

Effects of a Modified Deadlift Exercise Program on Low Back Pain: A Pilot Study

Ricardo Nava*, Levi McGee, Ashley Severt, Paula Weishaar

Faculty: Barbara Smith

Department of Physical Therapy, College of Health Professions

INTRODUCTION: Low back pain (LBP) is among the most prevalent problems in today's society and remains a great obstacle for the medical profession. Current treatments address many different causes including back extensor endurance, weak abdominals, tight hamstrings, and disc dysfunction. One possible treatment incorporates the use of a modified deadlift in order to teach proper lifting technique in an attempt to decrease spine injuries and strengthen back and hip extensors.

PURPOSE: The purpose of this study was to determine if an eight-week modified deadlift (MDL) program decreased pain and increased back muscle strength in patients with subacute or chronic LBP compared to a control group

METHODS: A randomized controlled trial composed of 18 subjects was performed. Two groups were formed, a control and exercise group that followed a MDL program. Data was collected at baseline, midpoint, and at the end of the eight-week study. Visual Analog Scale (VAS) pain rating and assessment of proper MDL form, for the exercise group, were collected at all three points. The Biering-Sorensen (B-S) test of back muscle endurance was performed during the baseline and final measurements. A mixed analysis of variance ($\alpha=0.05$) compared the control and exercise groups over time on the measured variables.

RESULTS: No significant difference was found between baseline and final measurements in either group for B-S ($p>0.05$) and VAS ($p>0.05$). Compliance was 91.8% for the exercise group. Both groups demonstrated an increase in strength and decrease in pain with the exercises group having a larger percentage change.

CONCLUSION: An eight-week MDL exercise program had no sizeable benefit on participants with chronic or subacute LBP. Future research may include a disability scale tailored to patients with general LBP and a greater focus on the MDL technique.