The Effects of Lower Extremity Adductor and Abductor Resistance Training on Changes in Muscular Strength and Specific Basketball Fitness.

Objective: The aim of this study was to investigate the impact of adductor and abductor resistance training on changes in performance in specific tests in basketball players, as well as changes in muscle strength**.**

Methods: Twenty basketball players participated in the study - 10 in the control group and 10 in the experimental group (age: 21 ± 6 years; weight: 95 ± 10 kg; height: 185 ± 15 cm; training experience: minimum 5 years). The research protocol consisted of an introductory session, during which measurements of 1RM adductor and abductor strength, body weight measurements and an experimental session were conducted. The experimental session included tests for maximal isometric strength and special fitness tests - 5-meter sidestep test.

Results: Analysis of variance (ANOVA) revealed significant differences between the control and experimental groups before and after the intervention for the variable of relative abductor strength difference between the left and right lower extremities. The results indicated significant statistical differences for relative adductor strength before and after training in both the control and experimental groups ($p < 0.001$). In both groups, significantly higher results were observed after the experiment for the variable of relative adductor strength difference between the left and right side in adduction. However, for relative abductor strength, significantly higher differences were observed only in the experimental group between the left and right lower extremities before and after four weeks of training ($p = 0.0001$). The time in the specific fitness test was also significantly lower ($p = 0.0002$).

Conclusion: The implementation of a four-week targeted adductor and abductor muscle strength training significantly reduced the time in the specific fitness test and increased abductor and adductor strength**.**

Keywords: Strength training; adductors; abductors; fitness tests.