

SEX DIFFERENCES IN PHYSICAL FITNESS AND BODY COMPOSITION CHANGES AFTER 4-WEEK PHYSICAL TRAINING IN STUDENTS

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Background: An essential element of soldiers' efficiency and readiness to carry out tasks is their physical fitness, which is closely dependent on their body mass and composition, which in turn determine the proper functioning of the body.

Subjects and methods: The aim of this study was to examine changes in physical fitness and body composition of students after a 4-week physical training. The study involved women (N=45) and men (N=45). Body composition measurement and selected physical fitness tests (PushUps, shuttle run 10x10m) were conducted before and after the 4-week military training period.

Results and Conclusions: Changes in physical fitness tests were shown in both men and women. However, in the case of body composition, significant changes in response to a 4-week training were noticed only in women in BFM ($t=9,6$; $p<0,001$), SMM ($t=10,0$; $p<0,001$) and BF% ($t=10,7$; $p<0,001$). This study showed dimorphic variation in body composition and physical fitness changes in response to specific physical training.

Keywords: Physical fitness; Body composition; Physical training; Sexual dimorphism.