



Conducting Physical Education Classes in the Conditions of the Hot Climate of the Republic of Uzbekistan

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Abstract: The article presents an analysis of the influence of geographical and climatic factors in the south of the Republic of Uzbekistan on the seasonal dynamics of working capacity and some functional indicators in schoolchildren aged 14-15. The procedure for organizing physical education classes in a hot climate is considered and the significance of adjustments in building the process of physical education of schoolchildren is substantiated.

Keywords: schoolchildren, physical education, hot climate, classes, control.

Introduction. The hot climate of the regions of the Republic of Uzbekistan is characterized by complex, sometimes extreme, climatic, geographic, environmental and social factors that undoubtedly affect the health of the population, especially children and adolescents [1].

In 1861, the founder of Russian physiology, I.M. Sechenov, formulated his famous thesis about the unity of the organism and the environment, which not only formed the basis of modern biology and medicine, but is still a powerful impetus for new directions in many studies. He wrote: "An organism without an external environment that supports its existence is impossible; therefore, the scientific definition of an organism must also include the environment that influences it." From all of the above, it is clear that the organism and the environment are not only a dialectical unity, but also integrity [2, 3].

Science now has already extensive knowledge about the interaction of the human body with the environment. For many years, comprehensive medical research has been carried out to identify the effect of weather conditions on the human body in various regions of the Republic of Uzbekistan [4, 5, 6].

A number of authors in their works have revealed a close correlation between some climatic factors and a number of diseases [7, 8, 9]. There are studies that summarize materials on the influence of various climatic factors and entire climatic regions on a person: cold, tropical climate, desert climate.

The influence of climate on sports performance is one of the most important problems of modern sports and physical education [10, 11]. So, in order to expand the functional capabilities of the athlete's body, they began to actively use training in conditions of oxygen deficiency (middle altitude conditions). On this issue, there are already enough studies that indicate the positive effect of mountain training on the performance of athletes under normal conditions [12, 13].

However, excessive physical activity negatively affects the body's resistance to adverse factors [14].

A number of studies have established that in the process of sports training, meteorological indicators (temperature, air humidity, solar radiation, and others) act on the athlete's body. At high air temperatures, the lability of the cardiovascular system increases significantly, the body reacts to the load with a sharp increase in heart rate, respiration, an increase in the maximum and a decrease in the minimum pressure, etc. [15, 16].

A number of studies have shown that at low temperatures, the body's performance decreases, and the energy consumption required to maintain the body's heat balance increases [17].

On the other hand, the athlete's body experiences great difficulties during training in the hot season [18]. At the same time, increased sweating is observed, which significantly changes the water-salt metabolism. At the same time, the cardiovascular system experiences additional stress. The influence of heat is all the more pronounced, the longer and more intense the work. And especially the effect of physical activity increases in a hot climate.

Along with this, one of the most important issues is the improvement of human adaptive capabilities. In this case, it is necessary to take into account the biological norm of the adaptive capabilities of the organism.

In this regard, the role of physical exercises, as the most effective non-specific means of increasing the adaptive capabilities of the body to adverse environmental influences, greatly increases.

When organizing physical education classes in a hot climate, the leading extreme factor is high temperature, with increased activity of solar radiation. Naturally, its effect causes increased sweating in the body, a violation of water-salt metabolism, hard work of the cardiovascular and respiratory systems, and an excessive increase in body temperature.

Performing physical work in such conditions requires increased blood supply to the working muscle groups. This, in turn, causes stress on the part of the cardiovascular and respiratory systems, which is characterized by an increase in the minute volume of blood, physical performance under the influence of high temperatures in a hot climate decreases.

In the case of insufficient training of trainees to the conditions of a hot climate, an imbalance occurs between ensuring the performance of muscle work and maintaining heat exchange, which can lead to adverse consequences (heat stroke).

Chronic overheating of the body is accompanied by certain signs:

- a slight increase in body temperature within 37.2 - 37.3-C;
- uncomfortable thermal sensations;
- a pronounced decrease in blood pressure, especially systolic, up to 95 mm Hg;
- deterioration of indicators of the functional state of the cardiovascular system;
- negative water balance with a loss of 1% to 1.5% of body weight per day;
- characteristic swelling (feet and hands);
- Lethargy and decreased performance.

When organizing physical education classes, it is necessary to take into account the main provisions:

1. The method of conducting training sessions is circular training.
2. Exercises of aerobic orientation are performed at the end of the main part of the training session.
3. After each exercise, the pulse value is measured, in order to determine the temperature state of the "core" of the body, so that during the subsequent exercise there is no overheating of the body, fraught with "heat stroke".
4. During medical and pedagogical control, it is necessary to carefully monitor the external signs of fatigue (lethargy, lethargy in movements).
5. A sharp increase in water loss in the body under conditions of exposure to high environmental temperatures puts the problem of water supply among the priorities, since the violation of water and electrolyte metabolism leads to a decrease in efficiency and an increase in the risk of thermal damage.

Thus, physical education classes in a hot climate impose special conditions on their organization:

- classes should preferably be held in the morning;
- increase rest intervals between exercises;
- the main form of classes - complex classes;
- the duration of classes should not exceed 30 minutes;
- clothing should not contribute to additional perspiration;
- strictly observe the drinking regimen;
- To carry out medical and pedagogical control over the influence of physical activity.

Conclusions. Thus, the analysis of the conducted studies allows us to make some generalizations, indicating that in late autumn and in the first half of winter, as a rule, the working capacity of schoolchildren increases sharply, which is accompanied by a significant optimization of the samples used in the work. Subsequently, all these indicators decrease somewhat and remain at a fairly stable level in the second half of winter and the spring months. The lowest indicators of functional tests and physical qualities were registered in summer at the height of the summer hot climate. At the same time, in most cases, the noted shifts are more pronounced in schoolchildren aged 14-15.

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