

YOGA: TREATMENT FOR LOW BACK PAIN

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Abstract

Lower back discomfort can be effectively treated with yoga in particular. Different positions help build strength in particular back muscle groups. Numerous yoga positions provide a mild method for building stronger stomach and back muscles, both of which are vital for a healthy spine. Strong abs and back muscles enable you to move and maintain good posture, which lessens back pain. Yoga not only tones your muscles but also stretches them, which eases general tension. It increases flexibility and mobility in your muscles and joints by allowing certain muscles to flex and others to stretch deeply for 30 to 60 seconds at a time. Stretching is a vital technique for back pain sufferers as it can effectively reduce or even eliminate discomfort. There are numerous possible problems that could lead to lower back pain. When the space between your vertebrae becomes too small to perform its function, a bulging disc may result. Pinched nerves can result from pressure exerted by a herniated disc. Osteoarthritis may also be relevant. This review article is formed with the intention of focussing on the yoga practice that further brings positive changes in the human. 10 research articles were reviewed in order to understand the effectiveness of yoga on low back pain. PUBMED, CINAHL and GOOGLE SCHOLAR were prominently used as search engine to gather information.

Keyword: YOGA, CLBP (Chronic Low Back Pain), Practice, Effectiveness.

INTRODUCTION

Regular yoga practice can help reduce back discomfort by enhancing posture, flexibility, and core body strength. Exercise and over-the-counter medications, however, may not always be sufficient to fully address persistent back pain. The calming effects of yoga practice are an additional advantage. Yoga teaches you that relaxation affects your entire body, especially your back, and is not just a mental condition. This is a terrific lesson to learn. After even a short yoga practice, muscles and joints feel much less stiff since most poses stimulate the body to expand and release stored tension. The main focus of yoga is on mental calmness through deep breathing exercises. These breathing techniques support moderate and controlled stress levels. The wonderful thing is that you can utilise these methods anywhere, at any time, even when you're not on your yoga mat. You may perform breathing exercises directly from your desk, and they have been proved to alleviate stress throughout the body, particularly tension in the back.¹ From a gradual, persistent ache to an abrupt, searing sensation that renders you immobile, low back pain can take many different forms. The discomfort may start suddenly after an accident or when moving a large object, or it may gradually worsen as a result of age-related changes in the spine. Many people experience persistent low back discomfort, which lasts longer than three months. About 20% of people with chronic low back pain experience it for longer than a year. According to recent research, a properly

modified series of yoga poses may help lower pain and enhance mobility in those with mild to moderate persistent low back pain. Yoga has its roots in ancient Indian philosophy. As practiced today, it usually combines physical postures, breathing techniques, and meditation or relaxation. Most research on yoga has been done with middle-class white men. However, people in economically disadvantaged communities suffer disproportionately from chronic low back pain.² The benefits of yoga go beyond the muscles. Slow movements and a constant focus on proper breathing can improve the emotional aspect of back pain, helping to reduce stress and relieve anxiety and depression. Nonspecific low back pain is a common, potentially disabling condition that is often treated with self-medication and over-the-counter medications. Exercise therapy may be beneficial in the treatment of chronic low back pain according to current guidelines. Yoga is a mind-body exercise that is sometimes used for non-specific lower back pain. Yoga involves a series of poses, also known as handstands, and emphasizes breathing techniques. The poses teach you to stretch and strengthen your muscles, which helps reduce muscle tension, build flexibility and strength, and improve balance and bone strength. For lower back pain, yoga can be especially beneficial for the muscles that support the back and spine, such as the paraspinal muscles, which help bend the spine, the multifidus muscles, which stabilize the vertebrae, and the transverse abdominis, which also helps to stabilize the spine.³

¹ '3 Ways Yoga Can Help With Back Pain'. *NJ Spine & Orthopedic*, 24 Feb. 2021, <https://www.njspineandortho.com/3-ways-yoga-can-help-with-back-pain/>.

² Holtzman S, Beggs RT. Yoga for chronic low back pain: a meta-analysis of randomized controlled trials. *Pain Res Manag*. 2013 Sep-Oct;18(5):267-72. doi: 10.1155/2013/105919. Epub 2013 Jul 26. PMID: 23894731; PMCID: PMC3805350.

³ Wieland, L. S., Skoetz, N., Pilkington, K., Vempati, R., D'Adamo, C. R., & Berman, B. M. (2017). Yoga treatment for chronic non-specific low back pain. *Cochrane Database of Systematic Reviews*, (1).



METHODS

We reviewed the scientific literature to identify studies on the effects of yoga on pain in people with chronic low back pain. The literature search was done in March 2024. Cochrane, PubMed, CINAHL, Embase ProQuest Dissertations, and Google Scholar and Clinical Trials government databases were searched electronically. YOGA and back pain were used as search terms. Some studies recruited subjects through self-referrals and medical professionals according to specific inclusion/exclusion criteria.

SELECTION OF STUDIES

A total of 10 relevant studies were selected for the literature review, consisting of studies that included randomized controlled trials of yoga therapy in people with chronic non-specific low back pain. We included studies that compared yoga with any other intervention or no intervention. We also included studies that compared yoga as an adjunct to other therapies versus these other therapies. Several randomized controlled trials have been conducted on the effectiveness of yoga.⁴ These include osteoarthritis (Garfinkel et al., 1994), carpal tunnel syndrome (Garfinkel et al., 1998), multiple sclerosis (Oken et al., 2004), bronchial asthma (Nagarathna and Nagendra, 1985,

Vedanthan et al., 1998), pulmonary tuberculosis (Visweswaraiiah and Telles, 2004), drug addiction (Shaffer et al., 1997), hypertension (Murugesan et al., 2000), irritable bowel syndrome (Taneja et al., 2004), lymphoma (Cohen et al., 2004) and mild depression (Woolery et al., 2004). Four of these studies evaluated Iyengar yoga (Garfinkel et al., 1994, Garfinkel et al., 1998, Oken et al., 2004, Woolery et al., 2004) and reported positive results.⁵ In one study, a total of 88 female nurses from a tertiary hospital in South India were randomized to a yoga group (n = 44; age - 31.45 ± 3.47 years) and an exercise group (n = 44; age - 32.75 ± 3.71). The yoga group was treated with exercises from the integrated yoga therapy module, 1 h/day and 5 days a week for 6 weeks. The exercise group practiced several physical exercises at the same time. All participants were assessed at baseline and after 6 weeks using the WHOQOL-BREF questionnaire.⁶

Medical Condition	Postures (Asanas) to be avoided (May aggravate pain)	Contraindicated Postures
Low Back & Radicular Leg Pain Worse in Flexion	Paschimottasana (seated forward fold) Janu Sirasana (head to knee pose) Uttanasana (standing forward fold)	Sirasana (headstand) Parivrita Trikonasana (revolved triangle pose) Mayurasana (Peacock pose)
Low Back & Radicular Pain Worse in Extension	Ushtrasana (camel pose) Dhanurasana (bow pose) Bhujangasana (cobra pose)	Chakrasana (wheel pose) Shalabhasana (Locust pose) Naukasana (Boat pose)
Neck Pain (Cervical Spondylosis/ Degenerative Disc Disease)	Dhanurasana (bow pose) Setu Bandhasana (bridge pose) Ushtrasana (camel pose) Ardha Matsyendrasana (seated twisting pose)	Sirasana (headstand) Urdhva Sarvangasana (supported shoulder stand pose) Halasana (plough pose) Chakrasana (wheel pose)

RESULTS

There is little to moderate certainty that yoga, compared with no exercise, produces small to moderate improvements in back function at three and six months. Yoga may also be slightly more effective for pain relief at three and six months of age, but the effect size did not meet predefined minimum clinical values. It is not certain whether there is a difference between yoga and other exercise related to back function or pain, or whether yoga added to exercise is more effective than exercise alone. Yoga is associated with more adverse effects than non-exercise, but may have the same risk of side effects as other back exercises. Yoga has no major side effects.⁷ Additional high-quality studies are needed to improve confidence in efficacy estimates, assess long-term outcomes, and provide more information on comparisons between yoga and other forms of chronic nonspecific low back pain. Some studies included Roland-Morris Disability Questionnaire (RMDQ) scores and a parallel group randomized controlled trial. Yoga improves disability, pain intensity, and depression in adults with CLBP. The yoga group also had a clinically significant tendency to reduce pain use compared to the control group.⁸ One study using a pooled fixed effect of six studies showed that a 12-week yoga program could significantly reduce chronic nonspecific low back pain by 0.41 across studies (standardized mean difference; 95% CI: -0.58 to -0.23 p < 0.0001). Subgroup analyzes also showed that significant reductions in pain were associated with type of yoga, session

⁴ Williams, K. A., Petronis, J., Smith, D., Goodrich, D., Wu, J., Ravi, N., ... & Steinberg, L. (2005). Effect of Iyengar yoga therapy for chronic low back pain. *Pain*, 115(1-2), 107-117.

⁵ Tilbrook, H. E., Cox, H., Hewitt, C. E., Kang'ombe, A. R., Chuang, L. H., Jayakody, S., ... & Torgerson, D. J. (2011). Yoga for chronic low back pain: a randomized trial. *Annals of internal medicine*, 155(9), 569-578.

⁶ Patil, N. J., Nagarathna, R., Tekur, P., Manohar, P. V., Bhargav, H., & Patil, D. (2018). A randomized trial comparing effect of yoga and exercises on quality of life in among nursing population with chronic low back pain. *International journal of yoga*, 11(3), 208-214.

⁷ Williams, Kimberly PhD*; Abildso, Christiaan PhD, MPH; Steinberg, Lois PhD†; Doyle, Edward MD, MS*; Epstein, Beverly MD, PT‡; Smith, David PhD§; Hobbs, Gerry PhD*; Gross, Richard PhD¶; Kelley, George PhD*; Cooper, Linda MSW, MBA*. Evaluation of the Effectiveness and Efficacy of Iyengar Yoga Therapy on Chronic Low Back Pain. *Spine* 34(19):p 2066-2076, September 1, 2009. | DOI: 10.1097/BRS.0b013e3181b315cc

⁸ Sorosky, S., Stilp, S., & Akuthota, V. (2008). Yoga and pilates in the management of low back pain. *Current reviews in musculoskeletal medicine*, 1, 39-47.

length, study quality, and time of pain assessment. The results suggest that 12 weeks of yoga can help reduce pain and that yoga programs should consider subgroup factors to help people with chronic non-specific low back pain.⁹ In one controlled study, there were significant negative correlations (Pearson, $P = 0.30$) between all four baseline PSS domains and WHOQOLBref total scores. WHOQOLBref for all four domains improved in the yoga group (repeated measures ANOVA $P = 0.001$) with a significant group*time interaction.¹⁰ In CLBP, there is a negative correlation between stress and quality of life. Yoga improves quality of life and spinal flexibility better than physical therapy exercises. Poor physical health at baseline is associated with improved back function and yoga-induced pain. Race, income and body mass index do not affect the ability of a person with low back pain to benefit from yoga.¹¹

CONCLUSION

Weight gain, bad posture, incorrect lifestyle and a number of other reasons are the main reasons for the consequences of back pain, which are gradually increasing thanks to modern sitting. Many studies have found that yoga is beneficial for some back problems. The physical postures used in yoga are a therapeutic application that combines mind-body balance, coordination, flexibility and core strength of the human body. Yoga is now emerging as a promising treatment for back pain, such as upper (neck), lower back and scapular pain, and can be of great benefit to patients, especially when done with or without other conventional and alternative medical methods. Treatments such as lifestyle changes, exercise, massage and physiotherapy, exercise therapy and other manipulations. When practiced safely and systematically, yoga can be very beneficial in treating acute and chronic back pain.

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