AJPMHS GLOBAL RESEARCH NETWORK

AMERICAN Journal of Pediatric Medicine and Health Sciences
Volume 2, Issue 1, 2024 ISSN (E): 2993-2149

Influence of Swimming Sports on the Functional State of the Blood Vessel System

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Abstract: the cardiovascular and respiratory systems, on the one hand, allows to assess the level of adaptation of the athletes' bodies to the conditions of sports activity and the adequacy of the proposed physical activity, which is very important for the health of those involved. On the other hand, knowing the individual characteristics of the athlete's body's adaptation to physical activity allows the coach and sports doctor to make adjustments to increase his effectiveness during training. Therefore, studies aimed at studying the characteristics of the functional state of the cardiorespiratory system in children who practice swimming are relevant.

Keywords: cardiovascular system, swimming athletes, cardiovascular system, respiratory system, cardiorespiratory.

The purpose of the study is to evaluate the characteristics of the cardiovascular and respiratory systems of swimming athletes.

Materials and methods . In order to carry out the research, 15 students of the Nafis Olympic reserve, who are engaged in the sport of swimming, aged 14-17 years, were selected. For the purpose of comparison, 15 schoolchildren of the same age who do not play sports were taken. The subjects of all groups underwent the following tests: Yu QS was measured at rest to evaluate the cardiovascular system , Shtange and Genche tests were used to evaluate the respiratory system.

Results of the study . The obtained results showed that age- and gender-dependent changes were noted in the condition of the cardiorespiratory system of the children in the main group. In them, Yu QS showed an abnormal result in more than 68.9% of patients in the main group. The barbell test was found to be satisfactory in 72.5% of students. Satisfactory results were recorded in 62.3% of students in Genche exam. In the children of the comparison group, Yu QS was found to be low and above the norm in more than 40% of the subjects. In the Shtange and Genche test, only 57.7% of students had satisfactory results. It should also be noted that the maximum consumption of oxygen in the children of the main group is more developed than the lack of oxygen. The lowest indicators were recorded in schoolchildren of the comparison group. Cardiomyopathy is a disease associated with primary damage to the myocardium - it is the presence of systemic and functional negative changes in the heart muscle in the absence of cardiovascular diseases, arterial hypertension, acquired and congenital heart defects.

The real reasons for the occurrence and development of cardiomyopathy have not yet been determined. There are a number of factors that trigger the occurrence of this disease: heredity, adverse effects of the external environment, viral infections, autoimmune diseases, endocrinological diseases, exposure to allergens, alcoholism, heart pathologies, etc. In the advanced stage, cardiomyopathy is usually asymptomatic. The patient may have the following complaints: heart pain, severe fatigue, general weakness, severe heaviness in the right lower quadrant , shortness of breath, shortness of breath, and other similar symptoms. The treatment of cardiomyopathy depends on its type : hypertrophic cardiomyopathy is a thickening of the heart muscle and, as a result, a violation of the heart's ability to pump blood. Medicines are prescribed by doctors, but septal myectomy surgery is recommended in cases of danger. As a result of the operation, the thickened heart muscles are reduced and normal blood circulation is restored - in restrictive cardiomyopathy, the heart muscles become stiff and their elasticity decreases. As a result, the heart does not expand and the heart does not fill with enough blood in the interval between heartbeats . Electronic pacemakers that generate pulses for a beating heart, defibrillators for a dangerously unstable heart, and an auxiliary ventricular implant for a heart with impaired blood pumping can be used in various situations, especially drugs. in a situation where he cannot help, the patient can be advised as a solution to improve his condition - the doctor emphasized. A defect in the wall between the heart valves is a persistent defect, deficiency and changes in the anatomical structure of the heart that interfere with normal blood flow. It is one of the most common congenital heart defects in children older than 3 years. In this condition, there is a hole(s) in the interdispheric septum (wall) that separates the right and left atria in the heart . The presence of this hole causes pathological blood flow from the left atrium to the right and can cause heart and lung problems in the future . The modern method of treating the disease is the endovascular method. In this case, a long tube-shaped catheter is inserted into the heart through the femoral vein and the defect is closed using a special coating.

Summary.

Summarizing the data, it can be concluded that the functional state of the cardiovascular and respiratory systems of swimming students is higher and more stable than that of non-swimming schoolchildren. Swimming sport is of high importance for the condition of the cardiorespiratory system in stable activity . At the same time, the development of the athlete's cardiorespiratory system is important for achieving high results in sports.

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