

Arthritis

Tilt vibratory exercise improves the dynamic balance in fibromyalgia: A randomized controlled trial.

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Gusi N, Parraca JA, Olivares PR, Leal A, Adsuar JC.

Faculty of Sports Sciences, University of Extremadura, Cáceres, Spain.

OBJECTIVE: To evaluate the feasibility and efficacy of tilt whole-body vibration for improving dynamic balance in women with fibromyalgia (FM).

METHODS: Forty-one women (aged 41 to 65) were randomly assigned to either a vibration (n=21) or control (n=20) group. The vibration intervention consisted of a 30-minute session of instruction plus 3 sessions of whole-body vibration per week over a period of 12 weeks. Each vibration session consisted of 6 repetitions of a 45-60 second 12.5 Hz vibration. The posture of patient was lateral. Dynamic balance was assessed with a balance platform, the level of stability could be controlled. We performed intent-to-treat analysis and efficacy analysis in participants who completed the study (vibration, n=18; control, n=18).

RESULTS: Based on intent-to-treat analysis, the dynamic balance of the vibration group improved by 36%, as compared to baseline, whereas that of the control group was unchanged. Differences in the dynamic balance index were predicted (61%; $P < 0.001$) by the following linear model: $(0.027 \cdot \text{BODY-WEIGHT}) - (0.800 \cdot \text{DYNAMIC BALANCE AT BASELINE}) - (0.632 \cdot \text{GROUP})$.

CONCLUSIONS: The vibration program was useful and feasible for improving dynamic balance in women with FM. These novel results support further research aimed at the development of physical therapy programs that utilize controlled vibration. [ISRCTN16950947].

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