

UNIVERSITY OF MIAMI

RANDOMIZED CLINICAL TRIAL COMPARING ACTIVE VERSUS
PASSIVE APPROACHES TO THE TREATMENT OF RECURRENT
AND CHRONIC LOW BACK PAIN

By

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A DISSERTATION

Submitted to the Faculty
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Randomized Clinical Trial Comparing Active
Versus Passive Approaches to the Treatment
of Recurrent and Chronic Low Back Pain

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The purpose of this study was to compare the effectiveness of an active approach (Pilates) to that of a passive approach (massage) in improving the activity limitations and pain associated with chronic low back pain (CLBP) and recurrent low back pain (RLBP). Twenty-one subjects were recruited that suffered from CLBP or RLBP and were randomly assigned to the active or passive intervention groups. A six week intervention of Pilates or massage that consisted of two sessions per week was carried out for six weeks. Measures of activity limitation, pain, physical factors and psychosocial factors were administered to subjects prior to and following the intervention. Activity limitations and pain were measured using Oswestry, Miami Back Index and SF-36 Bodily Pain sub-scale. Physical factors were measured using a standardized battery of trunk strength, flexibility and coordination tests. Psychosocial factors were measured using the General Self-Efficacy (GSE), Functional Self-Efficacy (FSE), Fear of Re-Injury and SF-36 scales. A two group, repeated measures analysis of variance was calculated to compare intervention groups. Spearman correlation coefficients were calculated to examine the relationships between changes in activity limitations, physical factors and psychosocial factors. An

additional analysis was conducted on the CLBP sub-population. Due to a small sample size and the impact of floor and ceiling effects on a number of outcome measures, it is impossible to draw firm conclusions from this study. A significant improvement was found in the Pilates group for back extension strength and SF-36 Vitality measures when compared to the massage group. Both massage and Pilates produced improvement in most other outcomes, however, with the exception of FSE, subjects who received Pilates improved more post intervention than subjects who received massage. A modest correlation was found between changes in psychosocial factors and changes in activity limitations. A weaker correlation was found between changes in physical factors and changes in activity limitations. The findings for the sub-analysis using CLBP subjects did not differ significantly from the findings for the whole group. Further research is warranted to better examine the effectiveness of Pilates as a treatment for CLBP.