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## Q / What treatments relieve painful heel cracks?

### EVIDENCE-BASED ANSWER

**A** / Emollient cream may alleviate pain and dryness and improve the appearance of heel cracks (strength of recommendation [SOR]: **B**, one small randomized trial).

Foot soaks followed by mechanical debridement and topical petrolatum may decrease the depth of cracks and thickness of calluses in patients with leprosy (SOR: **C**, 1 small cohort study).

Keratolytic agents, such as salicylic acid, may reduce hyperkeratosis, cracks, and pain (SOR: **C**, one case-control study).

Cyanoacrylate tissue adhesives, such as Superglue or Krazy Glue, may reduce pain and speed closure of heel cracks (SOR: **C**, one case series). Maintenance therapy with emollients and appropriate footwear also may help heel cracks (SOR: **C**, expert opinion).

### Evidence summary

In a randomized, double-blind study, 58 patients with heel cracks applied one of 2 emollients twice daily.<sup>1</sup> After 4 weeks of treatment, both groups reported improved scores for pain, appearance, and dryness (using a clinical xerosis score) and also skin scaling and desquamation (using a D-Squame score). Both groups reported improvement, but investigators didn't say in the research abstract whether it was statistically or clinically significant.

#### In plain or soapy water, foot soaks seem to help

To compare foot soaks in plain and soapy water, a prospective cohort study enrolled 15 leprosy patients who had callosities and heel cracks.<sup>2</sup> Investigators graded the severity of the callosities and cracks clinically and photographically on a 0 to 4 scale (0=no cracks or calluses; 4=deep cracks and thick calluses). Each day, patients soaked one foot in plain water and the other in soapy water for 20 minutes, debrided both feet with a clay tool, and covered the soles with petrolatum.

By Day 7, both groups improved by more

than one clinical grade. Soap soaks appeared to raise scores more than plain water, but the investigators reported no statistical comparisons. The study was limited by its size, lack of controls, and inability to generalize results to patients without leprosy.

#### Salicylic acid cream also brings improvement

One case-control study of 2 women found that 6% salicylic acid controlled-release cream improved hyperkeratosis, heel cracks, and pain after one or 2 weeks. The women treated one foot and used the other as a control.<sup>3</sup> The investigator was blinded as to which foot was treated and used photographs to evaluate improvement over time. This study was limited by its size and short duration.

#### Tissue adhesive keeps it together

A case series involving 10 people with 14 heel cracks suggests that Super Glue may reduce pain and speed closure.<sup>4</sup> Patients applied 2 to 3 drops of glue along the length of each crack and held the edges together for 60 seconds. After 5 to 7 days, 12 of the 14 cracks remained closed and pain free. Investigators then in-

structed patients to begin mechanical debridement.

## Recommendations

Expert recommendations for treating heel cracks include the use of keratolytics, emulsifying ointments, silver nitrate, and 10% glycerol in sorbolene cream, along with treatment of any underlying conditions.<sup>5-7</sup> The New Zealand Dermatological Society recommends proper fitting shoes and daily moisturizers to prevent skin cracks. To treat cracks, the Society recommends keratolytics, debridement, strapping or heel cups to redistribute the weight on the heel, and tissue glue.<sup>8</sup> **JFP**

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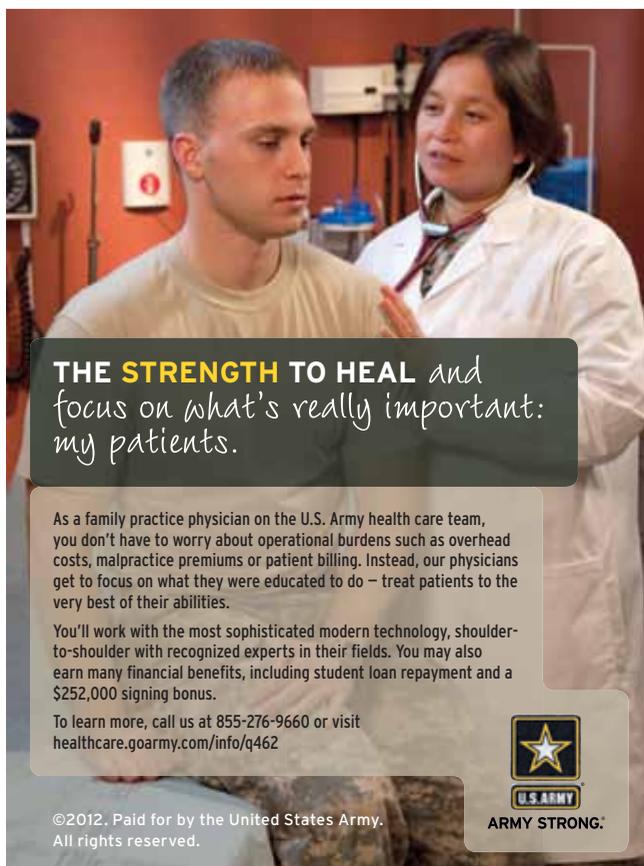
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