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## Yoga Classes Help Relieve Chronic Back Pain

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Yoga classes helped people with chronic lower back pain improve their mood and ability to function and eased their pain more than conventional treatment alone, according to a new study funded by the National Institutes of Health.

People who were assigned to take yoga for two months experienced a 29% reduction in functional disability ( $P=0.01$ ) and a 42% reduction in pain ( $P<0.001$ ), the authors reported in the Sept. 1 issue of *Spine*. Yoga was also associated with a 45.7% decrease in symptoms of depression over conventional therapy alone ( $P<0.001$ ).

"Yoga improves functional disability, pain intensity, and depression in adults with [chronic lower back pain]," Kimberly Williams, PhD, of West Virginia University, and colleagues concluded. "There was also a clinically important trend for the yoga group to reduce their pain medication usage compared to the control group."

Lower back pain is a major public health issue, the authors noted, with studies suggesting that 70% to 85% of the population experience one or more episodes during their lifetimes. Directly-related medical costs exceed \$34 billion per year, they wrote.

"Complementary alternative medicine utilization has increased nearly 10% in recent years, with back pain as the most commonly reported reason for its use," the authors noted. "One of the most common complementary alternative medicine activities is yoga, with participation reported at approximately 14.9 million in the U.S."

Previous research on Hatha (physical) yoga showed a decrease in pain and improvements in function and mood, but the studies lacked statistical power or clinical significance. A 2005 study of viniyoga (a therapeutic branch of the discipline that emphasizes breathing) found a significant improvement over standard therapeutic exercise.

A previous randomized controlled trial of Iyengar yoga, which stresses alignment of the body and is the most prevalent style practiced by yoga journal subscribers, found a significant reduction in pain intensity, functional disability, and use of pain medication after 16 weeks.

In this new study, Williams and colleagues extended the treatment time to 24 weeks to compare the outcomes of people participating in Iyengar yoga and those receiving conventional medical treatment alone.

The study included 90 participants who self-referred or were physician referred and were deemed eligible during a telephone interview. They were then randomly assigned to the yoga group (43 participants) or the control group (47 participants).

The yoga therapy was developed in collaboration with two senior yoga teachers approved by B.K.S. Iyengar, who developed the Iyengar yoga system.

Patients assigned to the yoga group participated in 90-minute yoga classes twice a week for two months. The classes were led by a certified yoga instructor and two assistants with experience in yoga therapy for people with lower back pain.

The participants were given props, a DVD, and an instruction manual, and asked to practice yoga for 30 minutes on days when they had no formal class.

People in the control group continued self-directed standard medical care, with no instructions to change the treatment previously

### Action Points

- Explain to interested patients that yoga appears to be an effective complimentary therapy for chronic back pain.
- Note that the study found that two months of formal yoga classes were most effective for lower back pain therapy.
- Note that the study was relatively small and was based largely on self-reported data.

prescribed by their physician. They were put on a wait list to join yoga classes after the study was completed.

At 12 weeks, 24 weeks and six months, the researchers assessed participants' functional disability with the Oswestry Disability Index, pain with the Visual Analogue Scale, and depression with the Beck Depression Inventory Second Edition, all self-administered questionnaires.

The yoga participants saw improvement after 12 weeks of classes compared with the control group, but the difference was amplified after two months.

"Despite the fact that significant improvements at 12 weeks were found in the participants adherent to the study, we believe that a 24-week period of yoga practice for [chronic lower back pain] is superior since this time period can better prepare participants to sustain the benefits by improving posture, helping to retrain the musculoskeletal system, and building the skills needed to decrease the rate of relapse," they wrote.

Yoga participants also reported a reduction in their pain medication use, although this finding was not statistically significant.

Six months after the completion of the study-directed yoga classes, 67.9% of the people in the yoga group reported that they were still practicing. The improvement in their outcomes were slightly lower compared to controls than seen at 24 weeks, but still statistically significant.

The researchers cautioned that the study relied heavily on self-report and that one-third of the subjects had minimal disability to begin with. They also noted that the small sample size may have made the study less sensitive to analyze differences in pain medication usage by the participants.

Not noted by the authors, the control group had a significantly longer duration of pain since first onset of low back pain compared to the yoga group (212.8 months versus 146.1,  $P=0.027$ ).

The study was funded by the National Institutes of Health.

The authors reported no financial conflicts of interest.

**Primary source:** Spine

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Williams K, et al. "Evaluation of the Effectiveness and Efficacy of Iyengar Yoga Therapy on Chronic Lower Back Pain" *Spine* 2009; 19; 2066-76.

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