

Effect of Moderate to Vigorous Physical Activity on Long-Term Clinical Outcomes and Pain Severity in Fibromyalgia[†]

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Objective

To evaluate the relationship between long-term maintenance of moderate to vigorous physical activity (MVPA) and clinical outcomes in fibromyalgia (FM).

Methods

Patients with FM (n = 170) received individualized exercise prescriptions and completed baseline and followup physical activity assessments using the Community Health Activities Model Program for Seniors questionnaire at weeks 12, 24, and 36. The primary outcome was the change in the Fibromyalgia Impact Questionnaire-Physical Impairment (FIQ-PI) score. The secondary outcomes included improvements in overall well-being (FIQ total score), pain severity ratings, and depression.

Results

Using a threshold increase in MVPA of ≥ 10 metabolic equivalent hours/week above usual activities, 27 subjects (15.9%) increased and sustained (SUS-PA), 68 (40%) increased but then declined (UNSUS-PA), and 75 (44.1%) did not achieve (LO-PA) this benchmark. Compared to LO-PA subjects, both SUS-PA and UNSUS-PA subjects reported greater improvement in FIQ-PI ($P < 0.01$) and FIQ total score ($P < 0.05$). Additionally, the SUS-PA group reported greater improvement in pain severity compared to the LO-PA group ($P < 0.05$). However, there were no significant group differences between SUS-PA and UNSUS-PA for any primary or secondary outcome measure.

Conclusion

Increased participation in MVPA for at least 12 weeks improved physical function and overall well-being in patients with FM. Although sustained physical activity was not associated with greater clinical benefit compared with unsustained physical activity, these findings also suggest that performing greater volumes of physical activity is not associated with worsening pain in FM. Future research is needed to determine the relationship between sustained MVPA participation and subsequent improvement in patient outcomes.