

# **Optimization of muscle strength and hypertrophy by training with blood flow restriction in the limbs in combat athletes**

Project no. VEGA 1/0544/23

## **Anotation**

Strength training has a beneficial effect on muscle hypertrophy and the strength of skeletal muscles. With this type of training, we are referring to intensity at the level of 70-80% of the one-time maximum (1RM) of 10-12 repetitions in each series. On the one hand, such training stimulates the hormonal activity of the body, on the other hand, it also often causes mechanical wear of the human support system. It has emerged that the regulation of the resistive element below the level of 50% of 1RM can be much more sparing for the human musculoskeletal system, when the influence of such training is stimulated, determining hormones for the regulation of muscle activity. This can be determined by training with the blood flow restriction, which is caused by tightening straps. The question is, how significant will be the reactive and adaptive hormonal change because of such training. However, it is necessary to stress the need for verification of this methodology on the cardiovascular system when re-applied.

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