

Comparison of Anthropometric Measurements Between Handball and Basketball Female Players

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Abstract : Introduction: Anthropometric measurements are integral part of regular medical examinations of athletes. In addition to the quantification of the size of the body, these measurements indicate the quality of the physical status, because of its association with sports performance. The purpose of this study was to examine whether there are differences in anthropometric parameters and body mass components in female athletes who participate in two different types of sports. Methods: A total of 27 athletes, 15 handball players and 12 basketball players, at the average age of 22.7 years (age span from 17 to 30 years) entered the study. Anthropometric method by Matiegka was used for determination of body components. Sixteen anthropometric measures were taken: height, weight, four diameters of joints, four circumferences of limbs and six skin folds. Results: Handball players were 169.6 ± 6.7 cm tall and $63,75 \pm 7.5$ kg heavy. Their average relative muscle mass (absolute mass in kg) was 51% (32.5kg), while bone component was 16.8% (10.7kg) and fat component was 14.3% (7.74kg). The basketball players were 177.4 ± 8.2 cm tall and 70.37 ± 12.1 kg heavy. Their average relative muscle mass (absolute mass in kg) was 51.9 % (36.6kg), bone component was 16.37% (11.5kg) and fat component was 15.36% (9.4kg). The comparison of anthropometric values showed that basketball players were statistically significantly higher and heavier than handball players ($p < 0.05$). Statistically significant difference ($p < 0.05$) was observed in the range of upper leg circumference (higher in basketball players) and the forearm skin fold (higher in the basketball players). Conclusion: Handball players and basketball players significantly differed in basic anthropometric measures (height and weight), but the body components had almost identical values. The anthropometric measurements that have been taken did not show significant difference between handball and basketball female players despite the different physical demands of the games.

Keywords : anthropometry, body components, basketball, handball female players

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