

Randomizált és blokkosított izomfeszülésekkel járó dinamometriai edzés propriocepcióra gyakorolt akut hatása

Balázs Gáspár, Patrik Ivusza, Ádám Fésüs, Mátyás Varga, Sarolta Tar, Róbert Gáspár, Balázs Sebesi, Márk Váczi
University of Pécs Faculty of Science Institute of Sport Sciences and Physical Education
gaspar.balazs9797@gmail.com

Introduction

The instant and sustained effects of the practice of block-based and randomized training programs are well known. In order to represent the impact of these practices, researchers had only used visual stimuli, while the effect of learning adaptation, resulting from proprioception training, remains undisclosed.

Methods

The proprioception of the knee joint was measured in twenty young, healthy male students (including: passive joint angle kinesthetics, force controlling ability with and without visual feedback) in a sitting position by a dynamometer before and after a randomized (unknown muscle contraction) and a block-based (known muscle contraction) knee extension warmup task.

Results

In the joint kinesthetic tests, regarding the absolute and constant errors, the block-based warm up protocol was proved to be more effective. In case of variable errors, the randomized type of training was the more efficient one. As far as the blocked group is concerned, the absolute error deteriorated significantly in the force controlling test, which was a blind experiment accomplished with low force. At the high force exertion unknown muscle contraction tests, viewing the absolute and constants error, the randomized warm-up was more sufficient. When participants, examining the variable error, were given visual signs about their exerted force, the interaction of time and condition was significant. In this sense the block-based warm-up improved significantly.

Conclusion

Even though at many variables, the block-based warm-up protocol was more effectual, we cannot make further conclusions. It is presumable that the proprioceptive-based practice improves one's ability to adapt on the long run.

Keywords: proprioception, force control, block-based; randomized training