

Letters to the Editor

Exercise Therapy for Chronic Low Back Pain

To the Editor: In their review of chronic low back pain, Maharty, et al. state that “there are no data to support the benefit of one exercise modality over another.”¹

A 2021 Cochrane review found moderate-certainty evidence that exercise treatment is effective for the management of chronic low back pain.² This review was not designed to evaluate whether there were relative benefits of one exercise modality over another; however, the authors subsequently performed a network meta-analysis to answer that question.³ Their conclusions were that Pilates, McKenzie therapy, and functional restoration were more effective than other types of exercise for reducing pain and improving functional limitations. Personally, I have found that McKenzie exercises are helpful in relieving pain from lumbar radiculopathy, and I recommend them to my patients.

Robert Skully, MD

Columbus, Ohio

robert.skully@ohiohealth.com

Author disclosure: No relevant financial relationships.

REFERENCES

1. Maharty DC, Hines SC, Brown RB. Chronic low back pain in adults: evaluation and management. *Am Fam Physician*. 2024;109(3):233-244.
2. Hayden JA, Ellis J, Ogilvie R, et al. Exercise therapy for chronic low back pain. *Cochrane Database Syst Rev*. 2021;(9):CD009790.
3. Hayden JA, Ellis J, Ogilvie R, et al. Some types of exercise are more effective than others in people with chronic low back pain: a network meta-analysis. *J Physiother*. 2021;67(4):252-262.

In Reply: We thank Dr. Skully for highlighting the potential positive effects of specific exercises (ie, Pilates, McKenzie therapy, and functional restoration) on managing chronic low back pain.

Outcomes used in the 2021 Cochrane review only show available follow-up for the short-term (4 weeks to 3 months). Long-term follow-up was not completed.¹ In large network meta-analyses, the probability (*P* value) can be greatly affected by the number of studies and patients involved, rather than by the significance of the results. The aforementioned network meta-analysis reveals gaps due to the restrictive use of only a few exercise modalities. This analysis is not comprehensive and excludes many types of exercise.¹

Because of this, care should be taken when interpreting the results of this meta-analysis.² Systematic reviews of randomized controlled trials are generally considered the highest level of evidence for the relative effectiveness of interventions such as these types of exercises.^{3,4}

A 2022 systematic review found that some exercise types for chronic low back pain are disproportionately studied more than others; there is more research on motor control exercises, Pilates, and yoga compared with other exercise types. The review included 45 systematic reviews that investigated pain and disability as primary outcomes in short-, intermediate- and long-term follow-up.⁵ Many of the trials appeared to have a high risk of bias. They concluded that the effect of different exercises used in chronic low back pain for functional disability and pain outcomes varies, with no major difference between exercise types. These results support our initial statement that there is no definitive data to support the benefit of one exercise modality over another.

Donald Clinton Maharty, DO, DMin, FACOPF, FAAFP, MAML, DABOM, DipABLM

Fayetteville, North Carolina

dmaha@capefearvalley.com

Shaun Hines, DO, DABOM, DipABLM

Bladenboro, North Carolina

Regina Bray-Brown, MD, FAAFP, MHPE

Lillington, North Carolina

Author disclosure: No relevant financial relationships.

REFERENCES

1. Hayden JA, Ellis J, Ogilvie R, et al. Some types of exercise are more effective than others in people with chronic low back pain: a network meta-analysis. *J Physiother*. 2021;67(4):252-262.
2. Ahn E, Kang H. Introduction to systematic review and meta-analysis. *Korean J Anesthesiol*. 2018;71(2):103-112.
3. Guyatt GH, Sackett DL, Sinclair JC, et al; Evidence-Based Medicine Working Group. Users' guides to the medical literature. IX. A method for grading health care recommendations. *JAMA*. 1995;274(22):1800-1804.
4. Cipriani A, Higgins JPT, Geddes JR, et al. Conceptual and technical challenges in network meta-analysis. *Ann Intern Med*. 2013;159(2):130-137.
5. Grooten WJA, Boström C, Dederding Å, et al. Summarizing the effects of different exercise types in chronic low back pain – a systematic review of systematic reviews. *BMC Musculoskelet Disord*. 2022;23(1):801.

Prostate-Specific Antigen Testing in the Evaluation of Chronic Low Back Pain

To the Editor: I appreciated the review article from Dr. Maharty and colleagues on chronic low back pain in adults.¹ Evidence-based evaluation of this common condition has the potential to improve lives and avoid wasting resources. The authors suggest obtaining complete blood cell count, erythrocyte sedimentation rate, and C-reactive protein measurements in people older than 50 years with a history of cancer or multiple risk factors for neoplasia.

Email submissions to afplet@aafp.org.

Central low back pain of insidious onset may be the only presenting symptom of prostate cancer metastatic to the spine. About 6% of prostate cancers are metastatic on presentation, and a delay in the diagnosis may result in decreased quality of life and prolonged, intractable pain.² Is there any evidence for or against including prostate-specific antigen (PSA) testing in the workup of eligible patients with chronic low back pain when physical examination suggests a localized bony source? A high PSA level may guide physicians to pursue appropriate workup; this provides an opportunity to alleviate considerable suffering.

Daniel Rosenberg, MD

Portland, Oregon

daniel.rosenberg@providence.org

Author disclosure: No relevant financial relationships.

REFERENCES

1. Maharty DC, Hines SC, Brown RB. Chronic low back pain in adults: evaluation and management. *Am Fam Physician*. 2024;109(3):233-244.
2. Devasia TP, Mariotto AB, Nyame YA, et al. Estimating the number of men living with metastatic prostate cancer in the United States. *Cancer Epidemiol Biomarkers Prev*. 2023;32(5):659-665.

In Reply: We thank Dr. Rosenberg for bringing to light the question of the use and implications of a PSA test for the evaluation of chronic low back pain.

In the United States, 13% of adults will have chronic low back pain.¹ This means that a large population would potentially be subjected to PSA testing. Prostate cancer metastatic to the spine can be difficult to diagnose because lesions may not be apparent on plain radiography until 50% to 70% of the bony trabecular architecture has been obliterated.² There is also no clear correlation between pain chronicity and the size and severity of metastatic bone damage.³

PSA screening alone has been debated. It may provide a small benefit in reducing mortality, but there is a high risk of potential harms, including false-positive results and treatment complications, such as incontinence and erectile dysfunction.

Clinicians offering PSA testing opens the proverbial Pandora's box considering the massive numbers of patients with chronic low back pain in the United States. Other more common diagnoses, such as spine osteoarthritis, are widespread, with 95% of male patients older than 60 years demonstrating

evidence of osteoarthritis on spinal radiography. These patients would be unnecessarily subjected to the risks of PSA testing.⁴

Our recommendation is to offer magnetic resonance imaging (MRI) when a patient older than 50 years with chronic low back pain presents with localized midline tenderness, weight loss, or other history or symptoms suspicious for cancer (see Table 1 and Figure 1 in our article).⁵ Compared with plain radiography, MRI has superior sensitivity and specificity for the detection of metastasis.⁶

This route avoids the conundrum of managing an elevated PSA level that is more likely to harm than help a patient. Vigilance and a high degree of suspicion are essential. Periodic reassessment is recommended for symptoms that suggest cancer. We advocate a multidisciplinary management approach based on collaborations between the primary care physician and consultants aimed at improving patient outcomes through a "choose wisely" strategy.

Donald Clinton Maharty, DO, DMin, FACOF, FAAFP, MAML, DABOM, DipABLM

Fayetteville, North Carolina

dmaha@capefearvalley.com

Shaun Hines, DO, DABOM, DipABLM

Bladenboro, North Carolina

Regina Bray-Brown, MD, FAAFP, MHPE

Lillington, North Carolina

Author disclosure: No relevant financial relationships.

REFERENCES

1. Von Korff M, Scher AI, Helmick C, et al. United States National Pain Strategy for population research: concepts, definitions, and pilot data. *J Pain*. 2016;17(10):1068-1080.
2. Weber MA, Delorme S, Hillengass J. Imaging of multiple myeloma and related monoclonal plasma cell diseases—an update. *Radiologie up2date*. 2014;14(3):237-255.
3. Zajączkowska R, Kocot-Kępska M, Leppert W, et al. Bone pain in cancer patients: mechanisms and current treatment. *Int J Mol Sci*. 2019;20(23):6047.
4. Sarzi-Puttini P, Atzeni F, Fumagalli M, et al. Osteoarthritis of the spine. *Semin Arthritis Rheum*. 2005;34(6 suppl 2):38-43.
5. Chou R. Low back pain. *Ann Intern Med*. 2021;174(8):ITC113-ITC128.
6. Del Grande F, Farahani SJ, Carrino JA, et al. Bone marrow lesions: a systematic diagnostic approach. *Indian J Radiol Imaging*. 2014;24(3):279-287. ■