A comparison of the physiologic effects of acute whole-body vibration exercise in young and older people.

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OBJECTIVE: To examine the acute physiologic effects of acute whole-body vibration (WBV) exercise in young and older people. DESIGN: Every participant performed 9 conditions in a static squat position, consisting of no vibration and WBV at 30Hz and 3 loads corresponding to (1) no load (0% body mass), (2) load of 20% body mass, and (3) load of 40% body mass. A Jendrassik voluntary contraction was also performed with no vibration and WBV at 30Hz with no load and 20% body mass. SETTING: Laboratory facilities at a university in the United Kingdom. PARTICIPANTS: Healthy young people (n=12; 6 men, 6 women; mean age, 21.5y) and 12 healthy older people (6 men, 6 women; mean age, 69.2y) from the local community. INTERVENTIONS: Not applicable. MAIN OUTCOME MEASURES: The Physical Activity Questionnaire, anthropometric measures, counter-movement jump, and isometric maximal voluntary contraction with the Jendrassik maneuver were assessed in both groups.

Oxygen uptake (Vo2), blood pressure, heart rate, and rating of perceived exertion (RPE) were recorded during WBV and load conditions as the outcome of the study. RESULTS: Both vibration and load were associated with an increase (P

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