

## NEWS AND NOTES

Don Stover PT, OCS, Cert. MDT  
Owner & Director

### *Does it matter which exercise you perform for back pain? Directional Preference for Spinal Pain*

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In a recent study conducted by Long, Donelson, and Fung (Spine, 2004), researchers studied 312 patients with low back pain and/or sciatica for movement directional preference. The authors defined directional preference as follows, "when posture or repeated end-range movements in a single direction (flexion, extension, or side-glide/ rotation) decrease or abolish lumbar midline pain, or cause referred pain emanating from the spine to appear to progressively retreat in a proximal direction back toward the lumbar midline (centralization)."

Seventy-four percent of the patients exhibited a clear directional preference when examined. The ex-

aminers divided these patients into three groups. Group 1 did exercises matching their individual directional preference (extension, flexion, or lateral movements to end range).

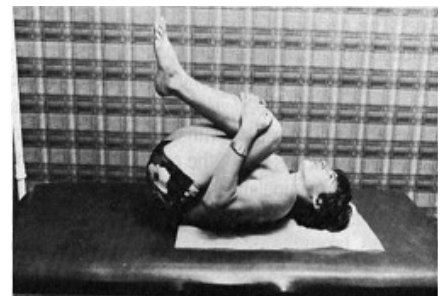
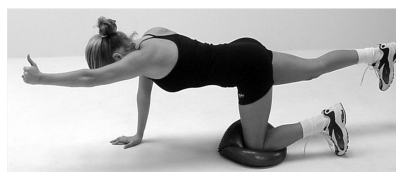
Group 2 exercised opposite their individual directional preference. Group 3 did "non-directional" exercises (evidenced based care group); these patients performed 8 commonly used mid-range exercises not biased in any particular direction.

The researchers measured each patient's pain intensity, location, disability, medication use, degree of recovery, depression, and work interference before and after the two week treatment period.

The results of the study were impressive. 95% of the people in Group 1 (matching exercise) rated better or resolved after two weeks. Group 1 improved significantly more than both

Group 2 and 3. Most dramatically, 35% of Group 2 and 33% of Group 3 withdrew from the study because of worsening of their symptoms. In contrast, not one individual in Group 1 withdrew from the study due to worsening symptoms. The authors concluded that exercises matching a person's directional preference have the potential to "significantly and rapidly decrease pain and medication use" in people with mechanical low back pain.

**Long, A., Donelson, R., & Fung, T. (2004). Does it matter which exercise? A randomized control trial of exercise for low back pain. *Spine*, 29, 2593-2602.**



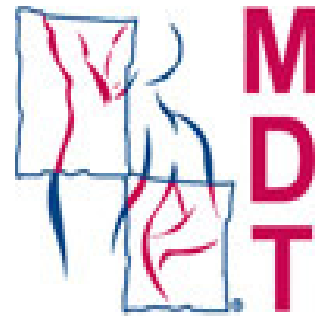
## Our Response

This is an excellent study clearly demonstrating what we see in the clinic everyday. Unlike most spinal literature investigating exercise and low back pain, researchers used repeated movement analysis to sub-classify people with low back pain. As noted in this study, most people exhibit a directional preference to movement and respond rapidly when they utilize this movement frequently. On the other hand, when people move opposite their directional preference negative results arise.

Interestingly, the testers in the study above were 12 PT's from 11 different facilities credentialed in Mechanical Diagnosis and Therapy (cert. MDT) from The McKenzie Institute International. This system of assessment utilizes a subgroup classification system for "nonspecific" low back pain populations. Mechanical Diagnosis and Therapy has demonstrated strong inter-rater reliability and other clinically useful properties such as predicting patient outcomes, predicting discogenic pathology, and

providing information to determine specific treatment based on assessment findings.

At Stover Physical Therapy we use Mechanical Diagnosis and Therapy to assess all of our patients with spinal disorders. This system enables us to identify responders and non-responders quickly and prescribe appropriate treatment.



## A Patient's Perspective

Dear Dr. Hopkins,

I wanted to take the opportunity to write and thank you for referring me to Stover Physical Therapy. As you know, the MRI showed four discs with bulges in my lower back that had bothered me for many years. The pain had gotten so bad that in order to even cook a meal at home I had to wear a back support. The pain had severely limited my range of motion and ability to do anything physical.

During my first session, Don Stover, made an assessment of the origin of my pain, and determined that it was mechanical in nature, and that my range of motion and agility were limited. Mr. Stover explained what mechanical pain was, what causes it, and how to manage it.

Although I was skeptical at first of this method of treatment, because it seemed to be quite contrary to what I had been told by other therapists in the past, to my amazement I felt better after the first session. Through the following weeks I faithfully did the exercises assigned each week and each week I showed and felt significant and rapid improvement in motion and relief from pain. Today, I am virtually free of pain in my back."

Eileen Walsh-Henry

Visit [www.StoverPT.com](http://www.StoverPT.com) to read testimonials of other patients treated with MDT.