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# Will Whole-Body Vibration Training Help Increase the Range of Motion of the Hamstrings?

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van den Tillaar, R. Will whole-body vibration training help increase the range of motion of the hamstrings? *J. Strength Cond. Res.* 20(1):192–196. 2006.—Muscle strain is one of the most common injuries, resulting in a decreased range of motion (ROM) in this group of muscles. Systematic stretching over a period of time is needed to increase the ROM. The purpose of this study was to determine if whole-body vibration (WBV) training would have a positive effect on flexibility training (contract-release method) and thereby on the ROM of the hamstring musculature. In this study, 19 undergraduate students in physical education (12 women and 7 men, age  $21.5 \pm 2.0$  years) served as subjects and were randomly assigned to either a WBV group or a control group. Both groups stretched systematically 3 times per week for 4 weeks according to the contract-release method, which consists of a 5-second isometric contraction with each leg 3 times followed by 30 seconds of static stretching. Before each stretching exercise, the WBV group completed a WBV program consisting of standing in a squat position on the vibration platform with the knees bent  $90^\circ$  on the Nemes Bosco system vibration platform (30 seconds at 28 Hz, 10-mm amplitude, 6 times per training session). The results show that both groups had a significant increase in hamstring flexibility. However, the WBV group showed a significantly larger increase (30%) in ROM than did the control group (14%). These results indicate that WBV training may have an extra positive effect on flexibility of the hamstrings when combined with the contract-release stretching method.

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