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Research article

## Effects of Vibration Training and Detraining on Balance and Muscle Strength in Older Adults

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### ABSTRACT

The purpose of this study was to analyze the effects of 2 days/week versus 4 days/week of Whole Body Vibration (WBV) during eight weeks of WBV training on health-related quality of life (SF-36), balance and lower body strength, as well as short-term detraining (3 weeks) on balance and lower body strength among older adults. Thirty-four older adults were randomly assigned to a control group (Control; n = 11) or to one of the vibration training groups: WBV 2 days/week (WBV\_2d; n = 11) or WBV 4 days/week (WBV\_4d; n = 12). The WBV groups exercised for 8 weeks, following 3 weeks of detraining. Lower body strength increased significantly ( $p < 0.05$ ) for both groups, WBV\_2d and WBV\_4d, after 8-week training. A significant reduction in strength was observed following 3 weeks of detraining only in WBV\_2d group ( $p < 0.05$ ). All variables of the SF-36 and the balance test did not change after intervention in any group. 2 days/week and 4 days/week of WBV during 8 weeks showed the same improvements on muscle strength. 3 weeks of detraining did not reverse the gains in strength made during 32 sessions of WBV.

**Key words:** Whole-body vibrations, posturography, dose-response, equilibrium

### Key Points

- 2 days and 4 days per week of WBV training during 8 weeks showed the same improvements on muscle strength.
- 3 weeks of detraining did not reverse the gains in strength made during 32 sessions of WBV exercise.
- 3 weeks of detraining did reverse the gains in strength made during 16 sessions of WBV exercise.

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