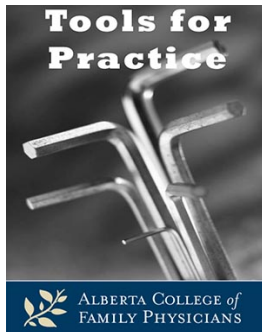


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## Healing the Heel: Corticosteroid shots for plantar fasciitis

**Clinical Question: Are corticosteroid injections effective for plantar fasciitis?**

**Bottom-line: Small, randomized controlled trials (RCTs) demonstrate that corticosteroid injections significantly reduce plantar fasciitis pain for 1 in 3 people at four weeks. Benefit beyond 12 weeks has not been well demonstrated. Risk of rupture is likely less than what has been reported in observational studies.**

### Evidence:

- Two double-blind, RCTs:
  - 65 patients, randomized to ultrasound guided corticosteroid (20 mg methylprednisolone acetate), palpation guided corticosteroid, or ultrasound guided placebo:<sup>1</sup>
    - Significant mean improvement in pain score on 100 point Visual Analogue Scale (VAS) for both steroid groups at six and 12 weeks, respectively:
      - Ultrasound guided steroid: 28.9, 33.6.
      - Unguided steroid: 35.2, 37.3.
      - Improvement with Placebo: 5.1, 2.2.
    - Minimal clinically important difference (MCID) for VAS ~12.<sup>2</sup>
    - Limitations: Small size, follow up only 12 weeks.
    - No adverse events (i.e. rupture) reported.
  - 82 patients, randomized to ultrasound guided corticosteroid (4 mg dexamethasone sodium phosphate) versus placebo:<sup>3</sup>
    - Significant mean improvement in pain on 100 point questionnaire at four weeks:
      - Corticosteroid: 22.1 points.
      - Placebo: 11.7 points.
        - MCID for questionnaire=13 points.<sup>4</sup>
      - Number Needed to Treat (NNT) for one successful outcome for pain=3.

- Trend towards improvement at eight and 12 weeks (corticosteroids better by 5.6 and 5.3 points on 100 point scale respectively) but not statistically significant.
- No adverse events (i.e. rupture) reported.

**Context:**

- Plantar fasciitis is a self-limiting condition and will generally resolve within one year regardless of treatment.<sup>5</sup>
- Concerns regarding plantar fascia rupture with corticosteroid injections are frequently cited<sup>6</sup> with estimates ranging from 2.4%<sup>7</sup> to 10%.<sup>8</sup> These estimates are observational rates of patients referred to specialty care centers and not necessarily reflective of primary care.
- A systematic review of five RCTs (149 patients) comparing ultrasound versus palpation guided corticosteroid injection for plantar fasciitis reported no difference in VAS scores [Standard Mean Difference = -0.35, 95%CI (-0.83, 0.14)].<sup>9</sup> No incidence of rupture was reported for the 149 patients receiving injection.

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**Disclosure:**

Authors do not have any conflicts to disclose.

**References:**

1. Ball EM, McKeeman HM, Patterson C, *et al.* Ann Rheum Dis. 2013; 72:996-1002.
2. Kelly AM. Emerg Med J. 2001; 18:205-7.
3. McMillan AM, Landorf KB, Gilheany MF, *et al.* BMJ. 2012;344:e3260.
4. Landorf KB, Radford JA, Hudson S. J Foot Ankle Res. 2010; 3:7.
5. Crawford F, Thomson C. Cochrane Database Syst Rev. 2003; 3:CD000416.
6. Sellman JR. Foot Ankle. 1994; 15:376.
7. Kim C, Cashdollar MR, Mendicino RW, *et al.* Foot Ankle Spec. 2010; 3:335-7.
8. Acevedo J, Beskin J. Foot Ankle Int. 1998; 19:91-7.
9. Li Z, Xia C, Yu A, *et al.* PLoS One. 2014; 9:e92671.

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