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The Influence of Training on the Special Aerial Gymnastics Instruments on Selected C-Reactive Proteins in Cadets' Serum

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Abstract : To C-Reactive Proteins include ferritin, transferrin, and ceruloplasmin- metalloproteins. The study aimed at assessing an effect of training on the Special Aerial Gymnastics Instruments (SAGI) on changes of serum ferritin, transferrin, and ceruloplasmin and cadets' physical fitness in comparison with a control group. Fifty-five cadets in the mean age 20 years were included into this study. They were divided into two groups: Group A (N=41) trained on SAGI and Group B (N=14) trained according the standard program of physical education (control group). In both groups, blood was a material for assays. Samples were collected twice before and after training at the start of the program (training I), during (training II), and after education program completion (training III). Commercially available kits were used to assay blood serum ferritin, transferrin, and ceruloplasmin. Cadets' physical fitness was evaluated with exercise tests before and after education program completion. In Group A, serum post-exercise ferritin decreased statistically insignificantly in training I and II and increased in training III in comparison with pre-exercise values. In Group B, post-exercise serum ferritin decreased statistically insignificantly in training I and III and significantly increased in training II in comparison with the pre-exercise values. In Group A, serum transferrin decreased statistically insignificantly in training I, and significantly increased in training II, whereas in training III it increased insignificantly in comparison with pre-exercise values. In Group B, post-exercise serum transferrin increased statistically significantly in training I, II, and III in comparison with pre-exercise values. I n Group A, serum ceruloplasmin decreased in all three series in comparison with pre-exercise values. In Group B, serum ceruloplasmin increased significantly in training II. It was showed that the training on SAGI significantly decreased serum ceruloplasmin in Group A in all three series of assays and did not produce significant changes in serum ferritin also was showed significant increase in serum transferrin.

Keywords : special aerial gymnastics instruments, ferritin, ceruloplasmin, transferrin
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