

Body Mass Components in Young Soccer Players

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Abstract : Introduction: Body composition plays an important role in the selection of young soccer players and it is associated with their successful performance. The most commonly used model of body composition divides the body into two compartments: fat components and fat-free mass (muscular and bone components). The aims of the study were to determine the body composition parameters of young male soccer players and to show the differences in age groups. Material and methods: A sample of 52 young male soccer players, with an age span from 9 to 14 years were divided into two groups according to the age (group 1 aged 9 to 12 years and group 2 aged 12 to 14 years). Anthropometric measurements were taken according to the method of Mateigka. The following measurements were made: body weight, body height, circumferences (arm, forearm, thigh and calf), diameters (elbow, knee, wrist, ankle) and skinfold thickness (biceps, triceps, thigh, leg, chest, abdomen). The measurements were used in Mateigka's equations. Results: Body mass components were analyzed as absolute values (in kilograms) and as percentage values: the muscular component (MC kg and MC%), the bone component (BCkg and BC%) and the body fat (BFkg and BF%). The group up to 12 years showed the following mean values of the analyzed parameters: MM=21.5kg; MM%=46.3%; BC=8.1kg; BC%=19.1%; BF= 6.3kg; BF%= 15.7%. The second group aged 12-14 year had mean values of body composition parameters as follows: MM=25.6 kg; MM%=48.2%; BC = 11.4 kg; BC%=21.6%; BF= 8.5 kg; BF%= 14. 7%. Conclusions: The young soccer players aged 12 up to 14 years who are in the pre-pubertal phase of growth and development had higher bone component ($p<0.05$) compared to younger players. There is no significant difference in muscular and fat body component between the two groups of young soccer players.

Keywords : body composition, young soccer players, body fat, fat-free mass

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