



## ENVIRONMENTAL EFFECTS OF EXERCISE

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### Abstract:

Physical exercise is understood as a different set of voluntary movement activities that meet the requirements of the laws of physical education and are performed consciously. Such movement activities as gymnastics, games, sports, tourism exercises were historically systematized, methodically collected and filled. The emergence of physical exercise is historically indicated in a number of textbooks (A.D. Novikov, B.A. Ashmarin, etc., 1966, 1979) as corresponding to the period of the primitive collective system.

**Key words:** physical exercises, ecology, environment, nature, physical training, harmful gases.

### Introduction:

The objective reason for the emergence of physical exercise was considered to be the primitive man's hunting in order to fill his belly, and the formation of consciousness as the subjective reason. Primitive man, who did not know how to use primitive weapons, chased his prey until he was full. With this, the hunter's organism felt the need for great physical training. Those with insufficient physical fitness were themselves prey. Accordingly, with the passage of time, primitive people began to go hunting in groups. Hunters began to use primitive weapons: a stone, a stone-enriched spear with a sharp edge, a well covered with wood, etc., and social consciousness began to form. The elders of the tribe, who could not participate in the hunt, began to train the youth to throw a stone at a target, to strengthen its impact, and with this, the elements of the education process, which



is the basis of education, began to be formed. Later, throwing, running, jumping to chase or escape began to be practiced. This is considered the period of formation and formation of physical exercises and elements of physical education.[7] To this day, these exercises are used as the main means of physical education in the style of modern athletics, gymnastics, sports games, individual wrestling, tourism and other types of sports. The increase in types of physical exercises was also influenced by human labor. It is known that work requires a certain level of preparation and development of human body (movement) qualities such as physical strength, endurance, quickness, and agility. In the practice of education, mainly, a person practices more the actions that he uses in his work. In the development of physical exercise, religious ceremonies, games on holidays, dances, consciously performed voluntary actions in military activity and industry serve as tools. Natural laws of the nature of physical exercise I.M. Sechenov and I.P. Pavlov. It is revealed in Pavlov's scientific world views. Voluntary action, according to Sechenov, is controlled by consciousness and reason and is directed to a goal. Pavlov revealed the physiological mechanism of movements and scientifically proved that the movements are related to the gathering properties of the cortex of the brain and that they are formed with the active participation of the first and second signal systems, conditioned and unconditioned reflexes. Content and form of physical exercises. Exercise, like all events and processes, has its own content and form. A set of mechanical, biological, psychological processes that occur during physical exercise creates the content of physical exercise, and their influence develops the ability for movement activity. Also, the content of the exercise includes theoretical knowledge and practical movement skills about a set of its parts, for example, acceleration of the body in the long jump, jumping in the air, landing links, and tasks to be solved during the exercise, as well as functional changes that occur in the body as a result of the exercise. All these elements make up the overall content of physical exercise. The form of physical exercise can be seen in the consistency of their internal and external structure. The internal structure of the exercise includes the skeletal muscles involved in the performance of this activity, their contraction, elongation, twisting, etc., biomechanical and biochemical connections - energy consumption, cardiovascular, respiratory, nervous control, and other processes in organs, their interdependence, includes. The connection and coordination of biological, mechanical, psychological and other processes during exercise is different in running exercises, but in lifting weights, the internal



structure is different. The external form and external structure of the exercise is characterized by the external appearance of that exercise, the time taken to perform the movement or the norm of effort and the intensity of the movement.

### **Methods and Results:**

The form and content of physical exercises are interrelated and complement each other. A change in content results in a change in form. Content is more important than form. For example, the manifestation of the quality of speed at different distances causes the running technique to be different (step size, frequency, body position, etc.). Form influences content. The physical qualities that are manifested for a specific movement affect the competence in performing this physical exercise. Therefore, the strength of the swimmer and the strength of the gymnast and the weightlifter differ from each other. Achieving rational consistency of the form and content of physical exercise is one of the main problems of the theory and practice of physical education. This problem is partly related to movement skills and abilities, as well as physical qualities. Physical exercise technique The concept of technique can be studied from a pedagogical or biomechanical point of view. From a pedagogical point of view, it is accepted to call the selected movement activity a physical exercise technique. Effectiveness is expressed by the most rational influence on the body of students. But the most acceptable of them is called technical execution.

For example, it is possible to swim in various ways (crawl, backstroke, etc.), but some swim without using any of the classic ways. The effectiveness of the execution methods depends on the student's individual quality, level of physical fitness and the assigned tasks (for example, if they need to quickly climb a rope to a small height, they use the "one-handed" method, on a hard rope they use one method - the method of holding the wing with their feet, on a soft one - another). Nature is an existence that exists both before the appearance of man and with the participation of man. In general, this is the world, man, universe; micromacromegaworlds; inanimate and animate. In the narrow sense, it is an object studied by natural sciences. Nature is subject to laws independent of people and society. Man is a part of nature. Man cannot change the laws of nature, he can only master the elements and parts of nature using the laws. The concept of nature is also considered as a set of natural conditions for the existence of human society. Humans work for a living, and work (eg, farming, construction, industry), brain activity, and others change some aspects of nature. Material



wealth created by a person, that is, in the process of social labor, is conditionally called "second nature". For example, 92 chemical elements from hydrogen to uranium are naturally occurring, and those discovered later are artificial. All artificial synthetic chemical compounds, atomic and nuclear energies created by man belong to "second nature". The term nature in a broad sense means the physical, material world. In everyday life, the word "nature" refers to the environment and the life in it (wild nature) that is not heavily influenced by humans.

In the first case, nature is studied by science in general, and in the second case by natural science. In this, nature is seen from subatomic to galactic scales. Man's attitude to nature has changed and developed throughout history. In ancient philosophy, nature was viewed as spontaneous forces (Democritus), vision of the ideal world (Plato), harmonious process (Pythagoras), perfection (Aristotle). In religious teachings, nature is considered to be the material embodiment of the spiritual origin, and it is understood that God is above nature. During the Renaissance, nature was viewed as the manifestation of all natural harmony and perfection. In the new era, the attitude towards nature played a major role in the transformation of nature into an object of scientific study. An object of nature is a substance and matter existing in space and time. They consist of a set of infinite known things (elementary particles, antiparticles, sand, rock, soil, water, air, inanimate and living beings, planets, stars, galaxies and other heavenly bodies, physical fields). Once upon a time (according to the latest scientific data, 20 billion years ago), these bodies had a different appearance. It will change again in the next billion years. Nature is the homeland of man and society. Human life depends on the harmonious conditions of nature and biosphere. If these conditions are changed in a negative way, the normal life of a person will be damaged, environmental problems will appear. Improper use of scientific and technical achievements leads to the destruction of the biosphere. Therefore, it is necessary to thoroughly understand nature, use it effectively, treat it correctly and rationally (see Nature protection). Science is the main factor in this attitude of man to nature.

The air we breathe - the layers that make up the atmosphere - each has its own specific function. For example, the ozone layer protects all living organisms from radiation. Ozone, formed by the presence of oxygen, nitrogen oxide and other gases under the influence of sunlight, absorbs strong ultraviolet rays and protects living organisms from its negative effects. Exhaust gas emitted from cars causes



ozone depletion. According to experts' calculations, automobile transport takes the first place in the list of the main anthropogenic factors that pollute the air. That is, 40 percent of the total damage is caused by cars moving on Earth. The remaining 20 percent of the damage is caused by the energy industry, 14 percent by the production of enterprises and organizations, 26 percent by agricultural production, household utilities and other sectors. That's why experts call the car a "chemical factory on wheels." In the most advanced, developed countries of the world, environmental pollution occurs due to the toxic substances emitted by car engines. In Japan, due to the large number of cars, a police officer who manages street traffic has to change his oxygen mask every two hours.[4] The gas emitted by the car engine contains carbon monoxide, carbon dioxide, aldehydes, nitrogen oxides, and lead compounds, which not only damage the environment, but also harm human health. Carbon oxides combine with hemoglobin in the blood, reducing its oxygen-carrying properties, and lead compounds enter the body through the respiratory tract and cause serious damage to the cardiovascular system. One car uses 10-12 liters of gasoline fuel in one day and emits 25 kilograms of harmful chemical compounds into the atmosphere. A car that "worked" for a year "contributes" to the loss of more than 4 tons of oxygen. According to statistics, a person consumes an average of 1.5 kilograms of food and 2.5 liters of water per day. makes money. The human lungs absorb 13 cubic meters of air per day. This is equal to the volume of an entire single-head railway tank. A person can live a month without food and three days without water. However, it cannot live without air for more than two to three minutes. In addition, exhaust gases emitted by vehicles are harmful to flora and fauna, water and soil. Under the influence of polluted air, the exchange of matter and energy in plants is disrupted, and crops and fruit trees become less productive. Not only that, it has been found that carbon dioxide has a negative effect on the process of photosynthesis in nature. In fact, carbon dioxide gas also has its place and function in the atmosphere. That is, this substance, whose chemical formula is CO<sub>2</sub>, keeps the temperature on earth at a normal level, and it can be called, symbolically, the blanket of our planet. the share of carbon dioxide in atmospheric air is 0.3 percent, but this is not a constant amount, it changes depending on the season.

According to scientists, the amount of carbon dioxide gas in the current period due to the influence of the human factor is more than 22 billion tons per year on average. For the first time, Aristotle (384-322 BC), the formation of toxic fumes



when coal is burned about in his works. The old method of execution was to lock the criminal in a room filled with smoke from burning coals. At that time, the mechanism and source of death of criminals from smoke gas poisoning was not known. The Greek physician Galen (AD 129-199) hypothesized that it was a change in the composition of the air that caused harm during breathing. In 1776, the French chemist De Lassone heated zinc oxide with coke to form CO, but mistakenly called the gaseous product hydrogen because it burned with a blue flame. In 1800, Scottish chemist William Cruikshank stated that gas contains carbon and oxygen. 1846 Claude Bernard studied the toxic properties of gas to dogs. During World War II, gas mixtures, including carbon monoxide, were used to propel motor vehicles in areas of the world where gasoline and diesel fuel were scarce. External (with some exceptions) coal or wood gas generators are installed, and the mixture of atmospheric nitrogen, hydrogen, carbon monoxide and small amounts of other gases produced by gasification is transferred to the gas mixer. The gas mixture resulting from this process became known as wood gas.[6]

Carbon monoxide is formed by the partial oxidation of compounds containing carbon; it is formed when there is not enough oxygen to produce carbon dioxide (CO<sub>2</sub>), such as when running a stove or internal combustion engine indoors. In the presence of atmospheric concentrations of oxygen, carbon monoxide burns with a blue flame and forms carbon dioxide.

Until the 1960s, coal gas, which was widely used for household lighting, cooking, and heating, contained carbon monoxide, an important component of the fuel. Some processes in modern technology, such as iron smelting, still produce carbon monoxide as a byproduct. A large amount of CO is produced as a by-product in the oxidation processes for the production of chemical substances. 5 10<sup>12</sup> kilograms are produced in the troposphere per year. This is because the world's largest source of carbon dioxide is natural, due to photochemical reactions. Other natural sources of CO include volcanoes, forest fires, other types of combustion, and molecules that release carbon monoxide. Carbon monoxide has a molar mass of 28, which means it is slightly lighter than air according to the ideal gas law. It is known that the average molar mass of air is 28.8. The distance between a carbon atom and an oxygen atom in a CO molecule is 112.8 pm. This bond length is consistent with the triple bond of molecular nitrogen (N<sub>2</sub>), which has a similar bond length (109.76 pm) and almost the same molecular mass. The carbon-oxygen distance is much longer in formaldehyde, for example 120.8 pm. The boiling point (82 K) and melting point (68 K) of CO are very similar to those of N<sub>2</sub>



(77 K and 63 K, respectively). The dissociation energy is 1072 kJ/mol, stronger than N<sub>2</sub> (942 kJ/mol), which means that it has a stronger chemical bond than nitrogen.[2]

Life is movement! Although everyone knows this, they do not fully follow it. It's true that everyday tasks can take some effort: going to work, going out with friends, shopping, and the like. But this does not mean a full-fledged physical activity, even a simple daily walking norm is not fulfilled. In fact, walking helps to strengthen the body and at the same time improve its physical condition. In addition, a number of diseases related to the cardiovascular and respiratory system are more common in the lifestyle of older people. [3]

### **Discussion:**

In order to prevent the disease, it is necessary to get used to walking from now on. This habit should be performed as a separate and important physical exercise, not as a reward for doing some work. Most people come up with a number of excuses not to invest their time and energy in just walking. Most people claim that they don't have any free time, but spending only 30 minutes is not a huge problem for anyone. The reason is how many hours are spent sitting in front of the TV, talking on the phone or watching Internet news. But it is a pity that half an hour is not found to walk 10,000 steps in one day. These steps are very important for your future results and feeling good. What you'll learn instead is that walking is an aerobic exercise that's just as effective as running and swimming. In comparison, walking is much easier than any other sport. A person who starts walking once a day will immediately notice changes in himself, for example:

- the mood rises;
- sleep is normal;
- stress and depression are reduced;
- muscle tissue and body formation increases;
- blood circulation and heartbeat are stabilized.[1]

In addition, walking prevents diseases such as diabetes, atherosclerosis and osteoporosis. Also, this type of sport does not require any knowledge and skills. Especially since it's equally beneficial for everyone, and it doesn't cost any money. There are no side effects of walking at any age. Those who want to walk should wear comfortable shoes and download a special program that counts steps. You can listen to your favorite music while walking to avoid fatigue and keep you in a good mood. It will definitely make you more interested.



### **Conclusion:**

The biggest advantage of walking is that air pollution is reduced, the environment and living beings there are not poisoned or nobody. The negative impact of the harmful smoke gases emitted from cars can be understood with the global climate changes. Therefore, we believe that it is the duty of all people living in the current era to reduce the factor of negative effects on nature and to prevent possible changes in nature and genetics of creatures in the future.

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