

Person centered progressive resistance exercise for women with fibromyalgia

Muscle strength in women with fibromyalgia (FM) is reduced compared to healthy women and a reason for this might be a low level of physical activity at such intensity that is required to maintain or improve muscle strength. Many women with FM suffer from activity-induced pain which might be a reason why the women avoid activities that could cause increased pain. Current recommendations for the management of FM include recommendations of aerobic exercise such as brisk walking and cycling but few studies have evaluated the effects of resistance exercise on physical function and health status in FM. Therefore in order to avoid exercise induced pain we decided to use gradual introduction to heavier loads and to use a person centered approach which actively involved the patient in planning the treatment to enhance the possibilities of managing health problems. One reason for the lack of studies on resistance exercise might be the risk of exercise-induced pain during muscle contractions. However this can be avoided by gradual introduction to heavier loads and by actively involving the patient in planning the treatment which enhances the possibilities of managing health problems.

The aim of the study was to examine the effects of a person centered progressive resistance exercise program on muscle strength, health status and pain in women with FM. Relaxation therapy was selected as an active control intervention.

One-hundred and thirty women with FM age 20-65 years were recruited through adverts in local newspapers in three cities (Göteborg, Stockholm, Linköping). They were randomized to resistance exercise or relaxation therapy. An individual introductory meeting with the physiotherapist guiding each intervention was scheduled for each participant. The meeting was commenced with a dialogue between the participant and the physiotherapist regarding the participant's earlier experiences of exercise which could be an obstacle for her ability to exercise. The meeting also included exercise instructions, testing and adjustment or modification of specific exercises.

The main goal for the resistance exercise program was to improve muscle strength and health status by progressive resistance exercise without risking increased pain while loading the muscles. Exercise of large muscle groups, preferably in the lower extremities, was chosen as the risk of exercise induced pain was anticipated to be higher when loading muscles of upper extremities. The exercise was performed twice a week for 15 weeks. To promote the participants sense of control and to avoid possible negative effects related to exercise, the exercise was initiated at low loads and possibilities for progressions of loads were evaluated every 3-4 weeks in dialogue between the physiotherapist and participant.

Muscle strength was selected as the primary outcome. Pain intensity, physical capacity, health status and other variables associated with health problems in chronic pain were selected for secondary outcomes, as exercising was also thought to impact also these variables.

Results after 15 weeks of exercise showed that the resistance exercise group improved muscle strength, health status, pain intensity and physical capacity, compared to controls, when engaging in progressive resistance exercise.

Muscle-strengthening activity, such as resistance exercise, at least twice a week is recommended to improve muscle strength, to prevent age-related loss of muscle mass, impaired physical function and the development of degenerative age-related chronic conditions. The prevention of loss of muscle mass and physical function due to aging could be argued as even more important in this population given the impaired muscle strength and reduced levels of physical activity previously shown in women with FM.

The benefits of regular progressive resistance exercise on muscle strength, pain, health status and participation in daily life activities shown in this study implies that resistance exercise can be recommended as a safe and effective option for exercise, which warrants inclusion in the management of FM.

Publication

[Resistance exercise improves muscle strength, health status and pain intensity in fibromyalgia--a randomized controlled trial.](#)

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