ABSTRACT

Title:

Effect of body composition of the students of physical education and sport on the performance in the 3000 and 1500 metres away.

Objectives:

In this Bachelor's thesis you meet with the issue of the body composition and the results of the measurements of body composition students, men, studying PES. The main objective of the Bachelor thesis will determine the effect of individual components of body composition on endurance runs on the 3000m and 1500 m. They will also be detected statistical data of the body composition.

Method used:

We used an indirect method for the determination of off-road body composition by using the bioimpedance method. For needs of this bachelor thesis was used appliance BODYSTAT 1500.

Results:

Body fat of the students of Psychical education and sport refers to low to average value against the general population. The average of measured group is 12,7 ± 2,7 %, where the average normal of the population ranges from 12-18 %. The range of values of body water -55,1 % - 65,9 % - agree with the standards of the general population. The results of the BMI for the respondents, namely students of the PES in nearly half the cases in the overweight. This zone indicates values greater than 25 kg/m^2. However, BMI does not reflect the ratio of muscle and fat, and therefore the value of BMI for students of PES can be misleading. Basal metabolism showed higher values than is the average of the general population, which is around 25 kcal/kg/day. The arithmetic mean of the respondents is 26,62 ± 0,84 kcal/kg/day. Correlation between body fat and the performance in the 1500 m is -0,32. This correlation coefficient indicates a link between fat and exercise. Unfortunately, without this correlation, body composition, specifically body fat, BMI and BMR according to my results does not affect the performance in the legs on the 3000 and 1500 m. This is confirmed by the charts and correlation between the fractions of body composition and performances on the 3000 m and 1500 m.

Keywords: body fat, body water, BMI, BMR, medium-haul