Objective: To clarify whether a short-term whole body vibration (WBV) training has an effect on lean mass (LM) in the elderly.

Method: 49 non-institutionalized elderly (20 men) participated in the study. Participants who met the inclusion criteria were randomly assigned to the WBV or control group. A total of 24 elderly trained squat positioned on a vibration platform 3 times per week for 11 weeks. LM at the whole body, upper and lower limbs was assessed by dual-energy X-ray absorptiometry. Two-way repeated measures ANOVA was used to determine the effects of the intervention on the studied variables and also to determine the changes within group throughout the intervention period including age and height as covariates. Results: 11 weeks of WBV training led to no changes in none of the LM parameters. Conclusion: A short-term WBV therapy is not enough to cause significant changes on LM in non-institutionalized seniors.

Keywords