

Effect of Whole-Body Vibration Training on Self-Reported Physical Disability in Employees with Chronic Low-Back Pain: A Randomized Controlled Trial

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Abstract : Introduction: The goal of this randomized and controlled study is to examine whether whole-body vibration (WBV) training is able to reduce self-reported physical disability in office employees with chronic low-back pain. Materials and methods: 41 subjects (68.3% female/mean age 45.5 ± 9.1 years/mean BMI 26.6 ± 5.2) were randomly allocated to an intervention group (INT (n= 21)) or a control group (CON (n=20)). The INT participated in WBV training 2.5 times per week for 3 months. The primary outcome was the change in the Roland and Morris disability questionnaire (RMQ) score over the study period. In addition, secondary outcomes included changes in the Oswestry Disability Index (ODI). Results: The compliance with the intervention in the INT reached a mean of $81.1\% \pm 31.2\%$ with no long-lasting unwanted side effects. We found significant positive effects of 3 months of WBV training in the INT compared to the CON regarding the RMQ ($p=0.027$) and the ODI ($p=0.002$). Conclusions: WBV training seems to be an effective, safe and suitable intervention for the reduction of the self-reported physical disability in seated working employees with chronic low-back pain.

Keywords : back pain, exercise, occupational health management, vibration training

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