[IMAGE]

Do You Need a Tune-Up?

Smooth and efficient body movements depend on the coordination of multiple "trunk" muscles of the back and stomach. Some of these muscles generate power, while others help your body maintain balance and control. The multifidus in particular appears to be a primary contributor to control and stabilization in the lower back, acting as a "fine-tuning" muscle.

A recent study in the *European Spine Journal* measured activity in the back muscles of three groups of people: healthy individuals, acute back-pain patients, and chronic back-pain patients (pain for at least one year). Muscle activity was measured during strength, coordination, or stabilization exercises involving kneeling and lifting, in the multifidus muscle and a group of power-generating muscles of the back during maximum exertion.

During coordination exercises, there was a significant decrease in muscle activity of the control/stabilization muscles in the chronic-pain group compared to the healthy group. Testing revealed significantly lower activity in both stabilization and power-generating muscles in the chronic-pain group during strength exercises.

In the long run, low-back-pain patients may have problems with balance and coordination in back movements, due to weakened control muscles. A reduction in activity in the multifidus and other "fine-tuning" muscles during coordination exercises may be one reason behind the origin and recurrence of back pain. If you have low back pain, talk to your doctor of chiropractic about how to safely strengthen your back muscles. For more information about back pain, go to http://www.chiroweb.com/tyh/backpain.html.

Reference:

Danneels LA, Coorevits PL, Cools AM, et al. Differences in electromyographic activity in the multifidus muscle and the iliocostalis lumborum between healthy subjects and patients with sub- acute and chronic low back pain. *European Spine Journal* 2002:11(1), pp. 13-19.

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