

## The Effect of Core Training on Physical Fitness Characteristics in Male Volleyball Players

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**Abstract :** The aim of the study is to investigate the effect of the core training program on physical fitness characteristics and body composition in male volleyball players. 26 male university volleyball team players aged between 19 to 24 years who had no health problems and injury participated in the study. Subjects were divided into training (TG) and control groups (CG) as randomly. Data from twenty-one players who completed all training sessions were used for statistical analysis (TG,n=11; CG,n=10). A core training program was applied to the training group three days a week for 10 weeks. On the other hand, the control group did not receive any training. Before and after the 10-week training program, pre- and post-testing comprised of body composition measurements (weight, BMI, bioelectrical impedance analysis) and physical fitness measurements including flexibility (sit and reach test), muscle strength (back, leg and grip strength by dynamometer), muscle endurance (sit-ups and push-ups tests), power (one-legged jump and vertical jump tests), speed (20m sprint, 30m sprint) and balance tests (one-legged standing test) were performed. Changes of pre- and post- test values of the groups were determined by using dependent t test. According to the statistical analysis of data, no significant difference was found in terms of body composition in the both groups for pre- and post- test values. In the training group, all physical fitness measurements improved significantly after core training program ( $p<0.05$ ) except 30m speed and handgrip strength ( $p>0.05$ ). On the hand, only 20m speed test values improved after post-test period ( $p<0.05$ ), but the other physical fitness tests values did not differ ( $p>0.05$ ) between pre- and post- test measurement in the control group. The results of the study suggest that the core training program has positive effect on physical fitness characteristics in male volleyball players.

**Keywords :** body composition, core training, physical fitness, volleyball

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