Effect of exercise programs on symptoms of fibromyalgia in peri-menopausal age women: A systematic review and meta-analysis of randomized controlled trials

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Objectives: The aim of this review and meta-analysis was to summarize evidence regarding the effect of physical exercise programs on fibromyalgia syndrome symptoms in peri-menopausal age women, and the characteristics of these programs. Findings: Nineteen randomized controlled trials [N=1077 women] satisfied the inclusion criteria. Methodological quality of papers was assessed using the PEDro scores. Data on the study, subject, and exercise program characteristics as well as assessment of changes in depression, fatigue, global well-being [overall feeling of well-being and health-related quality of life], pain, sleep, and stiffness were extracted. The studies were grouped according to the intervention program: land interventions [aerobic, combined [aerobic endurance, strength, and flexibility], vibrations, and alternative programs], and aquatic interventions. Nineteen studies were selected for systematic review, but clinical heterogeneity limited the meta-analysis to two aerobic, three combined, two alternative, and five aquatic studies. Conclusions: In general, exercise programs have a positive effect on the symptoms of fibromyalgia in women in perimenopausal age. The meta-analysis indicates that programs based on combined exercise and aquatic exercises have, respectively, a moderate [d=-0.63; I2=0%] and small effect [d=-0.41; I2=30%] on functional global well-being [assessed using the Fibromyalgia Impact Questionnaire total score]. Short-term interventions [12 weeks], including two to three sessions lasting 30-60 min each per week seem to improve symptoms in peri-menopausal age women with fibromyalgia, although high-quality studies with larger sample sizes are necessary to confirm these results.

Exercise

Fibromyalgia

Global well-being

Menopausal

Meta-analysis

Perimenopause

Randomized controlled trial

Systematic review

adult

aerobic exercise

aged

depression

exercise

exercise intensity

fatigue

female

fibromyalgia

Fibromyalgia Impact Questionnaire

heart rate

human

meditation

menopause

meta analysis

muscle training

pain intensity

quality control

quality of life

randomized controlled trial (topic)

Review

sensitivity analysis

walking

wellbeing

whole body vibration