

ABSTRACT

Title: Comparison of selected physical parameters artistic gymnasts and classic bodybuilders in the off-season period

Objectives: The goal of the thesis was to determine and compare basic anthropometric parameters and selected physical parameters of artistic gymnasts and classic bodybuilders in the off-season period.

Methods: The work had the character of empirical research whereby the key approach was observation. Investigated group (n = 12) were divided evenly into two subgroups based on sports specialization. At the first stage, values for basic anthropometric parameters were obtained. Then, with the use of bioelectrical impedance analysis, values for selected parameters of body composition were measured. Two-sided Mann Whitney's U test was used to compare statistical significance of differences.

Results: Statistically important differences of the measured values have been recorded in the following parameters: body weight (p value = 0,002), body fat (%), kg (p value = 0,002/0,002), fat free mass (%) (p value = 0,002), skeletal muscle mass (%), kg (p value = 0,004/0,002), BMI (p value = 0,002), SMI (p value = 0,002) and total body water (%) (p value = 0,004). The only parameter that has not reached statistical significance ($p > 0,01$) is the absolute amount of fat free mass (p value = 0,132). A negligible difference of values has also been recorded in age and body height which was intentional due to homogeneity of tested groups.

Conclusion: The results of the work showed that diverse goals of given sport specializations – characterized by development of muscle strength – may have an impact on overall body structure and composition.

Key words: men's artistic gymnastics, men's classic bodybuilding, anthropometry, body composition, bioelectrical impedance, off-season period