# Physiotherapy for low back pain

- Effectiveness of Choosing Wisely recommendations in reducing physiotherapists' intentions to refer for imaging and use electrotherapy for low back pain: a randomised controlled experiment
- Efficacy and safety of musculoskeletal manipulations in elderly population with musculoskeletal disorders: a systematic review
- Prevalence of Myofascial Trigger Points in Patients with Radiating and Non-Radiating Low Back Pain: A Systematic Review
- Effects of Hypopressive Techniques on the CORE Complex: A Systematic Review
- Effect of telemedicine-supported structured exercise program in patients with chronic low back pain: a randomized controlled trial
- Chronic low back pain is associated with compromised cognitive function: A systematic review and meta-analysis
- Investigation of the validity and reliability of the Turkish version of Back-Health-Related postural habits in daily activities questionnaire
- A comprehensive mapping of stress system interactions with pain and their contribution to chronification of musculoskeletal pain: Protocol of the STRAIN study

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Physiotherapy, also known as physical therapy, is a valuable treatment approach for individuals experiencing low back pain. Physiotherapists are trained healthcare professionals who specialize in the assessment and management of musculoskeletal conditions, including low back pain. Their goal is to reduce pain, improve mobility, and enhance the overall function and quality of life for their patients. Here's how physiotherapy can be beneficial for low back pain:

Assessment and Diagnosis: A physiotherapist begins by conducting a thorough assessment to identify the underlying causes and contributing factors of the low back pain. This assessment may include a review of the patient's medical history, physical examination, and sometimes imaging studies like X-rays or MRI scans.

Pain Management: Physiotherapists can employ various modalities and techniques to alleviate pain, such as heat or cold therapy, ultrasound, electrical stimulation (e.g., TENS), and manual therapy.

Exercise Prescription: Exercise is a cornerstone of physiotherapy for low back pain. Physiotherapists design personalized exercise programs that focus on strengthening the muscles that support the spine, improving flexibility, and enhancing posture. Core-strengthening exercises are often emphasized to stabilize the lumbar spine.

Manual Therapy: Hands-on techniques, such as spinal manipulation, joint mobilization, soft tissue massage, and stretching, may be used to reduce pain, improve joint mobility, and alleviate muscle tension.

Education and Posture Training: Patients receive education on proper body mechanics, ergonomics, and lifting techniques to prevent future episodes of low back pain. Posture training is essential for promoting good spinal alignment.

Functional Rehabilitation: Physiotherapists work with patients to improve their ability to perform daily activities and tasks without pain or discomfort. This may involve training in functional movements, such as bending, lifting, and carrying objects safely.

Modalities: In addition to exercise and manual therapy, physiotherapists may use modalities such as traction, hot packs, or cold packs to reduce pain and inflammation.

Biofeedback and Relaxation Techniques: Some individuals with chronic low back pain benefit from biofeedback and relaxation techniques to manage pain and stress.

Patient-Centered Care: Treatment plans are tailored to the individual's specific needs and goals, taking into consideration their lifestyle and preferences.

Prevention Strategies: Beyond addressing current pain and discomfort, physiotherapists focus on preventing future recurrences of low back pain through ongoing education and exercise.

It's important to note that physiotherapy is typically considered a conservative approach to managing low back pain. While it can be highly effective in many cases, there are instances where more advanced interventions, such as surgery, may be necessary. Physiotherapists can also collaborate with other healthcare professionals, such as orthopedic surgeons or pain management specialists, when more specialized care is required.

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Fritz et al sought to examine the role of early physical therapy in the long-term management of low back pain. They specifically evaluated the group with acute lower back pain of <16 days' duration and with no symptoms below the knee [1)].

The primary outcome was change in disability from baseline presentation to the 3-month follow-up as assessed by the Oswestry Disability Index (ODI).

Secondary outcomes of the study included changes in pain intensity and healthcare use.Eligibility criteria for the study included age of 18 to 60 years, acute lower back pain of <16 days' duration, no pain or numbness below the knees within 72 hours of presentation, and an ODI score of >20. Exclusion criteria were prior lumbar surgery, pregnancy, clinical signs of nerve root compression, and findings indicative of nonmusculoskeletal back pain. Of the 1220 candidates screened, 220 patients were ultimately enrolled and randomized in the trial. Intergroup analysis showed no statistically significant differences between the 2 groups before the start of the trial.Patients in the early physical therapy arm of the trial started treatment within 72 hours of enrollment. They underwent 4 sessions over the course of 3 weeks. The first 2 sessions involved spinal manipulation, followed by range-of-motion and trunk-strengthening exercises. The last 2 sessions focused on exercises with no further spinal manipulation. Of the patients in this arm of the trial, 92.5% successfully completed all 4 physical therapy sessions. Patients in the control arm did not undergo physical therapy and had no intervention performed.Compared with the control group, the early physical therapy group had a statistically significant decrease in ODI score at the 4-week and 3-month follow-up. However, the decrease in ODI score was in the range of 3.2 to 3.5, which was <6, which is deemed the minimum decrease in ODI score corresponding to meaningful clinical improvement. At the 1-year mark, there was no difference in ODI score between the 2 groups. There was no significant change in the intensity of pain noted between the 2 groups at any point during follow-up. There was also no difference in healthcare use between the 2 groups in terms of emergency department visits, need for advanced imaging, and spinal injections or surgery. The authors noted that both groups had fairly rapid improvement in their symptoms and that this may be a reason why the effects of early physical therapy were not pronounced.Overall, early physical therapy contributed to an early but short-lived and modest decrease in disability for patients with acute low back pain. As ubiquitous as physical therapy may be, the timing of such treatment may be just as important as the treatment itself, and

judicious use of physical therapy after an initial phase of care has failed may yield better results for the patients who need it most [2].

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Preliminary evidence is suggestive of decreased cost without compromising outcomes with early receipt of Physical Therapy (PT) in spinal pain. The primary limitation of the current research on this topic is in study design. Additional high quality research involving prospective randomized designs and economic impact analyses is required to further investigate the outcomes with early initiation of PT. Level of Evidence Therapy, Level 1a [3].

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Fritz JM, Magel JS, McFadden M, et al.. Early physical therapy vs usual care in patients with recent-onset low back pain: a randomized clinical trial. JAMA. 2015;314(14):1459–1467.
2)
Chavakula V, Chi J. Early Physical Therapy in Cases of Acute Low Back Pain Provides Minimal Benefit. Neurosurgery. 2016 Feb;78(2):N21. doi: 10.1227/01.neu.0000479896.48360.8c. PubMed PMID: 26779798.
3)
Ojha HA, Wyrsta NJ, Davenport TE, Egan WE, Gellhorn AC. Timing of Physical Therapy Initiation for Nonsurgical Management of Musculoskeletal Disorders and Effects on Patient Outcomes: A Systematic Review. J Orthop Sports Phys Ther. 2016 Jan 11:1-31. [Epub ahead of print] PubMed PMID: 26755406.