28 EFFECT OF WHOLE BODY VIBRATIONS ON PERFORMANCE INDEXES OF AEROBIC POWER AND FLEXIBILITY IN NON-ATHLETE MEN

Babak Davoodi, Sajad Arshadi, Shirin Zilaei Bouri *Physical Education and Sport Science, Azad University, Masjid Soleyman Branch Iran*

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The aim of the present study was to investigate the effect of one session whole body vibration (WBV) on anaerobic power and flexibility in non-athletic male students. The participants were 12 untrained healthy male students (age: 25.42 years; body mass: 72.99 kg; height: 175.92 cm and body fat percentage: 19.69%). On the day of assessment, the subjects carried out 10 min-warm-up including jogging, stretching and cycling on ergometer. Then, several tests were carried out; vertical jumping test for assessing power, distance jumping test for assessing explosive power and sit and reach test for assessing flexibility. After that, the vibration with frequency 30 Hz and amplitude 10 mm was conducted eight times including 1-min vibration along with 1-min rest lasting for 15 min. After a 5-min cool down, the test of vertical test, distance jump and flexibility was repeated. The results showed that one session of WBV leads to a significant increase in the amount of vertical jump (p=0.009), peak and aerobic power (p=0.002) and flexibility (p=0.005). However, there was no significant increase in distance jump after WBV (p=0.063). Therefore, we concluded that one session of WBV would lead to an increase in anaerobic power, which can be due to neural activation of fast twitch motor units. The increase in flexibility was attributed to the neuromuscular facilitation resulting from WBV.