of superficial burns concluded that aloe vera in various dosage forms was effective in increasing the rate of success of healing and speeding up the wound healing process.<sup>4</sup>(Level I)

Diclofenac-Na 0.1% gel when compared to vehicle Emulgel effectively reduced pain and redness resulting from acute first-degree natural sunburns. In addition, diclofenac-Na 0.1% gel was found to be safe and soothing.<sup>5</sup>(Level II)

## CHARACTERISTICS OF THE EVIDENCE

This evidence summary is based on a structured search of the literature and selected evidence-based health care databases. The evidence in this summary comes from:

A systematic review including 26 randomised controlled trials (RCTs) with poor methodological validity and small sample sizes.<sup>1</sup>

A randomised controlled trial including 49 patients.<sup>2</sup>

A systematic review and meta-analysis of eight RCTs with low methodological quality and validity.<sup>3</sup>

A systematic review including four controlled clinical trial with low methodological quality and small sample sizes.<sup>4</sup>

A randomised, double-blind controlled trial including 172 subjects.<sup>5</sup>

## BEST PRACTICE RECOMMENDATIONS

Superficial burn wounds dressed with hydrogels, silicon coated and antimicrobial dressings heal rapidly. (Grade B)

Honey is effective in treating superficial burn wounds as it promotes rapid healing when compared to alternative dressing treatments. (Grade A)

Aloe vera in various dosage forms is effective in the management of superficial burns. (Grade A)

Diclofenac-Na 0.1% gel reduces pain and redness in acute first-degree natural sunburns. (Grade B)

[Reference]

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Cochrane Database Syst Rev. 2008; 4. (Level I)  
Welling A. A randomised controlled trial to test the analgesic efficacy of topical morphine on minor superficial and partial thickness burns in accident and emergency departments. Emerg Med J. 2007; 24(6):408-12. (Level II)  
Wijesinghe M, Weatherall M, Perrin K, Beasley R. Honey in the treatment of burns: a systematic review and meta-analysis of its efficacy. N Z Med J. 2009; 122(1295):47-60. (Level I)  
Maenthaisong R, Chaiyakunapruk N, Niruntraporn S, Kongkaew C. The efficacy of aloe vera used for burn wound healing: a systematic review. Burns. 2007; 33(6):713-8. (Level I)  
Magnette J, Kienzler JL, Aleksandrova I, Savaluny E, Khemis A, Amal S, et al. The efficacy and safety of low-dose diclofenac sodium 0.1% gel for the symptomatic relief of pain and erythema associated with superficial natural sunburn. Eur J Dermatol. 2004; 14(4):238-46. (Level II)

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## **Indexing (document details)**

**Subjects:** Evidence-based medicine, Medical research, Clinical trials, Systematic review, Burns, Skin, Burn treatment

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**Document types:** Evidence Summaries

**Publication title:** Evidence Summaries - Joanna Briggs Institute. Adelaide: Oct 22, 2009. 1 pgs

**Source type:** Report

**ProQuest document ID:** 1937746971

**Text Word Count** 597

**Document URL:** <http://proquest.umi.com/pqdweb?did=1937746971&sid=3&Fmt=3&clientId=23922&RQT=309&VName=PQD>