

[IMAGE]

## Accept No Substitutions!

Chronic low back pain causes countless days of work lost and health insurance dollars spent, yet the causes of this long-term condition remain elusive. Why do some people recover quickly from back pain while others suffer for years? A recent study in the journal *Spine* adds to the growing body of information that helps us understand the causes of recurring back pain and injury.

Low back pain is known to cause sufferers to utilize their back muscles differently, or substitute the wrong muscles for lifting tasks. Added force could in turn hasten spinal disc degeneration. This study investigated the force during lifting on the spines of 22 back-pain patients and 22 healthy individuals in two phases: one measuring spinal forces while participants lifted in a specific posture, and the other allowing individuals to personalize their posture to lift comfortably. The researchers wanted to determine how back-pain patients might compensate for their pain.

The researchers found that patients tended to compensate for back pain and injury by substituting inappropriate back, side, and abdominal muscles for lifting, rather than the correct muscles that hurt. The resulting force on the spine was significantly increased in back-pain patients as uninjured muscles were used to compensate for injured muscles. By guarding the injured muscles, back-pain sufferers imposed twice as much twisting force and 1.5 times more compressive force on their spines as healthy people, when lifting the same object in a controlled fashion. Also, lifting more slowly, as those with back pain tended to do, only prolonged and intensified the force on the spine.

If you suffer from chronic low back pain, talk to your doctor of chiropractic about treatment options like exercise and stretching to help you avoid substituting the wrong muscles while lifting.

For more information on back pain, head to <http://www.chiroweb.com/tyh/backpain.html>.

### *Reference:*

Marras WS, Davis KG, Ferguson SA, et al. Spine loading characteristics of patients with low back pain compared with asymptomatic individuals. *Spine* 2001;26(23), pp. 2566-2574.

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