

58

## PREVENTION OF LOW BACK AND PELVIC GIRDLE PAIN DURING PREGNANCY: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS WITH GRADE RECOMMENDATIONS

Flávia F Santos<sup>1</sup>, Bianca M Lourenço<sup>1,2</sup>, Mateus B Souza<sup>1</sup>, Laís B Maia<sup>1</sup>, Vinicius C Oliveira<sup>1,2</sup>, Murilo X Oliveira<sup>1,2</sup>

<sup>1</sup> Posgraduate Program in Rehabilitation and Functional Performance, Universidade Federal dos Vales do Jequitinhonha e Mucuri (UFVJM), Diamantina, Minas Gerais, Brazil

<sup>2</sup> Posgraduate Program in Health Sciences, Universidade Federal dos Vales do Jequitinhonha e Mucuri (UFVJM), Diamantina, Minas Gerais, Brazil

**Background:** Low back (LBP) and pelvic girdle pain (PGP) during pregnancy are related to high direct and indirect costs. It is important to clarify evidence regarding interventions to manage and prevent these conditions.

**Objective:** Investigate the efficacy and acceptability of the interventions to prevent LBP and PGP during pregnancy.

**Methods:** Searches were conducted up to January 6th, 2021, in the MEDLINE, PEDro, Cochrane Library, SPORTDiscus, CINAHL, AMED, Embase, and PsycINFO databases. Study eligibility criteria: (1) Pregnant women without LBP and/or PGP; (2) any prevention strategy on incidence of LBP and PGP and sick leave; (3) comparison to control; (4) quasi and randomized controlled trial. Study appraisal and synthesis methods: Two reviewers performed screening, data extraction and methodological quality assessments. Meta-analysis was performed, and Relative Risks (RRs) and 95% confidence intervals (CIs) were reported.

**Results:** The review included six randomized controlled trials involving 2231 participants. Evidence of moderate quality was found that "stand-alone" exercise is acceptable to pregnant women with lumbopelvic pain (LBPP) (RR 0.60 [95%CI 0.42-0.84]) and prevents episodes of LBP (RR 0.92 [95%CI 0.85-0.99]) in the long-term. Moderate to very low-quality evidence was found detailing the lack of efficacy of other interventions in the prevention of these problems in the short and long term. Limitations: A small number of trials included.

**Conclusions:** The efficacy of prevention strategies for episodes of LBPP and the use of sick leave during pregnancy is not supported by evidence of high quality.

**Implications:** Current evidence suggests that exercise is acceptable and promising for long-term LBP prevention. However, further high-quality trials with larger samples are needed.

**Keywords:** Low back pain, Pelvic girdle pain, Pregnancy

**Conflict of interest:** The authors declare no conflict of interest.

**Acknowledgment:** Not applicable.

**Ethics committee approval:** Not applicable.

<https://doi.org/10.1016/j.bjpt.2024.100655>

59

## EFFICACY OF PHARMACOLOGICAL AND NON-PHARMACOLOGICAL THERAPIES ON PAIN AND DISABILITY IN PLANTAR FASCIITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

Bianca Martins Lourenço<sup>1,2</sup>, Mariana Gabrich Moraes Campos<sup>1</sup>, Laís Braga Maia<sup>1</sup>, Brenda Katrovyevysky Costa Castro<sup>3</sup>, Renato Guilherme Trede<sup>1</sup>, Vinicius Cunha Oliveira<sup>1,2</sup>

<sup>1</sup> Posgraduate Program in Rehabilitation and Functional Performance, Universidade Federal dos Vales do Jequitinhonha e Mucuri (UFVJM), Diamantina, Minas Gerais, Brazil

<sup>2</sup> Posgraduate Program in Health Sciences, Universidade Federal dos Vales do Jequitinhonha e Mucuri (UFVJM), Diamantina, Minas Gerais, Brazil

<sup>3</sup> Posgraduate Program in Rehabilitation Sciences, Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Minas Gerais, Brazil

**Background:** Plantar fasciitis (PF) is one of the most common musculoskeletal conditions of the foot. Estimates of lifetime prevalence are up to 34.7% of the general population. Most of the time, PF is self-limited, but the time for complete resolution of symptoms can take up to a year, impairing the quality of life of patients. Non-pharmacological therapies are the first-choice management option for PF, such as biomechanical support, stretching, and extracorporeal shock wave therapy [ESWT]. In addition, other pharmacologic options are commonly prescribed (e.g., nonsteroidal anti-inflammatory drugs [NSAIDs], botulinum toxin, platelet-rich plasma injections, corticosteroid injections). However, there is no consensus on the decision-making process because they are limited in scope and methodology. Current evidence also needs to be updated with the aim of providing reliable evidence for the management of PF, taking into account that some new types of pharmacological and non-pharmacological therapies are being investigated (e.g., orthoses, shoes).

**Objective:** To investigate the effects of pharmacological and non-pharmacological therapies on pain and disability in PF.

**Methods:** Systematic review of randomized controlled trials (RCTs). Data sources: AMED, MEDLINE, PEDro, COCHRANE, SPORTDISCUSS, CINAHL, EMBASE, and PsycINFO without language or date restrictions until February 3<sup>rd</sup>, 2023. RCTs that evaluated the efficacy of any pharmacological and non-pharmacological therapies in comparison with control (placebo, sham, waiting list, or no intervention) on pain intensity and disability in people with PF were the eligibility criteria. Two reviewers independently screened eligible studies, extracted data, assessed the methodological quality of included studies, and assessed certainty of evidence using the Recommendations, Assessment, Development, and Reviews (GRADE) grading framework.

**Results:** Seventeen different therapies investigated in 28 studies were included in the quantitative analysis. Moderate certainty evidence showed short-term effects of custom orthoses on pain intensity when compared with control (MD, -12.0 [95% CI: -17.1 to -7.0]) and that orthoses did not reduce long-term pain intensity (MD, -5.9 [95% CI: -21.2 to 9.5]). Low-certainty evidence showed short-term effects in favor of taping (MD, -21.3 [95% CI: -38.6 to 4.0]) on pain intensity. For disability, low-certainty evidence showed that high-quality studies are needed.

**Conclusions:** The results of this meta-analysis should be evaluated by clinicians, stakeholders, and researchers, taking into account that most investigated interventions currently have low or very low certainty. Our findings expose the need to develop new larger studies with high methodological quality. Clinical

**Implications:** Current evidence supports customized orthoses and taping on short-term pain intensity when compared with controls with moderate and low certainty evidence, respectively. PROSPERO: (CRD42021224416).

**Keywords:** Plantar fasciitis, Randomized control trial, Systematic review

**Conflict of interest:** The authors declare no conflict of interest.

**Acknowledgment:** Not applicable.

**Ethics committee approval:** Not applicable.

<https://doi.org/10.1016/j.bjpt.2024.100656>