International Journal of Research and Review
[Indexed, Peer-Reviewed Journal]
Volume 12; Issue: 11; November 2025
Website: www.ijrrjournal.com
Review Paper *E-ISSN: 2349-9788; P-ISSN: 2454-2237*

Impact of Yoga in Patients with Chronic Low Back Pain: A Literature Review

Rohina Kumari

Orthotist, Department of Prosthetics and Orthotics, Faculty of Paramedical and Rehabilitation Sciences, Dr. Shakuntala Misra National Rehabilitation University, Lucknow, Uttar Pradesh.

Corresponding Author: Rohina Kumari

DOI: https://doi.org/10.52403/ijrr.20251120

ABSTRACT

Chronic low back pain (CLBP), a musculoskeletal condition, is common and often incapacitating. LBP can be exacerbated by common mental diseases such depression, anxiety, and stress-related disorders, which can also have a negative impact on day-to-day functioning. Low back pain is typically treated with physical therapy exercises and standard care. An alternate method of treating low back pain may be yoga, a mind-body workout. It is necessary for practitioners and patients with CLBP to understand whether yoga is more beneficial than other forms of treatment, such as conventional physical therapy, exercises, and regular medical care. The purpose of this review was to ascertain whether yoga was effective in treating low back pain.

Keywords: Low back pain, Activities of daily living, Yoga, Meditation

INTRODUCTION

A major contributor to disability in both developed and developing nations is low back pain (LBP). Stiffness and pain below the costal line and above the inferior gluteal folds are common symptoms of LBP. The term "chronic low back pain" (CLBP) refers to LBP that lasts 12 weeks or more. According to studies, up to 84% of people in the general population will have LBP in their lifetime, 23% will experience CLBP, and 12% will experience LBP with a substantial handicap. Age-related increases in activity limitation may be one of the factors contributing to the alleged rise in the prevalence of LBP, which peaks between the ages of 35 and 55. LBP is one of the most commonly reported localizations for chronic pain problems, and it has a strong tendency to develop into chronic pain; according to certain data, 20% of people aged 20 to 59 worldwide suffer from this condition.[1,2,3]

Many patients continue to suffer with severe pain, disability, and functional restrictions despite seeking medical assistance, including medication, surgery, and rehabilitation. Four Participants with CLBP may find yoga to be a safe self-management intervention.[4]

Yoga has mostly been taught in group settings under the guidance of a yoga instructor, with very few negative side effects. People with CLBP are characterized by low core stability, muscle imbalance, poor mobility, and altered lumbopelvic posture. An imbalance of tight and weak muscles causes mechanical problems with posture, which could be remedied by exercises like yoga that focus on both strengthening and flexibility.[5]

The ancient Patanjali Yoga Sutra, written by the sage Patanjali, provides a detailed description of the science and practices of yoga. The eight limbs of yoga are Yama (abstinences), Niyama (observances), Asana (physical postures), Pranayama (breath

management), Pratyahara (withdrawal of the senses), Dharana (concentration), Dhyana (meditation), and Samadhi (absorption), according to Patanjali. However, these days, Asana, Pranayama, and Dhyana are frequently employed for therapeutic purposes. Yoga therapy's many subtle elements - breath control, posture maintenance, awareness, and relaxation, have the potential to treat a wide range of lifestyle disorders, including CLBP.[6,7]

Thus, the purpose of this review was to ascertain whether yoga was effective in treating low back pain.

METHOD

Low back pain, daily living activities, yoga, meditation, and other keywords were used to search and retrieve a variety of papers from the following databases: Google Scholar, Science Direct, Pub Med, and the Cochrane Library. The study comprised ten articles in all, and a review was conducted based on the findings.

RESULTS

Table 1: Details of the reviewed articles

Author	Title	Conclusion
Helen E. Tilbrook et.al 2011	Yoga for Chronic Low Back Pain	According to this study, providing a 12-week yoga program to persons who experience persistent or recurring low back pain improved back function more than standard therapy.[8]
Moseon Lee, WoongjoonMoon et.al 2014	Effect of Yoga on Pain, Brain-Derived Neurotrophic Factor, and Serotonin in Premenopausal Women with Chronic Low Back Pain	This was the first clinical trial to demonstrate the considerable impact of yoga intervention on serum BDNF.[9]
Padmini Tekur et.al 2008	Effect of Short-Term Intensive Yoga Program on Pain, Functional Disability, and Spinal Flexibility in Chronic Low Back Pain: A Randomized Control Study	It was determined that the cumulative effect of intense daily practices is more successful than those that are dispersed over longer periods of time, which may not have the same effect.[10]
Gopal Nambi S et.al 2014	Changes in pain intensity and health related quality of life with Iyengar yoga in nonspecific chronic low back pain: A randomized controlled study	According to the study's findings, Iyengar yoga works better than general exercise at reducing pain and improving HRQOL in those with nonspecific chronic back pain.[11]
Douglas G. Chang et.al 2016	Yoga as a treatment for chronic low back pain: A systematic review of the literature	It was concluded that lowering the functional impairment caused by back pain, yoga seems to be just as successful as other non-pharmacologic treatments. When compared to normal care or no care, it seems to be more successful in lowering the intensity of pain or "bothersomeness" of CLBP. By maintaining serum BDNF and serotonin levels, yoga may help treat depression and other psychiatric co-morbidities. For persistent low back pain, yoga seems to be a safe and beneficial treatment.[12]
Yvonne M Colgrove et.al 2019	Physical and Physiological Effects of Yoga for an Underserved Population with Chronic Low Back Pain	For those with CLBP, yoga can reduce pain and disability. It does this in part by improving core strength and flexibility. With so many obstacles to health care, yoga seems to be a good addition to basic medical care for low-income patient populations.[5]
Arlene A. Schmid et.al 2019	Yoga improves occupational performance, depression, and daily activities for people with chronic pain	The study's findings indicate that eight weeks of group yoga sessions improved a number of occupation-based outcomes for those with chronic pain. Occupational therapists and other rehabilitation team members may view yoga as a crucial component of managing chronic pain.[13]

Paul Posadzki et.al 2011	Yoga for low back pain: a systematic review of randomized clinical trials	It was determined that yoga may help those with low back discomfort.[14]
Feilong Zhu et.al 2020	Yoga compared to non-exercise or physical therapy exercise on pain, disability, and quality of life for patients with chronic low back pain: A systematic review and meta-analysis of randomized controlled trials	Compared to non-exercise (e.g., usual care, education), yoga may reduce pain from short- to intermediate-term and improve functional impairment status from short- to long-term. Yoga's impact on pain and disability was comparable to that of any other physical therapy or exercise.[15]
Chametcha Singphow et.al 2022	Integrated effect of yoga and mindfulness meditation on pain, functional disability, and spinal flexibility in computer users with chronic low back pain: A prospective randomized active control trial	Physical activity, mindfulness meditation, and yoga all had positive effects on CLBP. However, compared to physical exercise, yoga and mindfulness meditation were more successful in lowering pain and functional impairment and increasing spinal flexibility in computer users with CLBP.[1]

DISCUSSION

Millions of individuals worldwide suffer from chronic low back pain. Although there are numerous therapy options for CLBP, the majority are not very effective. Thus, the purpose of this research was to assess yoga's effects on CLBP and confirm if it is a supplemental and alternative treatment for CLBP patients. Yoga is an old practice that was created to bring the individual and global consciousnesses together, but research has shown that yoga has numerous positive effects on both mental and physical health. For some, yoga is a form of mind-body practice, similar to meditation, which involves steady sitting, whereas yoga involves movement and physical body participation. The holistic development of the human body, mind, and soul is provided by yoga, which is actually a synthesis of psychological, physical, and spiritual sciences.[16,1]

There have been reports of unexpected failures and recurrences following surgical and physical treatments. Only two of the three patients who were active prior to the surgeries went back to work, and one of the three patients who had herniated lumbar disc surgery presented with ongoing pain, weariness, and emotional issues that interfered with their careers. Research on nonpharmacologic treatments, such as yoga, has resulted from this. Through well-designed trials, yoga has demonstrated efficacy in treating a number of chronic lifestyle-related conditions, including rheumatoid arthritis (RA), osteoarthritis, essential hypertension, bronchial asthma, irritable bowel syndrome, diabetes, coronary artery disease, and depression. It also provides a self-corrective, holistic approach to health. Patients with CLBP have also been treated with yoga.[10]

In their study, Colgrove Y. examined the viability and possible physiological and physical processes of yoga intervention in enhancing function and pain in a largely underprivileged group with CLBP. Strengthening the core muscles was one of the study's innovative features. The most improvement was seen in upper abdominal strength, while back extensor strength was on the rise.[5]

Yoga is considered a component of complementary and alternative medicine or a type of mind-body medicine. The use of postures (Hatha yoga), also known as asanas, in conjunction with breathing exercises or pranayama that are primarily based on isometric muscular contractions has been proposed as a means of achieving inner, physical, and emotional equilibrium. Numerous clinical and nonclinical uses exist for yoga. This is mostly explained by the level of intricacy and multifacetedness of the influences that can be seen in yoga poses.[14]

These finding were consistent with Chametcha Singphow et al. who examined that impact of a yoga program that included

lectures on yoga philosophy, back pain counseling, pranayama, meditation, and particular asana on patients with CLBP. The NRS(Numerical rating scale) score for pain decreased significantly in this study in both the yoga (49%) and physical exercise (17.5%) groups, with the yoga group benefiting from significant between-group differences.[1]

CONCLUSION

Patients with persistent low back pain have reported reduced back pain and functional impairment after practicing yoga, one of the most well-liked mind-body therapies. It is commonly believed that yoga consists of three main components: breathing exercises (pranayama), meditation (dhyana), and physical postures (asanas). The benefits of yoga may outweigh those of exercise alone since it combines mental and physical attention, and patients learn relaxation techniques, self-awareness, and proper posture.

Declaration by Authors

Ethical Approval: Not applicable
Acknowledgement: None
Source of Funding: None
Conflict of Interest: No conflicts of interest declared.

REFERENCES

1. Singphow C, Purohit SP, Tekur P, Bista S, Panigrahy SN, Raghuram N. Integrated effect of yoga and mindfulness meditation on pain, functional disability, and spinal flexibility in computer users with chronic low back pain: A prospective randomized active control trial. Yoga Mimamsa. 2022;54(1):4–11.
2. ChoiBK, VerbeekJH, TamWW E. Exercisesforprevention of recurrences of low-back pain. Cochrane Database Syst Rev. 2010;
3. MeucciRD, FassaAG F. Prevalenceofchroniclow back pain: systematic review. Rev Saude Publica. 2015;
4. Manchikanti L, Singh V, Falco FJ, Benyamin RM HJ. Epidemiology of low back pain in adults. Neuromodulation. 2014;17(2):3–10.
5. Colgrove Y, Gravino-Dunn N, Dinyer S, Sis E, Heier A, Sharma N. Physical and physiological effects of yoga for an underserved population with chronic low back pain. Int J Yoga. 2019;12(3):252.
6. D. KT. Yoga and Health. Indian J Community Med. 2014;39(2).
7. Govindaraj R, Karmani S, Varambally S GB. Yoga and physical exercise–a review and comparison. Int Rev psychiatry. 2016;28(3):242–53.
8. Helen E. Tilbrook. Yoga for Chronic Low Back Pain. Ann Intern Med [Internet]. 2011;155(9):569–78. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=mdc&AN=22041945&site=eds-live
9. Lee M, Moon W, Kim J. Effect of yoga on pain, brain-derived neurotrophic factor, and serotonin in premenopausal women with chronic low back pain. Evidence-based Complement Altern Med. 2014;2014.
10. Tekur P, Singphow C, Nagendra HR, Raghuram N. Effect of short-term intensive yoga program on pain, functional disability and spinal flexibility in chronic low back pain: A randomized control study. J Altern Complement Med. 2008;14(6):637–44.
11. Nambi G, Shanmugananth, Devi S, Inbasekaran D, Jagannathan K, Khuman R. Changes in pain intensity and health related quality of life with Iyengar yoga in nonspecific chronic low back pain: A randomized controlled study. Int J Yoga. 2014;7(1):48.
12. Chang DG, Holt JA, Sklar M, Groessl EJ, Diego S, Diego S, et al. Yoga as a treatment for chronic low back pain: A systematic review of the literature. J Orthop Rheumatol. 2016;3(1):1–8.
13. Schmid AA, Van Puymbroeck M, Fruhauf CA, Bair MJ, Portz JD. Yoga improves occupational performance, depression, and daily activities for people with chronic pain. Work. 2019;63(2):181–9.
14. Posadzki P, Ernst E. Yoga for low back pain: A systematic review of randomized clinical trials. Clin Rheumatol. 2011;30(9):1257–62.
15. Zhu F, Zhang M, Wang D, Hong Q, Zeng C, Chen W. Yoga compared to non-exercise or physical therapy exercise on pain, disability, and quality of life for patients with chronic

low back pain: A systematic review and meta-analysis of randomized controlled trials. PLoS One [Internet]. 2020;15(9):1–21. Available from: http://dx.doi.org/10.1371/journal.pone.0238544

16. Desai R, Tailor A BT. Effects of yoga on brain waves and structural activation: A review. Complement Ther Clin Pract. 2015;21(2):112–8.

How to cite this article: Rohina Kumari. Impact of yoga in patients with chronic low back pain: a literature review. *International Journal of Research and Review*. 2025; 12(11): 183-187. DOI: *https://doi.org/10.52403/ijrr.20251120*

******