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The full report is titled "Systematic Review: Strategies for Using Exercise Therapy To Improve Outcomes in Chronic Low Back Pain." It is in the 3 May 2005 issue of *Annals of Internal Medicine* (volume 142, pages 776-785). The authors are J.A. Hayden, M.W. van Tulder, and G. Tomlinson.

## Best Types of Exercise for Low Back Pain

### What is the problem and what is known about it so far?

Chronic low back pain is a common problem that causes discomfort and disability. Treatment goals include decreasing pain and helping patients resume their normal activities. Treatment options include exercise therapy, patient education, and pain-relieving drugs (such as nonsteroidal anti-inflammatory drugs). There are many forms of exercise therapies, and we do not know which particular types best improve outcomes.

### Why did the researchers do this particular study?

To see which types of exercise therapies reduce pain and improve physical function in adults with chronic low back pain.

### Who was studied?

Adults with chronic low back pain who participated in 43 trials of exercise therapy.

### How was the study done?

The researchers searched the medical literature up to October 2004 to find randomized, controlled trials that compared exercise therapy with placebo, no treatment, conservative management, or another exercise group. They classified the types of exercises that made up the interventions. They also looked at several characteristics of the exercise therapy interventions, including whether they were delivered as group or as individual programs and whether they were supervised or done independently without supervision. They then combined data from the trials to explore which exercises reduced pain and improved physical function.

### What did the researchers find?

Stretching and strengthening were the most effective exercises for improving pain and function, respectively. Exercise performed over longer periods of time seemed more effective than exercise involving less than 20 hours of total time. Also, supervised programs that were individually tailored seemed most effective.

### What were the limitations of the study?

Studies used different ways to measure pain intensity and function. Some studies were small and of low quality. Although the researchers thoroughly searched for evidence, they may have missed unpublished exercise trials with pertinent evidence.

### What are the implications of the study?

Stretching and strengthening exercises that are tailored to the individual and supervised by professionals may be the best forms of exercise therapy for adults with chronic low back pain.

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