

Clinical Guidelines to Address Low Back Pain

Using the Evidence to Guide Physical Therapist Practice

J Orthop Sports Phys Ther 2021;51(11):533-534. doi:10.2519/jospt.2021.0507

Low back pain (LBP) is a common musculoskeletal condition, a leading cause of disability, and one of the costliest medical conditions.^{3,4,9} Due to the adverse impact of LBP and the rising costs associated with it, there is a great need to implement consistent, evidence-based practice to improve the quality of care for patients suffering from

LBP.^{10,11} It is critical that health care practitioners take steps to reduce reliance on pharmacologic interventions, such as opioids, and promote nonpharmacologic interventions for treating and managing LBP.¹ Synthesizing and summarizing new research in a clinical practice guideline (CPG) support health care providers as they adopt and implement nonpharmacologic interventions.

WHAT WE KNEW

The 2012 CPG on LBP highlighted the importance of nonpharmacologic interventions as the preferred care pathway for LBP and chronic pain conditions.² Since then, several CPGs and literature related to back pain have been published; however, a lack of evidence remains on how to effectively implement interventions to address pain, disability, and functional limitations associated with LBP.⁶⁻⁸

WHAT WE DID

The 2021 CPG was assembled with the goal of providing an update on evidence-informed recommendations for interventions to help manage LBP that are delivered by physical therapists or in care settings that include physical therapist providers.⁵ This CPG is a continuation of the 2012 LBP CPG and again emphasizes nonpharmacologic interventions to improve the quality of care and outcomes for patients with LBP.

WHAT WE FOUND

A recent review of 5 high-quality CPGs for LBP produced recommendations for screening, assessment, and treatment approaches. This CPG is novel because it concentrates on treatment recommendations for LBP.⁷ The 2021 revision contains information related to interventions that were not covered in the 2012 CPG, including dry needling, cognitive functional therapy, and pain neuroscience education. Consistent with previous CPGs, thrust and nonthrust joint mobilizations remain the best care options for acute and chronic LBP; exercise and education are also effective for chronic LBP.

This *JOSPT Perspectives for Practice* article is based on the guideline by George et al⁵ and was produced by a team of the *JOSPT's* Special Features Editorial Board, including Alexander Scott, BSc(PT), PhD, and staff, led by Editor-in-Chief Clare Ardern, PT, PhD. The flow chart on the following page was produced by Kate Minick, PT, DPT, OCS, of Intermountain Healthcare, Rehabilitation Services, Salt Lake City, UT.

BOTTOM LINE FOR PRACTICE

The large volume of literature on LBP was difficult to synthesize. We found an overall lack of high-quality evidence, particularly randomized controlled trials, related to interventions for LBP. Nonetheless, research supports the use of multimodal interventions for LBP, consisting of various combinations of exercise, manual and other directed therapies, classification systems, and education, to improve patient outcomes. We contend that nonpharmacologic interventions should be the primary method of management of both acute and chronic LBP conditions. However, there is a great need for high-quality evidence to help clinicians make decisions about delivering and dosing interventions.

REFERENCES

1. Buchbinder R, van Tulder M, Öberg B, et al. Low back pain: a call for action. *Lancet*. 2018;391:2384-2388. [https://doi.org/10.1016/S0140-6736\(18\)30488-4](https://doi.org/10.1016/S0140-6736(18)30488-4)
2. Delitto A, George SZ, Van Dillen L, et al. Low back pain. *J Orthop Sports Phys Ther*. 2012;42:A1-A57. <https://doi.org/10.2519/jospt.2012.42.4.A1>
3. Dieleman JL, Cao J, Chapin A, et al. US health care spending by payer and health condition, 1996-2016. *JAMA*. 2020;323:863-884. <https://doi.org/10.1001/jama.2020.0734>
4. Finley CR, Chan DS, Garrison S, et al. What are the most common conditions in primary care? Systematic review. *Can Fam Physician*. 2018;64:832-840.
5. George SZ, Fritz JM, Silfies SP, et al. Interventions for the management of acute and chronic low back pain: revision 2021. *J Orthop Sports Phys Ther*. 2021;51:CPG1-CPG60. <https://doi.org/10.2519/jospt.2021.0304>
6. Lin I, Wiles L, Waller R, et al. What does best practice care for musculoskeletal pain look like? Eleven consistent recommendations from high-quality clinical practice guidelines: systematic review. *Br J Sports Med*. 2020;54:79-86. <https://doi.org/10.1136/bjsports-2018-099878>
7. Longtin C, Décarý S, Cook CE, Tousignant-Lafamme Y. What does it take to facilitate the integration of clinical practice guidelines for the management of low back pain into practice? Part 1: a synthesis of recommendation. *Pain Pract*. In press. <https://doi.org/10.1111/papr.13033>
8. Qaseem A, Wilt TJ, McLean RM, Forciea MA, Clinical Guidelines Committee of the American College of Physicians. Noninvasive treatments for acute, subacute, and chronic low back pain: a clinical practice guideline from the American College of Physicians. *Ann Intern Med*. 2017;166:514-530. <https://doi.org/10.7326/M16-2367>
9. Safiri S, Kolahi AA, Cross M, et al. Prevalence, deaths, and disability-adjusted life years due to musculoskeletal disorders for 195 countries and territories 1990-2017. *Arthritis Rheumatol*. 2021;73:702-714. <https://doi.org/10.1002/art.41571>
10. Zadro J, O'Keeffe M, Maher C. Do physical therapists follow evidence-based guidelines when managing musculoskeletal conditions? Systematic review. *BMJ Open*. 2019;9:e032329. <https://doi.org/10.1136/bmjopen-2019-032329>
11. Zadro JR, O'Keeffe M, Allison JL, Lembke KA, Forbes JL, Maher CG. Effectiveness of implementation strategies to improve adherence of physical therapist treatment choices to clinical practice guidelines for musculoskeletal conditions: systematic review. *Phys Ther*. 2020;100:1516-1541. <https://doi.org/10.1093/ptj/pzaa101>



JOSPT PERSPECTIVES FOR PRACTICE is a service of the *Journal of Orthopaedic & Sports Physical Therapy*[®]. The information and recommendations summarize the impact for practice of the referenced research article. For a full discussion of the findings, please see the article itself. The official journal of the Academy of Orthopaedic Physical Therapy and the American Academy of Sports Physical Therapy of the American Physical Therapy Association (APTA) and a recognized journal with 30 international partners, the *JOSPT* strives to offer high-quality research, immediately applicable clinical material, and useful supplemental information on musculoskeletal and sports-related health, injury, and rehabilitation. Copyright ©2021 JOSPT[®], Inc

JOSPT PERSPECTIVES FOR PRACTICE

Interventions for Managing Acute and Chronic Low Back Pain: Care Process

Classification Systems

Acute Low Back Pain

- Physical therapists may use treatment-based classification to reduce pain and disability - **B**
- Physical therapists can use Mechanical Diagnosis and Therapy to reduce pain and disability - **C**

Chronic Low Back Pain

- Physical therapists may use Mechanical Diagnosis and Therapy, prognostic risk stratification, or pathoanatomic-based classification to reduce pain and disability - **B**
- Physical therapists can use treatment-based classification, cognitive functional therapy, or movement system impairment to reduce pain and disability - **C**

Education

Acute Low Back Pain

- Physical therapists may use active education strategies (the provision of one-on-one information on the biopsychosocial contributors to pain, self-management techniques such as remaining active, pacing strategies, and back-protection techniques). Physical therapists may also incorporate counseling on the favorable natural history of acute low back pain - **B**

Postoperative Low Back Pain

- Physical therapists may use general education (ie, postsurgical precautions, exercise, and resuming physical activity for patients undergoing discectomy or decompression surgery). No specific recommendation is provided for education on other surgical procedures (eg, spinal fusion) due to lack of evidence - **B**

Chronic Low Back Pain

- Physical therapists may use standard education strategies, including advice related to exercise and staying active, but not as a stand-alone treatment - **B**
- Physical therapists should deliver pain neuroscience education alongside exercise or manual therapy - **A**
- Physical therapists should use active treatments (ie, yoga, stretching, Pilates, and strength training) instead of stand-alone educational interventions - **A**

Exercise and Manual Therapy Intervention Strategies

Acute Low Back Pain

- Acute Low Back Pain**
- Exercise**
- Physical therapists can use exercise training interventions, including specific trunk muscle activation, for patients with acute low back pain - **C**
- Manual therapy**
- Physical therapists should use thrust or nonthrust joint mobilization to reduce pain and disability in patients with acute low back pain - **A**
 - Physical therapists may use massage or soft tissue mobilization for short-term pain relief in patients with acute low back pain - **B**
- Acute Low Back Pain With Leg Pain**
- Exercise**
- Physical therapists may use exercise training interventions, including trunk muscle strengthening and endurance and specific trunk muscle activation, to reduce pain and disability in patients with acute low back pain with leg pain - **B**

Chronic Low Back Pain

- Chronic Low Back Pain**
- Exercise**
- Physical therapists should use trunk muscle strengthening and endurance, multimodal exercise interventions, specific trunk muscle activation exercise, aerobic exercise, aquatic exercise, or general exercise - **A**
 - Physical therapists may provide movement control exercise or trunk mobility exercise - **B**
- Manual therapy**
- Physical therapists should use thrust or nonthrust joint mobilization to reduce pain and disability in patients with chronic low back pain - **A**
 - Physical therapists may use soft tissue mobilization or massage in conjunction with other treatments to reduce pain and disability in the short term in patients with chronic low back pain - **B**
 - Physical therapists can consider using dry needling in conjunction with other treatments to reduce pain and disability in the short term in patients with chronic low back pain - **C**
- Chronic Low Back Pain With Leg Pain**
- Exercise**
- Physical therapists may use exercise training interventions, including specific trunk activation and movement control - **B**
- Manual therapy**
- Physical therapists may use thrust or nonthrust joint mobilization to reduce pain and disability - **B**
 - Physical therapists may use neural mobilization in conjunction with other treatments for short-term improvement in pain and disability - **B**
 - Physical therapists should not use mechanical traction in patients with chronic low back pain with leg pain, based on the lack of benefit when added to other interventions - **D**
- Chronic Low Back Pain With Movement Control Impairments**
- Exercise**
- Physical therapists should use specific trunk muscle activation and movement control exercise - **A**
- Chronic Low Back Pain in Older Adults**
- Exercise**
- Physical therapists should use general exercise training to reduce pain and disability - **A**

Postoperative Low Back Pain

- Exercise**
- Physical therapists can use general exercise training in patients following lumbar spine surgery - **C**

Based on the guidelines, the grades in this flow chart may be translated as follows: A, strong evidence; B, moderate evidence; C, weak evidence; D, conflicting evidence. Figure produced for the JOSPT by Kate Minick, PT, DPT, OCS, of Intermountain Healthcare, Salt Lake City, UT.

For this and more topics, visit JOSPT Perspectives for Practice online at www.jospt.org.