



ABSTRACTS Dezember 2025

Comparative Effectiveness of Tailored Exercise Therapies Alone or Combined With Psychological Interventions for Chronic, Nonspecific Low Back Pain: A Systematic Review With Network Meta-analysis

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Abstract:

Objective: To estimate the comparative effectiveness of tailored exercise therapies in people with chronic, nonspecific low back pain.

Design: Systematic review with network meta-analysis.

Literature Search: We searched PubMed, Cochrane Library, Web of Science, and Google Scholar from inception to August 27, 2024. **Eligibility**

Criteria for Selecting Studies: Only randomized controlled trials (RCTs) studying the effects of any type of tailored exercise therapies in persons with chronic, nonspecific low back pain were included. Outcomes of interest were pain intensity and disability. Usual care was the standard comparator; effect sizes were calculated as Hedges's *g*.

Data Synthesis: We used the R package netmeta to conduct network meta-analyses. Network plotting and P-scores summarized the intervention hierarchy; usual care was the main comparator. Risk of bias was assessed using the Cochrane risk-of-bias tool. The certainty of evidence was evaluated using the CINeMA (Confidence in Network Meta-Analysis) tool.

Results: We included 58 randomized trials ($n = 10\,510$ participants) with 29 different treatment or control categories. Risk of bias for pain intensity and disability was high. Cognitive functional therapy alone ($SMD_{Disability} = -0.89$ [95% confidence interval = -1.11 to -0.66]; $SMD_{Pain} = -0.71$ [-0.97 to -0.45]) or combined with biofeedback ($SMD_{Disability} = -1.00$ [-1.36 to -0.64]) were, with moderate-certainty evidence, the most effective treatments for pain intensity ($k = 49$ RCTs) and disability ($k = 45$ RCTs) reduction when compared to usual care.

Conclusion: In comparison to usual care, cognitive functional therapy, alone or with biofeedback, likely results in a large disability reduction.

Rotator Cuff Imaging Abnormalities in Asymptomatic Shoulders: A Systematic Review

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Abstract:

Objective: To estimate the prevalence of rotator cuff (RC) imaging abnormalities (tendinopathy, partial-thickness tear, full-thickness tear, or calcification) on radiograph, ultrasound, computed tomography, or magnetic resonance imaging (MRI) in asymptomatic adult shoulders.

STUDY DESIGN: Systematic review.

Literature Search: Ovid MEDLINE, Embase, CINAHL, and Web of Science (searched September 1, 2024), with forward and backward citation searches.

Study Selection Criteria: We included studies reporting the prevalence of RC abnormalities on imaging of asymptomatic shoulders.

Data Synthesis: Due to heterogeneity, data were synthesized without meta-analysis. Risk of bias was assessed using a tool for prevalence studies. Certainty of evidence was determined using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach.

Results: After screening 3801 records and 188 studies in full text, we included 53 studies (29 ultrasound, 24 MRI) across population-based, miscellaneous, and athlete populations. The certainty of evidence was low to very low. For full-thickness tears, prevalence on ultrasound was 11% to 17% in 2 population-based samples (1631 shoulders), 0% to 35% across 14 studies of miscellaneous populations (3390 shoulders), and 0% to 22% across 4 studies of athlete populations (346 shoulders). On MRI, the prevalence was 20% in 1 population-based study (20 shoulders), 0% to 14% across 10 studies of miscellaneous populations (490 shoulders), and 0% to 11% across 12 studies of athlete populations (326 shoulders). For tendinopathy and/or partial-thickness tears, the prevalence on ultrasound was 34% in 1 population-based sample (539 shoulders), 0% to 47% across



11 studies of miscellaneous populations (1971 shoulders), and 7% to 70% across 4 studies of athlete populations (346 shoulders). On MRI, the prevalence was 65% in 1 population-based sample (20 shoulders), 0% to 100% across 10 studies of miscellaneous populations (490 shoulders), and 6% to 96% across 13 studies of athlete populations (426 shoulders).

Conclusion: Across studies with low- to very low-certainty of evidence, the prevalence of RC imaging abnormalities in asymptomatic shoulders ranged from 0% to 100%.

Association between MRI findings and inflammatory symptoms in non-specific chronic low back pain

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Eur Spine J . 2025 Dec;34(12):5530-5538.

doi: 10.1007/s00586-025-09492-7.

Abstract:

Purpose: Non-specific chronic low back pain (nsCLBP) likely constitutes a heterogeneous group of conditions, and identifying an inflammatory phenotype may improve treatment stratification. The objective of this study was to determine associations between inflammatory back pain (IBP) features and MRI findings in subjects with nsCLBP.

Methods: Participants were selected from the longitudinal Clinical Cohort for Comprehensive Deep Phenotyping of Chronic Low-Back Pain Adults Study (comeBACK), a cohort of adults with nsCLBP. IBP features (morning stiffness, nocturnal LBP, symptom improvement with exercise / worsening with rest, insidious onset, onset < 40 years) were assessed via questionnaire. MRI scans of the lumbar spine were interpreted by a radiologist, using a comprehensive scoring system: Modic changes (MC), endplate erosion, facet joint arthritis, central canal stenosis and degeneration of the sacroiliac joints (SIJ). Logistic regression was performed (presence IBP feature as dependent variable and MRI findings as independent variables).

Results: A total of 290 individuals (159 female) were included. Both endplate erosion and MC1 changes were positively associated with overall IBP (erosion: OR 2.1, 95%CI 1.3–3.3; MC1: OR 2.2, 95%CI 1.4–3.4), and specifically morning stiffness and worsening with rest. Negative association



with overall IBP symptoms was found for SIJ degeneration (OR 0.6, 95%CI 0.4-1.0) and no association for facet arthropathy, MC2 and central canal stenosis.

Conclusion: Our exploratory analysis supports the notion of an inflammatory nsCLBP phenotype with distinguishing imaging features, by establishing associations between endplate erosion and Modic type 1 changes with select IBP features.

Do We Trust Patients in Pain? What Would Happen If We Did?

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Abstract:

Synopsis: This viewpoint explores clinical and lived experience perspectives of the clinical care environment. Through the lens of trust, we explore what people who have chronic pain experience in the clinical care environment. Trust is integral to the therapeutic relationship, yet most literature only considers whether patients trust clinicians-not if clinicians trust patients. The biomedical metanarrative prioritizes information gathered by clinicians or through tests, which is perceived as "objective," over patients' lived experiences and expertise, which are perceived "subjective." This can lead to implicit biases and judgments about patient behavior that create distrust and missed opportunities for health. What would happen if, instead, clinicians started from a place of trusting people with pain? By trusting patients with pain as honest and knowledgeable experts in their health and well-being, clinicians can learn how to best support health and recovery.

Does Orthosis Improve Outcomes of Conservative Treatment in Trigger Fingers? A 3-Arm Prospective Randomized Controlled Trail

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Arch Phys Med Rehabil . 2025 Dec;106(12):1798-1806.

doi: 10.1016/j.apmr.2025.05.015.

Abstract:



Objective: To evaluate whether the addition of an orthosis improved the efficacy of cortisone injection for the nonoperative management of trigger finger.

Design: Block randomized controlled trial.

Setting: Outpatient hand clinic.

Participants: Individuals presenting to our center with Green severity grade 1-3 trigger finger, aged 18-80, were eligible for inclusion (N=226). Exclusion criteria were previous treatment with either a splint or cortisone injection, trigger thumb, >2 digits involved, grade 4 trigger, or an allergy to cortisone (N=118).

Interventions: Patients' hands were randomized to nighttime extension orthosis, cortisone injection, or combined treatment, stratified by the Green severity score and comorbid diabetes.

Main outcome measures: Patient-reported outcome measures and the number of triggering occurrences with 10 repeated grips were collected at 6 weeks and 3, 6, and 12 months.

Results: The study included 104 patients representing 122 trigger fingers in 115 hands, with an average follow-up of 29 months. At 6 weeks, there was no significant difference in the incidence of triggering, symptom relief, or the Patient-Reported Wrist and Hand Evaluation score between injection or combined treatment groups. The overall success rate with conservative treatment was high, with 68.9% experiencing resolution or improvement of their symptoms. Grade 3 trigger fingers had a significantly higher rate of surgical release compared with lower-grade trigger fingers (39.1% vs 22.4%, $P=.05$).

Conclusions: Our study shows no significant benefit of adding an orthosis to cortisone injection in all trigger grades. Overall success with conservative treatment was high (68.9%) in this cohort. Conservative management of grade 1 and 2 triggers is successful in about 75% of patients, regardless of whether treatment is an orthosis, injection, or both, compared with a 60% success rate for grade 3.

Exercise for chronic musculoskeletal pain: time to prescribe with precision

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BMJ Open Sport Exerc Med . 2025 Nov 27;11(4):e003076.

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Abstract:

Introduction: Approximately 1.7 billion people world-wide live with musculoskeletal (MSK) pain, contributing to a high socioeconomic burden exceeding €250 billion in Europe and US\$180 billion in the USA. Beyond financial costs, individuals experience lost productivity, early retirement and reduced social well-being due to limitations in mobility and participation in society. Current clinical practice guidelines emphasise non-pharmacological and non-surgical treatments for managing chronic MSK conditions like back pain, neck pain and osteoarthritis. Among these, exercise-based treatment options are inexpensive, easily accessible and induce small to moderate yet clinically relevant improvements in chronic MSK pain disorders. Improvements observed with exercise training can be comparable to, or even exceed, those achieved with other conservative interventions such as manual therapy, education, electrophysical and psychological therapies. Despite the recognised benefits of exercise training, the translation of research into clinical practice is impaired by ongoing deficiencies in study reporting, as evidenced in our recent umbrella review.

Immediate physical therapy is beneficial for adolescent athletes with active lumbar spondylolysis: a multicentre randomised trial

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FEHLT NOCH!

Abstract:

Objectives: To compare the effects of initiating physical therapy (PT) immediately versus resting before starting PT on pain and dysfunction over 12 months in adolescent athletes (10–19 years) with active lumbar spondylolysis.

Methods: This prospective multicentre trial randomised participants to immediate PT or rest before PT. The immediate PT group began PT within 7 days and progressed based on pain and function. The rest before PT group started PT once symptoms resolved and progressed based on time. The primary outcome was pain and disability (Micheli Functional Scale) between groups over time, measured at baseline, 1 (primary end point), 3 and 12 months. Time to return to sport and the recurrence rate of low back



pain (LBP) were also assessed. Outcomes were analysed using an intention-to-treat approach.

Results: Sixty-four participants (median age 14.2 years; 40% female) were randomised to immediate PT (n=30) and rest before PT (n=34). At 1 month, the immediate PT group showed significant improvements in pain and disability (mean difference on Micheli Functional Scale of 21.3, 95% CI 28.7 to 13.9; $p<0.001$). They also returned to sport 38 days sooner ($p<0.001$), with fewer recurrences of LBP over 12 months (3% vs 29%; $p=0.01$). There were no adverse events.

Conclusion: Clinicians may consider prescribing PT immediately after diagnosing active lumbar spondylolysis instead of rest. Immediate PT showed greater initial improvements in pain and dysfunction, a quicker return to sport and a lower recurrence of LBP compared with rest before PT among adolescent athletes with spondylolysis.

Physioethology: a post-humanist perspective on physiotherapy

Matthew Low, Fiona H Moffatt, Roger Kerry, David A Nicholls

Physiother Theory Pract . 2025 Dec;41(12):2681-2699.

doi: 10.1080/09593985.2025.2532572.

Abstract:

Physiotherapy faces mounting challenges in an era of planetary crisis. This paper proposes a reorientation of physiotherapy through the philosophy of Gilles Deleuze and Félix Guattari, specifically their concept of ethology, which foregrounds affect, relation, and immanence. We argue that contemporary physiotherapy remains tethered to anthropocentric, essentialist, and representational assumptions that limit its capacity to respond to complex ecological entanglements. Drawing on ethology, we explore how bodies, human and non-human, can be understood not as stable entities but as dynamic assemblages defined by what they can do. We consider the implications of this approach for practice, education, and planetary health, suggesting that physiotherapy shift from its traditional forms of praxis toward a dynamic composition of capacities. In doing so, the profession might cultivate an ecologically attuned, affectively sensitive, and experimentally oriented practice capable of engaging in the world.



Differences in Psychological Factors Between People With Persistent Tendinopathy and Those Without Tendinopathy: A Systematic Review With Meta-Analysis

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doi: 10.2519/jospt.2025.13307.

Abstract:

Objective: To compare psychological factors between those with tendinopathy and nontendinopathy controls.

Study Design: Prognosis systematic review with meta-analysis (PROSPERO:CRD42023489445).

Literature Search: Seven databases were searched until September 24, 2024.

Study Selection Criteria: Studies comparing psychological factors between people with and without tendinopathy were included. We excluded studies that exclusively evaluated participants with tendon tears, tendon ruptures, systemic conditions, fibromyalgia, or psychiatric disorders.

Data Synthesis: Data were pooled across tendinopathy sites for each psychological factor. Meta-analyses were performed for each psychological factor, using a random-effects model to calculate effect sizes and 95% confidence intervals (95% CIs). Upper-limb and lower-limb tendinopathy sites were separated for subgroup analysis. The methodological quality of each study was appraised using Joanna Briggs Institute checklists, and certainty of evidence was evaluated using the Grading of Recommendations Assessment, Development, and Evaluation criteria.

Results: People with tendinopathy had higher pain catastrophizing ($n = 7$, mean difference [MD] = 4.01, 95% CI = 0.6, 7.41) than those without tendinopathy. Depression ($n = 5$, standard mean difference [SMD] = 0.46, 95% CI = 0.11, 0.8) and anxiety ($n = 4$, SMD = 0.45, 95% CI = 0.01, 0.89) were higher in those with lower-limb tendinopathy compared to nontendinopathy controls. We detected poorer mental health in people with lower-limb tendinopathy ($n = 2$, MD = 72, 95% CI = -6.68, -0.75) and no differences in kinesiophobia ($n = 4$), general self-efficacy ($n = 2$), extraversion ($n = 2$), or neuroticism ($n = 2$).

Conclusion: People with tendinopathy had different psychological profiles than people without tendinopathy.



Recent highlights in low back pain research, Part I: Diagnosis and Prognosis

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J Physiother . 2026 Jan;72(1):23-32.

doi: 10.1016/j.jphys.2025.12.002.

Abstract:

Introduction: This paper highlights research relating to diagnosis and prognosis in low back pain (LBP) published between January 2020 and September 2025.

Methods: To identify studies for inclusion, we searched Medline, CINAHL and the Cochrane Database of Systematic Reviews. Search results were screened and relevant studies were grouped according to their topic area. From those results, we selected studies that were perceived to be of great clinical importance, particularly high quality and/or controversial.

Findings: This narrative review synthesised five key themes in LBP research. For Theme 1 (Serious pathologies presenting as LBP), we found that serious spinal conditions are rare, and clinicians should assess overall concern using a combination of alerting features rather than isolated red flags. In Theme 2 (Imaging in LBP management), we discussed the limited role of imaging, noting its continued overuse and frequent inappropriate application. In Theme 3 (Diagnostic uncertainty), we highlighted that LBP often lacks a clear anatomical cause and that embracing uncertainty while focusing on modifiable factors can help patients feel more supported and in control. Theme 4 (Clinical course and pain trajectories) showed that although recovery is common in recent onset LBP, recurrences are frequent; even long-lasting pain can improve. Traditional labels such as 'acute' and 'chronic' often fail to capture the fluctuating nature of LBP. Finally, in Theme 5 (Prognostic factors and prediction models), we presented patient characteristics related to delayed recovery but highlighted that current prediction models are not yet ready for clinical implementation. We provided direction for future research across all themes. The identified themes help clinicians make informed, evidence-based decisions and navigate current uncertainties in diagnosis and prognosis.



Effectiveness of Thoracic Spine Manual Therapy in Treating Subacromial Impingement Syndrome: A Systematic Review and Meta-analysis

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Arch Phys Med Rehabil . 2025 Dec;106(12):1886-1898.

doi: 10.1016/j.apmr.2025.07.008.

Abstract:

Objective: To determine the effects of thoracic spine manual therapy (TSMT) in managing shoulder impingement syndrome (SIS) through a systematic review and meta-analysis.

Data sources: Five databases (Medline, Embase, Web of science, Physiotherapy Evidence Database, and Cochrane Central) were searched from inception to October 2024.

Study selection: Randomized controlled trials evaluating TSMT combined with other physiotherapy versus physiotherapy alone, or TSMT versus placebo, in individuals with SIS were included. Outcomes included pain, disability, and range of motion.

Data extraction: Two authors independently performed data extraction, risk of bias assessment, and evidence quality evaluation.

Data synthesis: A total of 10 randomized controlled trials involving 444 participants were included. Pooled mean difference and standardized mean difference (SMD) with 95% confidence interval (CI) were calculated. Four studies examined TSMT as an adjunct to exercise; 6 used placebo comparators. Pain was commonly assessed using Numeric Pain Rating Scale or Visual Analog Scale in 7 studies; disability was measured by Shoulder Pain And Disability Index or Disabilities of Arm, Shoulder, and Hand in 6 studies. High-quality evidence showed large effect size in favor of TSMT at short terms (2-6 wk after baseline) (SMD [95% CI]=-0.94 [-1.23 to -0.65]) and at intermediate-term (4-6 wk after intervention completion) (SMD [95% CI]=-0.83 [-1.26 to -0.40]) follow-up. Disability improved significantly at intermediate-term follow-up (SMD [95% CI]=-0.82 [-1.25 to -0.38]), supported by high-quality evidence. Subgroup analysis revealed that significant disability reduction in TSMT groups compared with placebo with a moderate effect size (SMD [95% CI]=-0.75 [-1.18 to -0.32]), supported by high-quality evidence. Furthermore, moderate evidence also supported improved internal rotation (SMD [95% CI]=0.61 [0.21-1.02]) and external rotation (SMD [95% CI] = 0.58 [0.17-1.00]).

Conclusions: The TSMT is effective in reducing pain, disability, and improving range of motion in individuals with SIS over short terms.

