

Physiological and Psychological Benefits Lumbar Strengthening in Chronic Low Back Pain Patients

*Sherry V. Risch, PhD
Michael L. Pollock, PhD
Howard Langer, RPT
James E. Graves, PhD*

*Nancy K. Norvell, PhD
Edward D. Risch, MD
Michael Fulton, MD
Scott H. Leggett, MS*

Abstract

The effects of exercise for isolated lumbar extensor muscles were examined in 54 low-back pain patients. Subjects were randomly assigned to a 10-week exercise program ($N = 31$) or a wait-list control group ($N = 23$). Results indicated a significant increase in isometric lumbar extension strength for the treatment group and a significant reduction in reported pain compared with the control group ($P \leq 0.05$). Treated subjects reported less physical and psychological dysfunction whereas the control group increased in pain, and physical and psychological dysfunction. There were no concomitant changes in reported daily activity levels. These results show that lumbar extension exercise is beneficial for strengthening the lumbar extensors and results in decreased pain and improved perceptions of physical and psychological functioning in chronic back pain patients. However, these improvements were not related to changes in activities or psychological distress. [Key words: chronic low-back pain, lumbar extension strength, psychological distress]