

Abstract

Title:

Effect of strength training with vascular occlusion on the forearm flexor muscle strength.

Aims:

The aim is to determine the effect of vascular occlusion on maximum isometric strength of forearm muscles.

Methodology:

The research group of 8 volunteers underwent six weeks of exercise program for upper limb (UL). The exercise program was different for each upper limb. Probands practiced one UL with vascular occlusion and second one without vascular occlusion. The research group was measured maximal isometric strength of forearm muscles before the 6-week exercise block, after 3 weeks of training and after completion of the cycle. All measurements were carried out in the laboratory climbing walls FTVS UK. The results were statistically evaluated using test ANOVA with repeated measurement.

Results:

The results of examining the impact of vascular occlusion to increase muscle strength flexor forearm in this thesis confirmed. Testing did not find significant differences in absolute strength or relative strength between exercise with vascular occlusion and exercise without vascular occlusion. Absolute strength at exercise with vascular occlusion averaged before exercise program 422 N, after the completion of 461 N. Absolute strength at exercise without vascular occlusion averaged before exercise program 418 N, after the completion of 449 N. The relative strength measured before exercise program with vascular occlusion was 61%, after completion of the program 66%. The relative strength measured before exercise program without vascular occlusion was 61%, after completion of the program 64%.

Conclusion:

The results show that there was a slight increase in both absolute and relative power. However, influence vascular occlusion was insignificant.

Keywords:

Strength, vascular occlusion, flexor muscles of the forearm, physiotherapy