

## Resistive Exercise in Individuals with Fibromyalgia: A Literature Review

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**Purpose:** The purpose of this report is to present a review of the literature on the effect of resistive exercise on symptoms, strength and function in individuals diagnosed with fibromyalgia (FM) syndrome. This report utilizes a matrix format to organize and synthesize the available literature.

**Background:** Research examining the effect of exercise training on symptoms in individuals with FM has focused on cardiorespiratory fitness. Although strength and function have been found to be lower in patients with FM, resistive exercise has been largely overlooked as a potential treatment. Recent research indicates that resistive exercise may slow the cycle of deconditioning, allowing FM patients to participate in more daily activities.

**Methods:** The terms “exercise” and “fibromyalgia” were entered into Ovid Medline. Based on standardized inclusion and exclusion criteria, seven prospective controlled clinical trials published within the last ten years were selected. Specific variables were tracked across studies to facilitate comparison, generalizability to the population and determination of attrition rates. Variables tracked included: author, year of publication, number of subjects, age, gender, duration of treatment, treatment of control and experimental groups and treatment effects on strength, pain, and function.

**Synthesis:** Analysis of individual variables within all studies revealed that subjects were predominantly female, with very small treatment group sizes and high rates of attrition, ranging from 8.8% to 37.5% of treatment groups. Treatment duration ranged from six to twenty weeks. Treatment provided to control and experimental groups was inconsistent. When variables were compared across studies attrition was determined to be a significant source of variability. None of the studies reviewed reported increased pain. Five of seven studies reported decreased pain and number of tender points. Four out of six studies that assessed function demonstrated improvement. Effects on strength were dependent on duration of treatment, with significant strength increases reported only following treatment for eight weeks or longer.

**Conclusions:** Resistive exercise is an important component of treatment for individuals with FM. Effects of resistive exercise include increased strength, decreased symptoms and improved function. Future research is needed to establish the appropriate dosage of resistive exercise to maximize outcomes in individuals with FM.

**Keywords:** Fibromyalgia, strength training.