



THE EFFECT OF PHYSICAL TRAINING AND SPORTS ACTIVITIES ON THE HUMAN BODY

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ABSTRACT

In this article, the extent to which physical training and sports have a positive effect on the human body, as well as the role and importance of physical training in the rational organization of work, are discussed.

Physical activity is a component of the healthy lifestyle of various professions.

During physical exercises, a morphological and functional process occurs in the body that ensures its functional capacity, the expansion of networks and their interactions to a certain extent, the improvement of control mechanisms, and the increase of the limit of compensatory-adaptive variability. As a result, the normal and extreme endurance of the organism increases, its ability to resist the influence of various harmful factors from the external environment increases, and resistance to exercise also increases. The changes that occur in the human body under the influence of physical exercises depend on the specificity of muscle movements, the rate and style of exercises, health, age, gender, and the result of training.

With a certain level of change, the resistance of the human body increases. The basis of the development of exercise tolerance as a result of constant exercise is the improvement of the nervous system and control mechanism. The variability and excitability of nerve cells is based on nerve processes and their power of movement. The emergence of conditioned reflexes and their stability accelerates, metabolic activity accelerates to a certain extent. Advanced middleware management mechanisms are perfected.

An increase in the hemoglobin content and the number of erythrocytes in the blood allows for an increase in the amount of oxygen in the blood, the number of lymphocytes increases on average, and work productivity increases. The reserve of energy substances increases in the muscles, brain, and heart muscles.

It increases the activity of enzyme networks that supply tissues with oxygen. The functional capacity of the respiratory apparatus increases to a certain extent, the increase in the volume of oxygen in the blood ensures the growth of oxygen absorption during physical activity, and gives the opportunity to increase the ability to work. Carbohydrate reserves



increase, fat content decreases. Energy consumption will be low several times, but may rise again to meet the demand.

In the course of training, the function of the analyzers, which created the conditions for the creation of a large number of different variables, improves.

A component of movement activity is the organization of a healthy lifestyle in various professions. It can be seen from the table that after 24 hours of heavy physical work, mental performance does not recover to the previous level, but after moderate physical performance, recovery of mental performance is better than before (100% obtained) and is restored close to the previous state.

The improvement of the activity of the visual analyzer results in the expansion of the field of vision, the growth of the eye movement apparatus, the perception of light, and the increase in the variability and excitability of the optic nerve. Hypertrophy of bone tissue - the transverse growth of the tubular bone diaphysis occurs in the thickening of the shell layer. Hypertrophy of the bone apparatus is very important for the performance of large physical exercises, and it provides an opportunity to increase the mechanical strength of the bone. When a muscle undergoes hypertrophy, its weight and volume increase, first of all, the protein structure changes and its quantity increases, blood supply to the muscles increases. Capillaries expand significantly, morphological studies are consistent with animal experiments; their number will increase to 40-50 percent. Power potentials increase significantly from stock. Biochemical studies show that the number of myoglobin, myosin, creatine phosphates corresponding to the increase of glycogen in ATF receptase and muscle performance increases significantly, and some iron, sodium, calcium, magnesium, which are part of potassium, increase. Muscles make up 35-40% of body weight for an average person, sometimes 50% or more. Changes in bone and muscle networks indicate that the main indicators of physical development have improved. Increasing the mobility of the spine in the joints helps to improve the appearance and figure of a person.

As a result of the loss of excess fat and water in the body, the relative weight of the body increases. At the beginning of training, the body weight decreases, and then it returns to its previous state. In some cases, if height growth and body formation are not completed, body weight increases due to muscle growth. At the same time, as a result of hypertrophy of muscles and an increase in energy resources, the functional state of muscles improves. The ability to stretch and relax muscles increases, their amplitude increases, muscle strength increases, and the excitability of muscle fibers improves. Great changes take place in the respiratory and exhalation apparatus. The respiratory muscles develop, the breathing capacity of the lungs increases, the chest becomes mobile. The capacity of the lungs reaches 4-5 liters in women and 5-7 liters in men, and increases by 11-25% of the required amount. The maximum minute ventilation of the lungs reaches 100-200.l, and it is 60-120 l in people who do not do sports.

The minute volume of breathing increases to 4-10 l.

Breathing decreases (10-16 breaths per minute, in some cases 6-20) and deepens (0.7-1 l, 0.3-0.5 l in non-athletes), shortness of breath; It is shortened (6-3 s, 1.8-2 s in those who do not do sports). The ability to consume maximum oxygen increases.



In the following years, the number of people engaged in physical education and sports among the villagers has increased significantly. The basis for this was the increase in the general level of culture of the population, the increase in the number of high school, club and independent sports events. At the same time, there are still many unresolved problems, difficulties and contradictions in the development of mass physical education among rural workers.

Many professionals working in rural areas of our republic do not have a clearly defined agenda. It depends on the nature of work, seasonality of work and other factors. The work of mechanists in agriculture requires a lot of physical and static stress (tension), uncomfortable production (noise of a working tractor or combine harvester, vibration, air pollution) and natural-climatic conditions (a sharp increase in air temperature in summer and a decrease in winter). - depends on the conditions. The influence of these factors has a serious impact on the working ability and labor productivity of mechanics. In the spring-summer season, the duration of their working day reaches 12-14 hours. Machine milking operators (milkers) do not feel the effect of the season on their work. They go to milk cows three times a day (they are given a day off on a rolling schedule): morning, afternoon and evening. Their work is characterized by moderate physical exertion. Hard physical work is typical for the members of the beekeeping brigade. They prioritize long-term seasonal work.

Physical education aimed at recovery after work. In the physical culture of workers, a place must be reserved for physical exercises. The main task of such exercises is to restore strength after the end of the working day, to carry out preventive measures directed against unfavorable and one-sided factors of work, and on this basis to maintain high professional training.

The results of the conducted studies have shown that the implementation of physical exercises and other recovery procedures after work serves to speed up the recovery of organs and prevent occupational diseases.

Restorative physical training events are held directly at workplaces, in specially equipped recovery centers at the enterprise, at sports facilities located on the territory of the enterprise or near it, and at preventive events. In the development of physical training and preventive activities, the selection of training and the method of conducting them depends on the technological features of the production organization and the conditions of work, as well as the nature of professional activity. Physical exercises should be aimed at eliminating the cause and effect of work: monotony of work on the conveyor, high nervous tension (for example, in operators, dispatchers), etc.

It uses the following forms of training:

- a) organizational: they are held in recovery-prevention centers, occupational rehabilitation groups, sports sections for sports;
- b) independent: exercise in wellness zones, preventive gymnastics, various forms of preventive physical training.

In practice, employees with an optimal movement mode have the highest performance indicators.

Rehabilitation and preventive gymnastics. Unfavorable working conditions: air pollution, high temperature, noise, vibration and the like, especially in oil and chemical, gas,



heat, metallurgy, mining, textile, coal mining and some other enterprises. observed. These lead to serious changes in the normal functioning of physiological systems in the body. If regular preventive measures are not taken against them, various diseases may develop over the years. A similar result can be manifested in the process of working for many years in the situation of a forced laborer.

In order to prevent such diseases, it is necessary to use a set of health-prophylactic gymnastics exercises and it serves to solve the following main issues:

a) increasing the level of adaptability to unfavorable working conditions due to general strengthening of the organism, increasing the non-specific protection of the organism - immunological properties and functional capabilities;

b) prevention of occupational diseases and functional disorders;

c) reducing the recovery time of functional systems that have undergone changes.

Stretching exercises due to static tension in the work process muscles,

ligaments are used to restore mobility in joints damaged by ligament shortening.

Relaxation exercises improve blood and lymph circulation in the body, accelerate the release of carbon dioxide gas, and eliminate fatigue.

Isometric exercises prevent muscle atrophy and provide a local effect.

Strength and speed-strength exercises, in addition to the general strengthening effect, also have an effect in a small area. They are used to improve blood circulation, increase metabolism, and restore expended strength and muscle contraction speed. At the same time, they have a significant effect on the respiratory system.

Corrective exercises are used to correct various deformities of the spine, chest, and heel. With tension in such actions that have a local effect and are performed from a certain initial state stretching is combined. For example, a hunchback can be corrected by performing shoulder rotations, chest expansion exercises, and shoulder strengthening exercises. In order to restore coordination, quickness, accuracy, and rhythm while working with a vibrating instrument, along with general development exercises, special exercises aimed at coordination of finger movements are used.

Movement coordination exercises are used to restore the rhythm and pace of work, as well as to create an optimal state when starting work.

Balance exercises improve vestibular function, develop correct body structure, and also strengthen and restore trophic and vegetative reflexes.

Post-work recovery - preventive gymnastics is conducted in a group method or individually under the guidance of a methodologist-instructor. During the training, the load is gradually increased, when it reaches the middle of the training, the load reaches the maximum, and then it is gradually reduced by changing the number of repetitions of some exercises, the speed, the amplitude, the complexity of the exercises, and the level of tension in the muscles.

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