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DETERMINATION OF TRAINING BY COMPARING BREATH INDICATORS IN ATHLETES

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ABSTRACT: The ability of the body to quickly respond to physical activity, the fastest functioning of physiological systems at the start of work, and the possibility of their rapid recovery are of great importance in sports activities. The distribution of air in the lungs and the circulation of oxygen during weight lifting are the main sports physiological indicators. If the oxygen exchange is disturbed, the initial closed injury is observed and the athlete may not be able to lift the specified weight. That is why Weightlifting is called "Sport of closed injuries".

KEYWORDS: physical activity, the start of work, sports activities.

INTRODUCTION

When a person breathes normally, 500-600 ml of air enters the lungs, and the same amount of air is expelled during exhalation. This is called breathing air. A person can take in 500 ml of air, about 1500 ml of additional air (supplementary air), and after a calm exhalation, he can exhale another 1500 ml of air (reserve air). If necessary, the volume of respiratory movements can change both on the side of exhalation and on the side of inhalation, due to which the volume of air entering the lungs increases.

MATERIALS AND METHODS

In the study, the respiratory indicators, which are one of the factors causing various types of closed injuries in athletes, were analyzed. Athletes specializing in weightlifting (50 people), canoe rowers (57 people) and psychology students who did not play sports (50 people) were invited to participate in the study. The volume of breathing air was determined using the "Ergooxyscreen (Jaeger)" meta-balograph.

RESULTS AND ITS DISCUSSION

The purpose of the study was to clarify the level and dynamics of parameters of oxygen volume and lung vital capacity in athletes of different levels of adaptation to muscle activity.

To achieve this goal, 50 non-athletes, 57 canoeists and 50 weightlifters were selected. The age of 157 athletes selected as an experiment is 18-21 years. We determined the breathing air in athletes when they did not perform a strong physical load to achieve certain discharges.

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The average value of breathing air of those who did not do sports was 1300 ml. The average volume of breathing air was 1684 ml in those who started doing weightlifting. The experiment was conducted 7 times and the average value was obtained.

After a year, the experiment was repeated on the same objects in order to determine the difference between the trained organism and the untrained organism.

The average indicator of the volume of air intake of people who did not do sports was 1300±8 ml, and after one year this indicator was 1480±10 ml. In a growing organism, the volume of breathing has increased due to the movement of muscles. It was found that the respiratory volume of the athletes who started weightlifting and did not discharge was 1684±22 ml, and after one year this indicator was 1985±18 ml. This indicates an average volume increase of 504±18 ml during 1 year. Therefore, during the examination, it was found that 4 athletes whose breathing air was 2200 had reduced symptoms of shortness of breath, less fatigue, and no headaches even after high-intensity training. In 6 athletes whose breathing volume was 1800±18ml, cases of shortness of breath and early exhaustion were observed. From this it can be concluded that athletes with a high respiratory capacity can carry out high-intensity training and loads. The physical load given to them is a sign of the improvement of the state of training and the absence of physiological traumas in the body. We recommend increasing aerobic exercise to weightlifters whose breathing capacity is changing. The greatest danger for athletes who row in canoes is the development of diseases related to their spine. If there are no injuries during sports, a positive change in breathing patterns can be felt due to the active participation of the chest. In the first examination, the breathing air of canoeists was 1470±10 ml. After 12 months, this result improved to 195±15 ml.

As can be seen from the presented data, absolute values of parameters of the respiratory system and minute consumption of oxygen differed significantly in athletes of different physical conditions and aged 18-21 years. Breathing air improved by 301±20 ml in 1 year in weightlifting athletes. In canoeists, this indicator is 106±10 ml less than the results of heavy athletes. The reasons for this were explained by the movement of 1/2 part of the body in canoe rowers and the lack of warm-up exercises. With the increase in functional training, the reactions of autonomic systems to standard physical activity regularly decrease, which is explained by the development of processes of increased training.

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