

PLAYING RUGBY AS YET ANOTHER OPPORTUNITY TO INCREASE THE ADAPTATIONAL CAPACITY OF HUMAN BODY

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The article presents the data received from the comparative analysis of the anthropometric, hemodynamic and functional parameters of the young males going in for rugby and those who do not practice rugby. The results of the study testify to a positive impact of regular rugby exercise on the cardiorespiratory system of the test group (the young males going in for rugby) manifested in the increased lung capacity and conformity of hemodynamic parameters to age-specific and physiological standards.

In particular, a comparative analysis of the mean anthropometric parameters in the test group and the young male who do not practice rugby does not show any statistically significant differences. Statistically significant differences are manifest in the hemodynamic parameters of the two groups. The mean systolic blood pressure value in the rugby players met the physiological standard while the same parameter in the group of young males who do not practise rugby was 1.25 % higher ($p < 0.001$). The mean diastolic blood pressure and heart rate values in the group of the young male who do not practice rugby exceed the same values in the test group by 13,20 % ($p < 0.001$) and 37,99 % ($p < 0.001$) respectively.

The rugby players had a low heart rate ($59,16 \pm 2,05$ beats/min) which indicates to an efficient myocardial performance. 40.68 % of the young males who do not practice rugby manifested predisposition to tachycardia (86-117 beats/min) due to decreased heart function as a result of reduced blood supply to the ventricle and decreased ventricular ejection. The study revealed statistically significant differences in the hemodynamic parameters and cardiovascular function in the two groups. The young males who do not practise sports showed high values of the hemodynamic parameters associated with decreased cardiovascular function.

The respiratory function in the two groups of young males meets the physiological standards though the lung capacity in the rugby players is 12.17 % higher ($p < 0.001$) which impacts the amount of oxygen inhaled per time unit and the oxidation intensity. The lung capacity ratio in the young males who do not practice rugby was below the physiological standard while the same in the rugby players met the physiological standard. Therefore, it is recommended to include this sports in the physical exercise to increase the adaptational capacity in students.

Keywords: blood pressure, hemodynamic parameters, young males, sport, rugby.

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