



## PHYSICAL EDUCATION AS A MEANS OF PREVENTING DISEASES AND INCREASING THE BODY'S RESISTANCE

**Niyazova Olga Yurievna**

Senior lecturer of the Department of Theory and Methods of Physical Culture  
Karakalpak State University named after Berdakh

**Abstract:** the article considers physical education as a means of preventing diseases and increasing the body's resistance.

**Keywords:** physical education, prevention, disease, body.

Physical education is aimed not only at achieving various sports results, but also at preventing diseases, increasing resistance and reactivity of the body. The proposed set of exercises has a beneficial effect on the respiratory and cardiovascular system, and also helps to reduce the negative effects of some already acquired diseases.

Health is the first and most important need of a person, determining his ability to work and ensuring the harmonious development of personality. A healthy lifestyle includes the following basic elements: a rational work and rest regime, the eradication of bad habits, optimal motor regime, personal hygiene, hardening, rational nutrition, fruitful work, etc.

An optimal motor regime is the most important condition for a healthy lifestyle. It is based on systematic physical exercises and sports, effectively solving the tasks of strengthening the health and development of physical abilities of young people, maintaining health and motor skills, strengthening the prevention of adverse age-related changes. At the same time, physical culture and sports act as the most important means of education.

Physical education is an integral part of general culture. It not only improves health, but also relieves some congenital and acquired ailments. Physical culture is necessary for people of both physical and mental work. Physical culture and physical activity are the most important factors in promoting health, which is necessary for people of any age. It should be noted that sports are only a small part of the physical activity that a person does during the day. Sport is an important component for increasing physical activity, but it is not necessary for those who keep themselves in good shape all day. Sport is a professional activity and can be practiced by a fairly limited number of people. However, the task of physical education is to maintain and strengthen health. In therapeutic physical culture, the following means are used for the prevention and treatment of diseases and injuries: physical exercises (gymnastic, ideomotor, sports and applied, that is, mentally produced exercises in sending impulses to muscle contraction), natural factors (sun, water, air), therapeutic massage. Let's take the example of the respiratory system. According to recent studies, about 20% of people have breathing problems, most often in the form of dyspnea (a decrease in the volume of inhaled air).

Dynamic exercises and breathing exercises are reflex stimuli of the respiratory system. Physical therapy classes use a person's ability to freely control the phases of breathing, change the rhythm, depth, frequency and type of breathing, the ratio of the phases of inhalation and exhalation; as a result, he is given the opportunity to develop, according to the mechanism of conditioned reflexes, full-fledged breathing. Exercises strengthen the respiratory muscles and diaphragm. Regular and targeted exercises increase blood and lymph



circulation in the lungs, which contributes to faster resorption of inflammatory infiltrate and exudate. Exercise therapy prevents the formation of intra-pleural adhesions, improves the elasticity of lung tissue, and promotes the formation of compensatory mechanisms. An approximate set of breathing exercises consists of:

1. I.P. (starting position) – lying on his back, on a couch, without a headrest, arms – along the trunk. Raise both straightened arms in the direction of the head to stretch – inhale, return to the I.P. – exhale. The pace of movement is slow. Repeat 4-5 times.
2. Starting position. The same thing. Diaphragmatic breathing 1 –/ 2 min, exhalation, elongated through lips folded into a tube. The pace is slow.
3. Starting position. The same thing. Clench your fingers into fists, bend your feet ("take over"). These movements are repeated quickly and vigorously. Breathing is arbitrary. Duration – up to 1 min.
4. Starting position. The same thing. Hands at the shoulders. Lift your elbows up through the sides – inhale, lower them down and slightly squeeze your chest with your elbows–exhale. Clear your throat. Repeat 4-6 times.
5. Starting position. The same thing. One straight arm is raised up behind the head, the other along the body. Quick change of hand position. Breathing is arbitrary. Duration – up to 1 min.
6. The starting position is the same. Spread your arms apart – inhale, pull your knees up to your chest, wrap your arms around them - exhale. Clear your throat. Repeat 4-6 times.
7. Starting position. The same thing. The hands tightly cover the lower part of the chest – inhale. On exhale, squeeze the chest with your hands. Exhale vigorously, loudly, through an open glottis. Repeat 4-6 times..." and other exercises.

The duration of these exercises, as well as the number of their repetitions, are indicated approximately and can be changed by the methodologist during the course of classes.

Now I propose to consider an example of the impact of physical culture on the cardiovascular system. Hypertension is a chronic disease in which blood pressure exceeds the limits of the norm established by the World Health Organization (WHO). The norm of blood pressure depends on age, on average in an adult it is: systolic – within 110-130 mmHg, diastolic – within 70-90 mmHg. The disease is accompanied by an increase in blood pressure from the mouth of the aorta to the arterioles inclusive.

Signs of hypertension – headaches, dizziness, noise in the head, sleep disorders, nosebleeds, etc. The basis of the effect of physical exercise is an increase in the overall tone of the body, which is reduced in hypertension. The general tone with the help of direct and feedback links determines the functional state of the central nervous system and ANS, the state of homeostasis in general, the course of immunobiological reactions, tolerance to adverse conditions of the external and internal environment, the level of regeneration and compensatory capabilities. Normalization of the general tone of the body helps to reduce clinical manifestations, exacerbations and complications. Exercises activate motor–visceral reflexes, including motor–cardiac, pulmonary, reduces total peripheral vascular resistance (OPSS), promotes the expedient redistribution of blood through organs and tissues. In active muscles, blood flow increases several times, in non–working muscles it decreases due to an increase in local vascular tone.

When performing dynamic exercises involving small muscle groups and with low intensity (flexion, extension of fingers), the overall increase in vascular tone in inactive muscles will exceed dilation (dilation) of the vessels of working muscles, resulting in increased blood pressure and total peripheral vascular resistance (OPSS) with increasing load on the left ventricle of the heart. The opposite ratio of vascular tone occurs during the work of large muscle groups with low intensity, medium pace, in this case, blood pressure, total heart rate, the work of the left ventricle decreases. , using weights, sports equipment, exercise equipment. Walking,



jogging, swimming, games, etc. are used. The interval method of dosing physical activity and the circular method of conducting classes using various simulators are widely used

Dynamic and static exercises, relaxation exercises, breathing exercises at a slow and medium pace, without significant stress, general developmental exercises are used, then moderate cyclic loads are connected – dosed walking, skiing, etc. It excludes power-based loads (straining) and exercises with breath retention, exercises with a downward tilt of the head, jumping.

Coronary artery disease (CHD) is a chronic insufficiency of the coronary circulation, which is a consequence of atherosclerosis of the coronary arteries. Clinical forms of coronary heart disease: angina pectoris, heart attack, atherosclerotic cardiosclerosis. In the treatment and prevention of coronary heart disease, cyclic types of physical exercises. Angina pectoris is a form of coronary heart disease, manifested by attacks of sudden pain in the heart area. Angina pectoris is paroxysmal, short-term, relieved by nitroglycerin, validol. There is angina pectoris of tension and angina pectoris of rest. stimulation of neurohumoral regulatory mechanisms for the restoration of normal vascular reactions during muscular work, improvement of the function of the cardiovascular system, activation of metabolism (fight against atherosclerotic processes), improvement of the emotional and mental state of the patient, adaptation to physical exertion. Training in metered walking begins with a walk of 5 km, then the distance gradually increases to 8-10 km (at a walking speed of 4-5 km / h). Acceleration is performed during walking; individual sections of the distance may have a rise of 10-15 °. After patients have mastered the distance of 10 km well, they can start jogging alternately with walking. If there is a swimming pool, swimming classes are held; their duration is gradually increased from 30 to 45-60 minutes. Outdoor and sports games (volleyball, table tennis) are also used.

## Conclusions.

Regular and moderate physical exercises really have a positive effect on the functioning of our body, increase the body's natural resistance to harmful environmental influences and infections. Low physical activity, of course, leads to poor health, the development of various diseases and a decrease in life expectancy. Students should be well aware of the importance of the discipline "Physical Education". To do this, educational institutions need to develop new methods and activities to motivate students to exercise regularly and increase physical activity.

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