

Specific question:

In adults with plantar heel pain (plantar fasciitis), are gel insoles more effective than customised (functional) orthotics for reducing pain?

Clinical bottom line

At present, there is insufficient good quality evidence to state that gel insoles are more effective than customised functional orthotics in reducing symptoms of plantar heel pain in adults.

Why is this important?

Local and national clinical care pathway suggests gel heel pads are effective for this condition; this advice tends to be followed by local GPs. However, NICE published a clinical knowledge summaries update in March 2020 on Plantar Fasciitis, suggesting that adults should “wear shoes with good arch support and cushioned heels (such as laced sports shoes) and avoid walking barefoot. Consider purchasing insoles and heel pads to insert in their shoes, with the aim of correcting foot pronation. Advise that 'magnetic' devices should be avoided” (<https://cks.nice.org.uk/plantar-fasciitis#!scenario>). Anecdotally, Podiatrists tend to prescribe bespoke functional insoles for this condition. As clinicians, it is important that we have the latest up to date, best evidence to inform our treatment choices.

Gel insoles are made of thermoplastic, can be full length or supplied as heel cushions.

Customised functional orthoses are devices that have been adapted to the patient's requirements, these can be off the shelf devices with additions added or prescribed devices that have been made from a cast of the patient's feet.

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27/04/2021

Search timeframe: 2000-2020

Inclusion criteria

	Description	Search terms
Population and Setting	Adults with plantar heel pain	Adult , plantar fasciitis, heel pain, plantar heel pain, plantar fasciopathy, policeman's heel, postman's heel, plantar fasciosis.
Intervention or Exposure	Functional/corrective orthoses e.g. anti-pronatory orthoses	Biomechanical correction, orthotics, insoles , biomechanics, gait corrected inlays, foot orthoses, anti-pronation, biomechanical assessment.
Comparison, if any	Gel insoles	Gel insoles, cushioned insoles, foam insoles, gel pads, foam pads, cushioned trainers, heel pads.
Outcomes of interest	Pain (VAS)	Pain (VAS), pain (walking), length of symptoms, quality of life, heel pain tenderness.
Types of studies	RCTs and systematic reviews	

Routine databases searched

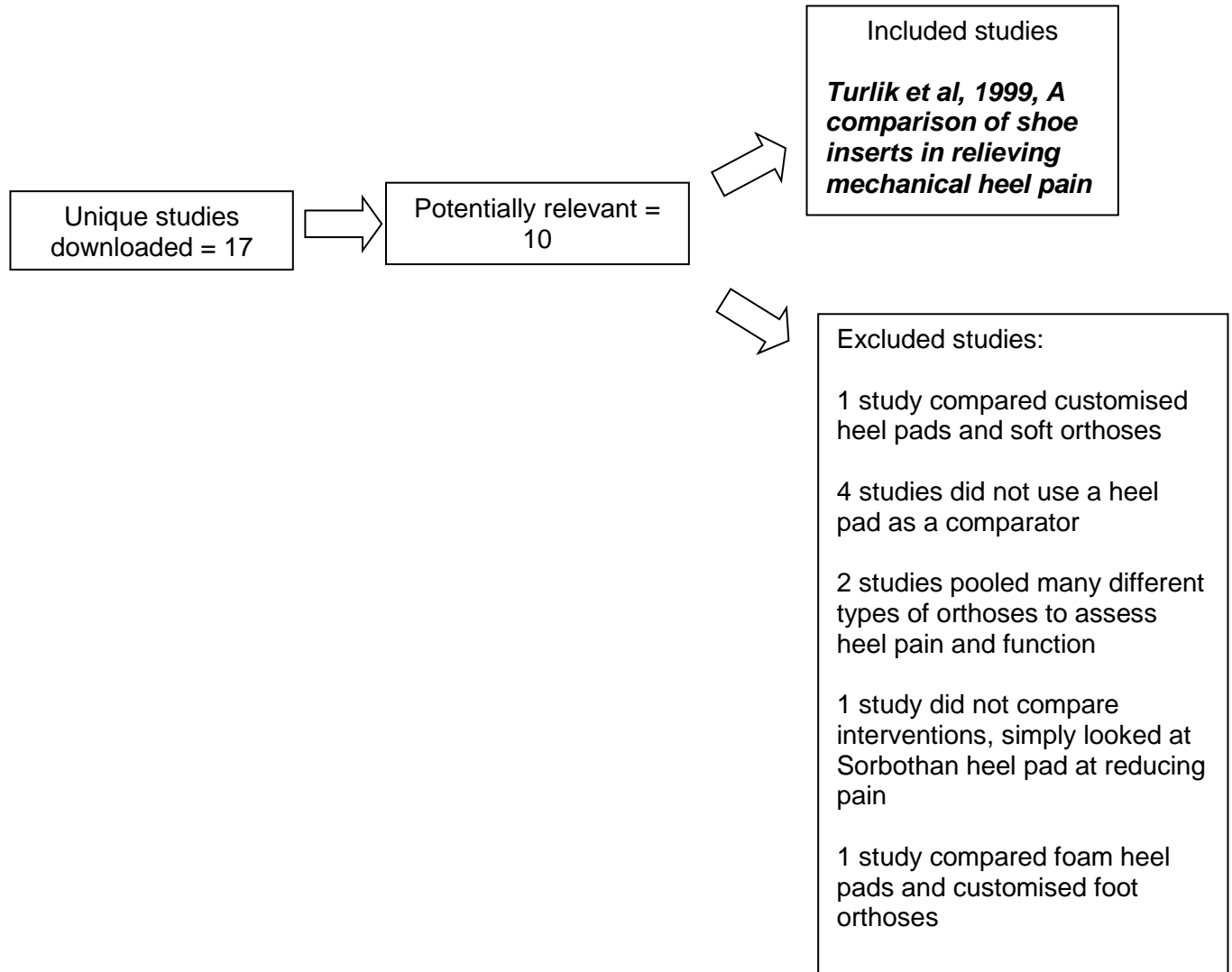
Clinical Knowledge Summaries, PEDro, BMJ Updates, Clinical Evidence, TRIP, Database, NICE, HTA, Bandolier, The Cochrane Library, Medline, Cinahl, Embase, PsycInfo, Professional websites. Joanna Briggs Institute, Web of science, Sports discuss and Pub med

Date of searches- March 2017 & March 2020

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Date CAT completed: April 2021
Date to be reviewed 2023

Results of the search



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Table 1- Detail of included studies

First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
<p>Turlik, MA; Donatelli, TJ; Veremis, MG, 1999</p> <p>Longitudinal randomised controlled study</p>	<p>60 volunteers were recruited via public service announcements on a local radio in Ohio. All lived within a 5 mile radius of Ohio College of Podiatric Medicine</p>	<p>Generic gel heel pad versus functional foot orthotic device.</p>	<p>At 3 months all participants who had received the functional foot orthotic devices reported a significantly higher improvement in all pain outcomes compared to the gel heel pad group.</p> <p>Outcomes gathered via simple questionnaire covering frequency and severity of heel pain, and patient perception of pain and orthotic intervention.</p> <p>25 participants received a functional foot orthotic device and 30 received a gel heel pad.</p>	<p>Limited study, one centre and small local recruitment with no discussion on population parameters other than sex, age, height and weight. Not able to compare across all adults.</p> <p>Outcome tool not validated</p> <p>As the study brought in multiple additional treatments it was difficult to ascertain how they affected the overall results of the two main interventions.</p> <p>The questionnaire did address the main outcome of mechanical heel pain.</p> <p>There is no power calculation mentioned in the study, and no explanation of how the participants were randomised into the two groups.</p>

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First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
			<p>All participants were able to access adjunctive therapies during the course of the study including NSAIDs, local steroid injections or ultrasound; and all were instructed on stretching exercises for the plantar fascia.</p>	<p>It was noted that the participants in the functional foot orthotic group were heavier than those in the gel heel pad group – but not significantly so.</p> <p>It has been noted that in the gel heel pad group the adjunct therapies were accessed more than those in the customised functional orthotic group.</p> <p>There was no consistent approach to footwear type.</p> <p>Initial outcomes were undertaken by the senior author, follow-up was undertaken with various researchers and secretaries – the timing of the follow-up is 3 months and above. No upper limit is indicated on this.</p>

Summary

There is insufficient good quality evidence to show that gel heel pads are more effective than customised functional foot orthoses, in treating adults who present with heel pain. There was only evidence from one small study which did not use a validated outcome tool, and follow up was only short term. As this was a pragmatic study, the impact of one single intervention (e.g. gel insoles) is difficult to establish.

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Implications for practice/research

Practice does not need to change at this time based on this evidence. Current practice of GPs recommending gel heel pads is valid, and should be used in-conjunction with current NICE 2020 guidelines. Where a patient has no resolution of symptoms, or symptoms are severe, then onward referral to appropriate specialist/ Musculoskeletal services could be considered, and discussed with the patient.

What would you tweet? (140 characters)

No current good quality evidence to show that heel pads are more effective than customised functional foot orthoses in treating plantar heel pain in adults.

References

Turlik, M.A., Donatelli, M.G. and Veremis, M.G. (1999). A comparison of shoe inserts in relieving mechanical heel pain. *The Foot*, 9, pp. 84-87.