The influence of the physical culture and wellness program on the health of students of special medical groups

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Abstract

Objective of the study was to determine the impact of a sports and recreation program on the restoration of the health status of students of special medical groups.

Methods and structure of the study. The experiment was conducted at the Department of General Hygiene and Physical Culture of the Federal State Budgetary Institution of Higher Professional Education «North Ossetia State Medical Academy» of the Ministry of Healthcare of the Russian Federation (FSBI HPE «NOSMA» MOH Russia) from September 2020 to December 2021. We studied 40 students with heart failure, including 20 boys and 20 girls aged 18-19 years. The duration of the disease in most students is two to three years. During the study, treatment was carried out using individual physical education programs to normalize the condition of students.

Results and conclusions. At the end of the first year of research on the use of special individual physical exercises for this disease, a positive effect was obtained in restoring the health and working capacity of students of special medical groups.

The means of physical education in special medical groups are dosed physical exercises, as well as natural factors of nature and a rational, hygienically justified regimen that provides a healing effect on the body, excluding the formation of bad habits. The main means are therapeutic physical exercises (TPE).

A feature of the classes in special medical groups was a large number of exercises that specifically affect individual weakened body systems. It is recommended to conduct sparing mixed-type exercises, since the variety of means used and their modern alternation increase interest in them, give them an emotional coloring and prevent the appearance of fatigue.

Keywords: *special medical groups, use of special complex programs, therapeutic physical culture, state of health.*

Introduction. At present, a large number of scientific works are devoted to aspects of the influence of a physical culture and health program on the restoration of students' health [1-3]. The problem of the application of special complex physical exercises on the state of health of students of special medical groups and the study of the mechanism of their therapeutic action is topical. Most researchers [4-6] believe that the therapeutic effect is mediated through the nervous and humoral systems. The problem of increasing the efficiency of the body of students of special medical groups using complex physical exercises ensures the restoration of their health.

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Results of the study and their discussion. At the end of the first year of research on the use of special individual physical exercises for this disease, we obtained a positive effect in restoring the health and performance of students of special medical groups.

In the studied students at rest before the experiment, the average heart rate was 83.4±21 beats/min, BP at rest was 128±13 mm Hg. Art., ADD - 77 ± 12 mm Hg. Art. After the experiment, the indicators improved: heart rate 79.3±16 beats/min, BP at rest - 112.3±14 mm Hg. Art., ADD - 64 ± 7 mm Hg. Art.

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In classes, physical exercises are used that cause acceptable reactions of the cardiovascular system that correspond to the functional capabilities of the body. The degree of load is strictly controlled and regulated. In the initial period of training, low-intensity exercises were used, which increased heart rate by 25-30% of the initial level. Subsequently, dosed loads of medium intensity were included, which increased heart rate by 40-45%, as well as high-intensity exercises (with sufficient adaptation of the body to physical stress), which increased heart rate by 70-80%. Submaximal and maximum physical activity in classes with students of special medical groups is not used.

The basis of the training process is the use of endurance exercises that have the most beneficial effect on the activity of the cardiovascular system.

Exercises for strength and speed were included in the classes at first cautiously, and then, as the trainees adapted to physical loads, they began to train these qualities as well.

Physical exercises with objects (gymnastic sticks, balls, maces, etc.) are useful, as they increase the emotional saturation of classes, make them more interesting.

Dosed running was used in the classes. Initially, it was used in the form of light runs at a slow pace, and then gradually increased the load by increasing the length of the distance covered (but not by accelerating the run). Such a methodical technique contributed to the development of endurance and did not allow crossing the border separating aerobic loads from anaerobic ones. At the first signs of fatigue, students should be transferred to walking.

A feature of the classes in special medical groups was a large number of special exercises that specifically affect individual weakened body systems.

In special medical groups, it is recommended to conduct sparing mixed-type exercises, since the variety of means used and their modern alternation increase interest in classes, give them an emotional coloring and prevent the appearance of fatigue.

Conclusions. Normalization of the state of health of sick students in the process of therapeutic physical culture indicates an increase in metabolism in the myocardium and oxygen delivery, which leads to an improvement in the condition and performance of students of special medical groups, which indicates a neurohumoral theory of the action of therapeutic physical culture.

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