

# Eli's Rehab Report

## Clinical Rehab Roundup

In this recurring feature, Physical Medicine & Rehab Coding Alert provides summaries of a cross section of recent clinical studies. Here's what's new this month.

### Teaching Techniques Get Low-Back Patients Back to Work Faster

"Effects of education on return-to-work status for people with fear-avoidance beliefs and acute low back pain." Godges JJ, Anger MA, Zimmerman G, Delitto A. Phys Ther. 2008 Feb;88(2):231-9. Epub 2007 Dec 4.

Researchers noted that people with acute low-back injury and fear-avoidance beliefs can remain off work for an extended time. With that in mind, they designed a study to determine whether education and counseling on pain management, physical activity and exercise could significantly decrease the number of days that people with low-back injury are off work.

Thirty-four people who were unable to return to work following a work-related episode of low-back pain and who exhibited fear-avoidance beliefs participated in this study. Participants who scored 50 points or higher on the Fear-Avoidance Beliefs Questionnaire were split into an education group and a control group, each of which received conventional physical therapy intervention. Participants in the education group, however, received education and counseling on pain management tactics and the value of physical activity and exercise.

**Findings: All participants in the education group returned to regular work duties within 45 days, while one-third of the participants in the comparison group remained off work at 45 days.** Researchers concluded that education and counseling on pain management, physical activity, and exercise can reduce the number of days off work in people with fear-avoidance beliefs and acute low-back pain.

### How TENS Can Help Balance Control

"TENS to the lateral aspect of the knees during stance attenuates postural sway in young adults." Laufer Y, Dickstein R. Scientific World Journal. 2007 Nov 26;7:1904-11.

Researchers, noting that somatosensory input is essential for postural control, conducted a study that examined the effects on postural sway of sensory input delivered via transcutaneous electrical nerve stimulation (TENS) applied to the knees. Twenty healthy, young volunteers had electrodes from a dual-channel portable TENS unit adhered to the skin overlying the lateral and medial aspect of both knees. Researchers obtained postural sway parameters during static bipedal stance with an AMTI force platform. They tested four stimulation conditions with eyes open and with eyes closed: no TENS, TENS applied bilaterally, and TENS applied to either the right or the left knee. Participants underwent two eight-trial blocks, each trial lasting 30 seconds. Stimulation consisted of a biphasic symmetrical stimulus delivered at the sensory detection level, with a pulse duration of 200 microsec and a pulse frequency of 100 Hz.

**Findings: TENS application induced significant reductions in mean sway velocity and in the medio-lateral dispersion of the center of pressure, with no corresponding effect on the anterior-posterior dispersion.** Researchers concluded that electrical stimulation delivered at the sensory detection level to the lateral aspects of the knees may be effective in improving balance control and that this effect may be directionally specific.