

PULSE EVALUATION RUNNING EXERCISES FRESHMEN MILITARY-TECHNICAL LYCEUM IN THE CLASSROOM FOR PHYSICAL EDUCATION

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ABSTRACT

In the article on the basis of this pedagogical experiment, the optimal modes of cross-country loads of volume and intensity for the first year students in military-technical lyceum.

Keywords: Research, experiment loads modes, aerobic and anaerobic reactions, respiratory function, factor analysis, treadmill

Objective: To determine the optimal modes of cross-country loads of volume and intensity for the first year students in military-technical lyceum.

Methods: HR test method determines the optimal modes of cross-country loads in a variety of high-speed running mode.

An urgent problem of the education system of the Republic of Uzbekistan is the improvement of state educational standards for physical education.

The experimental substantiation of the hypothesis put forward, the ongoing educational process in the specific climate of the region, allow you to make adjustments to impossible normative indicators of physical fitness. In this regard, the physical fitness of young men of the first year of study at the military-technical lyceum and living in a region with a high external temperature was studied. In the course of monitoring studies, it was revealed that the basic lessons in athletics, students do not perform individual motor tasks associated with the manifestation of endurance.

The study of the motor preparedness of students has revealed a lag in the individual indicators of their physical status, which is the result of a defect in the educational system of physical education in this lyceum. In this regard, it is necessary to modernize the content of physical education of students and, within the existing technical capabilities of the lyceum, make appropriate adjustments to the educational process. A pedagogical task aimed at introducing modern innovative pedagogical technologies into the educational process in physical education will significantly increase the level of motor preparedness of students of a specialized lyceum.

The modernization of the educational process, taking into account regional factors, according to the results of the pedagogical experiment, allowed significantly increasing the adaptive level of students of the Lyceum for physical activity and successfully passing the normative tasks stipulated by state standards.

The basis for the development and implementation of new pedagogical technologies in the educational process for the physical education of students of the military-technical lyceum was the results of preliminary experimental studies and the experience of athletics specialists. The method of factor analysis selected running physical exercises in order to determine the amount

of available physical activity, optimal volumes and their intensity. In laboratory conditions, the heart rate (HR) was determined when performing various volumes of physical exercises provided for by the program material on physical education. It has been experimentally established that running exercises are the most technically accessible motor actions and can significantly enhance the educational process, increase the motor density of classes, reducing the time for the initial stage of their development. An analysis of the results of the pedagogical experiment revealed that about 77% of the physical exercises of a running nature carried out during athletics classes according to heart rate indices up to 160 beats / min belong to the low-intensity zone.

Available scientific and methodological literature contains data on the methodology for the development of general endurance in young men through prolonged uniform running. So, according to Professor Makarov A.N. for the development of endurance in young men, the optimal heart rate is in the range of 145-150 beats / min., and the running speed is 40-45% of the maximum value.

Experimental studies revealed that the increase in endurance indicators increases significantly when using high-intensity loads (heart rate 178.9 ± 3.9 beats / min) and less with low-intensity loads (heart rate 150.3 ± 6.4 beats / min). It was found that the amount of physical activity causing heart rate up to 150-160 beats / min is the “endurance limit” and does not contribute to the significant development of aerobic capabilities.

The results of the pedagogical studies aimed at the pulse assessment of different running physical activities in terms of volume show that heart rate varies in the range from 138 to 210 beats / min, and running speeds ranging from 2 to 3 m/s are used. It should be noted that in this narrow speed range all intensity zones are located, which makes the teacher more demanding when dosing the speed of running exercises (Fig. 1). With a slow three-minute run at a speed of 2 m/s, heart rate increased in young men by 59% and amounted to 152.4 beats / min., which refers to the low-intensity zone, where oxygen consumption is only 50% of the maximum, and the training effect of running loads the body is achieved only with prolonged and intensive work.

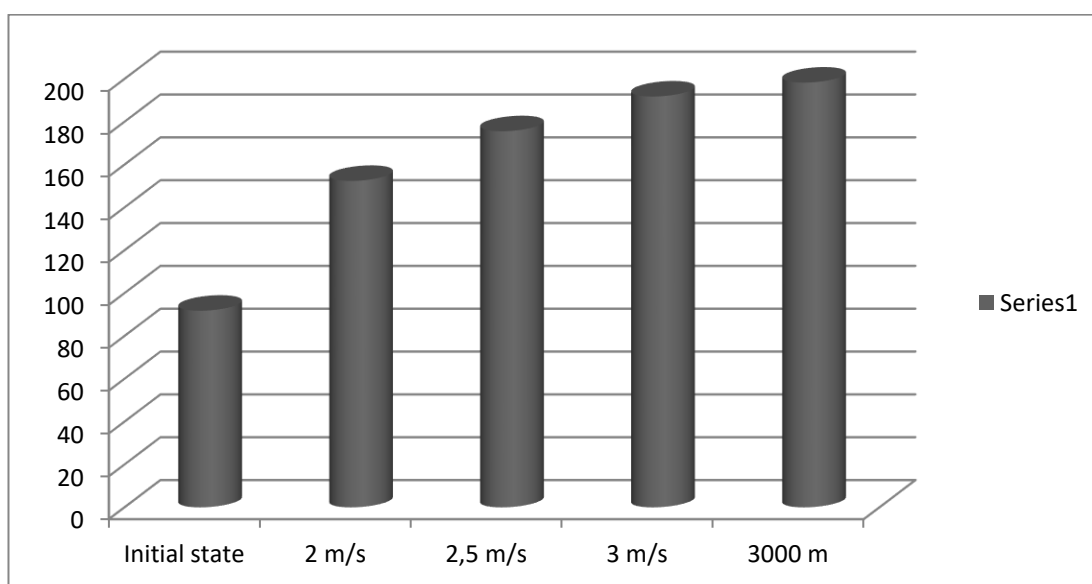


Fig. 1. The dynamics of the pulse cost of running loads at various speed conditions in athletics classes of first-year students of the military technical lyceum

Based on the studies, it was revealed that students of the lyceum of the first year of study could support a three-minute run at a speed of 2 m/s for up to one hour or more. It was revealed that the level of physical activity causing heart rate from 150 to 160 beats / min, is called the "endurance limit" and does not contribute to the development of aerobic capabilities in the test population. It was revealed that athletics classes, which offered running exercises performed at a speed of 2 m/s, are less than optimal in terms of volume of loads. Running at a speed of 2.5 m/s in the gym at a distance of up to 1200 m, heart rate in young men of the first year reached 175.6 hit. minutes.

When running exercises at a speed of 2.5 m/s, heart rate averaged 171.7 ± 2.5 bpm, and oxygen consumption corresponded to 65-72% of the maximum value. The proposed physical activity did not cause activation of anaerobic energy sources and work could be carried out for a long time. Constant monitoring by physical education teachers indicated that the proposed load for freshmen at the military-technical lyceum did not cause visible signs of fatigue and could continue for a long time. The running load at a speed of 2.5 m/s related to the high-intensity zone (heart rate 175-185 beats/min) is most effective for improving the cardio respiratory system of the body of students of this age group and increases their aerobic performance. An increase in running speed to 3 m/s at a distance to failure, young men ran an average of 684 ± 52 m, which amounted to 69% of the maximum running speed.

Heart rate measurement when first-year students of a specialized lyceum refused to continue running at a speed of up to 3 m / s, heart rate indicators increased significantly and averaged 194.8 ± 2.5 beats / min. It was experimentally revealed that an increase in the pulse debt leads to a decrease in the body's working capacity, while physical work by 90-95% is provided due to anaerobic energy sources.

The coordinated activity of aerobic and anaerobic energy supply systems of the body is difficult for young men in the prepubertal period of their life, where the duration of running at a speed of 3 m / s corresponded to a time in the range from 2.0 to 5.5 minutes.

When analyzing the results of a pedagogical experiment with students of the first year of running 300 m in the gym, it was revealed that they covered a distance of 87.6 ± 1.8 s., With a heart rate of 198.3 hit., which refers to the zone high intensity. Studies of the reaction of the cardiovascular system allow us to conclude that the optimal uniform running speed for students of a specialized lyceum lies in a narrow range - from 2.0 to 2.5 m / s. and refers to loads of medium and high intensity, being the most effective for the development of aerobic abilities of the body of students. The use of low intensity long running in the course of physical education classes is limited by the behavior of students and the solution of pedagogical problems aimed at improving motor qualities. In order to adapt students to training at a specialized military-technical lyceum, it is recommended that at the beginning of the school year, a tested system for preparing young men for upcoming physical work be used for a short time. Based on the results of the study, methodological recommendations were prepared and put into practice by the teachers of physical education, which presented the developed time limits and the length of the distance covered for first-year students of the military-technical lyceum.

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