

**Sheridan L, Lopez A, et al. Plantar fasciopathy treated with dynamic splinting: a randomized controlled trial. J Am Podiatr Med Assoc 2010;100(3):161-5.**

Design: Randomized clinical trial

Study question: Is a dynamic splint an effective treatment for plantar fasciopathy?

Population/sample size/setting:

- 60 patients (14 men, 46 women, mean age 49.5) treated for plantar heel pain at clinics in California, Texas, and Georgia
- Inclusion criteria were preexisting pain on the bottom of the heel for more than 3 months, worse on arising, increasing across several months, and made worse by walking barefoot on hard surfaces or by walking up stairs, and nocturnal pain
- Exclusion criteria were Achilles tendon injury, acute traumatic rupture of the plantar fascia, calcaneal bursitis, calcaneal neuritis or stress fracture, lumbosacral radiculopathy of the S1 nerve root, retrocalcaneal bursitis, and tarsal tunnel syndrome

Interventions:

- All patients had standard care with NSAIDs, orthotic devices, and corticosteroid injections if required
- Randomized to standard care (n=30) or to a dynamic ankle dorsiflexion splint (n=30)
  - o Dynamic splint was fit in a way customized to the patient's foot length, girth, and varus/valgus alignment
  - o Patients were instructed on wear, care, and protocol for use of the splint, beginning with 4 hours of use on the first day and increasing to 6-8 hours continuously at night for 12 weeks
  - o Tension was initially set at 2 foot-pounds of torque, but later adjustment arrangements are not described

Outcomes:

- At baseline and again at 12 weeks, scores were compared on the 100 point Plantar Fasciopathy Pain/Disability Scale
- The mean change score (improvement) in the splint group was 33 points, compared to 2 points for the control group

Authors' conclusions :

- The study shows the efficacy of dynamic splinting for plantar fasciopathy
- A low-load, prolonged-duration stretch with dynamic tension should be considered an integral addition to the standard of care in treating plantar fasciopathy

Comments:

- Much basic information is missing, including a comparison of baseline values on patient characteristics, a description of the uses of the control interventions, and a description of the patterns of use of the splint, including whether it was well-tolerated and whether there were adverse events with its use
- The authors are the developers of the outcome instrument, which is not a standardized outcome measurement instrument
- At least one of the authors is employed by the device manufacturer and a conflict of interest is likely

Assessment: inadequate for evidence of the effectiveness of dynamic splinting for plantar fasciopathy