

Back Strengthening Exercises for Low Back Pain

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Scientists haven't been able to prescribe the perfect exercise program for everyone with low back pain (LBP). That may be because there is a wide range of exercises that can be done for the back. And no one has been able to nail down how much exercise, how often, or the intensity with which they should be done.

Many studies combine two or more types of exercises together. The results can't be compared to other studies of single exercise types. Different approaches to LBP use different exercise strategies. These can include:

- activity as usual
- aerobic exercise (walking, biking)
- aquatic (pool) rehab
- directional preference (the McKenzie method)
- flexibility (stretching, Yoga)
- balance/coordination training
- core strengthening (exercise targeting the abdominal and trunk muscles; also referred to as stabilization exercises)
- strength training (lifting weights)

In this review, researchers look at what studies say about *lumbar extensor strengthening* exercises. This type of program is usually prescribed and supervised by a Physical Therapist.

The program follows a format of progressive resistance exercises (PREs) to load the muscles in training. This means the load is gradually increased as strength and endurance build up. The targeted muscles include the *lumbar erector spinae* and the *multifidus*. Both are deep muscles of the back that control extension movements.

Studies show that lumbar extensor strengthening for LBP is better than no treatment. Pain is decreased and function is improved. However, lumbar extensor strengthening doesn't work better than other exercise programs. With any strengthening program, a minimum of 10 to 12 weeks of exercise is needed. And it must be kept up over time to maintain the benefits.

Strength and endurance is improved regardless of the type of exercise used. High intensity exercise does improve strength and endurance more effectively than low intensity exercise.

It appears that exercise equipment such as Roman chairs and lumbar machines with graduated resistance are good choices. The use of free weights and stability balls is not recommended.

More study is needed to find the optimal dose (frequency, intensity, duration) of exercise for patients with chronic LBP. And studies need to be done to compare each isolated type of exercise before comparing exercises that combine several types of exercise.

John Mayer, DC, PhD, et al. Evidence-Informed Management of Chronic Low Back Pain with Lumbar Extensor Strengthening Exercises. In *The Spine Journal*. February 2008. Vol. 8. No. 1. Pp. 96-113.