

Whole-body vibration as potential intervention for people with low bone mineral density and osteoporosis: a review.

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Abstract

Low bone mineral density (BMD) and osteoporosis are health concerns among older adults and individuals with physical, neurological, and/or mobility impairments. Detrimental changes in bone density and bone architecture occurring in these individuals may be due in part to the reduction/cessation of physical activity and the accompanying reduction of mechanical strain on bone. Changes in bone architecture predispose these individuals to fragility fractures during low-trauma events. Whole-body vibration (WBV) has been examined as an intervention for maintaining or improving bone mass among people with low BMD, because it may emulate the mechanical strains observed during normal daily activities. This article provides an overview of WBV including terminology, safety considerations, and a summary of the current literature; it is intended for rehabilitation healthcare providers considering WBV as a potential therapy for individuals with osteoporosis.