

THE IMPORTANCE OF TRAINING THE ORGANISM WITH THE HELP OF EXTERNAL ENVIRONMENTAL FACTORS FOR SPORTS ACTIVITY

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Resilience is an increase in resistance to the effects of meteorological factors as a result of chronic administration of various treatments to the body. The importance of physical training in human life has been proven in a number of scientific studies.

It is an integral part of physical education, and thanks to training, the body's ability to fight against various diseases, its ability to work in various adverse conditions, and its tolerance to extreme factors increase.

Another important thing is that due to exercise, adaptation of the organism to the changed or changing environmental conditions occurs.

Exercise affects the body in specific and non-specific ways. The specific effect means the increase of resistance to cold temperatures by means of cold treatments, and the increase of resistance to solar radiation by taking sun baths. Non-specific changes mean the increase of the general resistance of the organism, the increase of the ability to work, and the increase of the ability not to succumb to diseases under the influence of various specified factors.

In the process of exercise, the regulation of the body's physiological functions by the nervous system and endocrine pathways changes. As a result of tickling different parts of the brain (for example, the forehead) with electric current, it is possible to speed up or slow down the adaptation to the influence of a certain factor.

The changes that occur with the increase in endurance are also manifested in cells and tissues, which can be indicated by a change in the chemical composition of cells, an increase or decrease in the activity of enzymes.

Due to the influence of some factor, the increase in endurance is faster in people with high physical fitness. If you adapt to some unfavorable factor (hot or cold

temperature) while exercising, the result will be better, that is, the agility caused by the influence of these two factors will be more effective, and the body will be more resistant to radiation, hypoxia, etc. Resistance to similar extreme factors occurs faster at this time.

In response to the cooling of the external environment, oxidation processes in the body can increase 3-4 times (compared to the main metabolism) by means of chemical thermoregulation. For example, falling into 40C water during winter bathing can increase oxygen absorption to 1000-1200ml/min. Such changes in the muscles of the body in response to cold can be clearly seen in the increase of their electrical activity. As a result of training in cold temperatures, the blood vessels of the skin expand instead of narrowing under the direct effect of cold, and at the same time, heat production in the muscles is enhanced.

A person's journey to distant Siberian regions makes the heart beat much faster, arterial blood pressure rises, and the minute volume of blood increases. When doing physical work, these indicators become stronger. As the body adapts to these conditions, bradycardia is observed in heart activity, and the above-mentioned changes stabilize. Cold conditions significantly affect metabolism in the body. For example, even if the glucose in the blood drops to 45-50 mg%, those who exercise in the open air in these conditions feel good, and there are no unpleasant conditions such as dizziness. Lipids increase in the blood, and energy that restores ATF is released due to them. Vitamins C, B1, B2 are greatly reduced in the blood (because they are excreted in urine). That's why it is necessary for such people to use fruits and vegetables rich in vitamins when doing heavy physical work in sports. In cold conditions, it is advisable to eat food rich in protein and lipids. If the ambient temperature drops by 100C, the caloric content of food should be increased by 5%.

A person who has adapted to the cold has a slightly lower body temperature, and an increased basic metabolism.

Sweating is the only way to cool the body when the ambient temperature is higher than the body temperature. It was found that heat training is carried out by releasing a lot of sweat fluid from the body. However, such sweat contains few salts,

so even if there is a lot of sweat loss, the exchange of mineral salts may not be disturbed. When the weather is hot, drinking a lot of water (more than the norm) puts a big load on the heart. Perfection of thermoregulation in a hot environment occurs not only at rest. Such changes occur directly in the work process. Performing standard physical exercises will prevent the body temperature from rising excessively due to heat.

In people who come to hot climates for the first time, the blood vessels of the skin expand a lot, the minute volume of blood increases, the heart starts to beat faster, and the arterial blood pressure decreases. As a result of physical work in hot climates, a person can lose 8-12 liters of water through sweat, 1 liter through urine, and 0.75 liters through evaporation in the respiratory tract.

In short, it has been found out by researches that it is good for the results of the sports that the people involved in various types of sports, while taking physical loads, train their bodies depending on the external environment conditions, i.e., in cold weather, in cold or cold water, and in hot season, in hot temperatures.

The time zone and climatic conditions help improve the athlete's results by training in competitions held in countries that are significantly colder or hotter than our climate.

References

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