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F

on

Editorial

Submissions

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➤ [Current Issue](#)

➤ [Back Issue](#)

➤ [Most recent articles](#)

➤ [Index](#)

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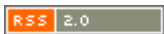
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Effects of combined electrostimulation and plyometric training on vertical jump and speed tests

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Abstract

The aim of this study was to determine the performance evolution of a group of athletes after 8 weeks of training that combined electrostimulation (NM ES) and plyometrics (PT). 78 medium level sprinter athletes participated, 40 women and 38 men (age, 15.9 \pm 1.4 years old, body mass index, 20.5 \pm 1.68 kg/m²; weight 58.53 \pm 8.05 kg; height, 1.68 \pm 0.07 m). The sample was randomized into four groups [Control

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(PT only), NM ES + PT, PT + NM ES, and Simultaneous (plyometric jumps were performed through the passage of current). Improvements were obtained in the Abalakov jump of 3.57% ($p < 0.01$), 13.51% ($p < 0.001$), 1.23% ($p < 0.01$), and 0.77%, and in the sprint of 0.45%, 3.87% ($p < 0.05$), 4.56% ($p < 0.01$) and 7.26% $p < 0.001$ for the control group, NM ES + PT group, PT + NM ES group, and Simultaneous group, respectively. It was concluded that a) improvement in vertical jump requires the application of the NM ES prior to PT; b) the sprinter athlete must combine the workout simultaneously or apply the ES after the PT training; and c) in sportspeople that require improvement in both the vertical jump and speed tests (e.g. basketball) the simultaneous method is not recommended, the order of application of NM ES and PT being non-determinant. Finally, the time needed to obtain significant

improvement in strength training through a combination of NM ES and PT is substantially lower (15 days) than the time needed to improve speed (30 days).

Key words: ELECTROSTIMULATION; PLYOMETRICS; MUSCLE STRENGTH; ABALAKOV JUMP; SPEED 30 M LAUNCHED

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Full Text: [PDF \(907 KB\)](#) [STATISTICS](#)



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