

External Environment as a Factor Influencing the Activities of Athletes

Sardorkhon Kuvondikov¹ and Nodir Kulboyev²

¹Associate Professor, Department of Physical Education and Sport
Tashkent State Pedagogical University Named After Nizami

²Senior Teacher, Department of Physical Education and Sport
Jizzakh State Pedagogical Institute Named After A.Kodiriy



Abstract - When studying various types of activities, natural factors (atmospheric pressure, gas content, humidity, ambient temperature, solar radiation - physical environment), biological factors of flora and fauna, as well as social factors influence economic, industrial and creative activities.

Keywords - The Natural And Socio-Biological Factors That Affect The Human Body Are Closely Linked To Environmental Problems.

When studying the various types of its activities, we cannot do without taking into consideration the influence of natural factors (barometric pressure, gas composition and air humidity, ambient temperature, solar radiation - the so-called physical environment), biological factors of flora and fauna environment, as well as factors of the social environment with the results of household, economic, industrial and creative activities of human.

Natural and socio-biological factors influencing the human body are inextricably linked to environmental issues.

The effect of high and low air temperatures. For the normal functioning of the body requires maintaining body

temperature within 360 c. This temperature optimum is maintained by means of heat control mechanisms (those of heat transfer and heat generation), which, however, at high outside temperatures cannot keep the body temperature within the required limits.

As a result, overheating takes place as a slowly developing state and heat stroke as an acutely occurring process due to high temperature and air humidity.

The effect of low temperatures leads to a protective reaction - an increase in heat generation, in connection with the rise in the body's consumption of oxygen. Therefore, the main metabolism in people in cold climates increased by 10-

15% compared with people residing in the middle lane. During physical work in the Arctic conditions (especially, there are holidays of the North for skiing type of sports), energy consumption is higher by 20-25%. At a temperature of -200 ° C and below, recovery after loads takes longer. Therefore, experts believe that skating competitions at 10,000 m in severe freezing conditions require athletes to recover within three weeks.

Change of time zones (when travelling from west to east and from east to west) leads to the inconsistency of the usual circadian rhythm, the temporary mode of life existing in this belt, which causes adverse changes in the body and even a painful state – desynchronises. This issue is especially actual in connection with the development of jet aircraft, thanks to which a person can cross 9-11 time zones in 3-4 hours. Among foreign doctors, even the diagnosis is rooted - "illness of businessmen", which is typical for business people who often travel from one country to another.

The realization of a person's opportunities, preservation of his health, obtained in the process of sports training, largely depend on the external conditions of activity. The structure of external conditions can be represented as follows.

Air pollution of sports facilities. A large role in maintaining health and high performance depends on clean air. Meanwhile, the lower atmosphere always contains mechanical impurities (dust, smoke). The main source of air pollution in cities are industrial facilities and motor vehicles.

Among the substances polluting the atmospheric air, the main one is carbon monoxide, which, when combined with hemoglobin in the blood, forms a stable, long-circulating compound carboxyhemoglobin, which interferes with the addition of oxygen to hemoglobin and its absorption into the body. Therefore, the construction of sports playgrounds and stadiums near city highways is unacceptable, as well as the

holding of competitions on the highway in the presence of moving vehicles.

Anthropoxins as a source of air pollution in sports facilities. In the process of life, a person breathing and evaporating sweat, releases the final metabolic products into the air: acetone, phenol, carbon monoxide, ammonia, etc. Due to the fact that many of them contain toxic properties, athletes may experience headaches, shallow breathing, nausea and other factors that interfere with the training process.

Ionization of air. In recent years, the attention of hygienists has been attracted by the question of air ionization. By the end of training sessions in sports facilities, the number of light ions decreases and the number of heavy ions increases. Light ions are absorbed in the process of breathing, contact with the surface of the athlete's body, adsorption by sportswear and sedimentation on material particles of air (dust) and turn into heavy ions in this way. The accumulation of heavy ions leads to a more rapid development of transcendental inhibition, to a deterioration in overall well-being and a decrease in performance.

The use of colour to increase the effectiveness of physical education. Different colours affect the mental state and physiological functions of a person in different ways. Warm colours (red, orange) have an ergo tropic effect, increasing the activity of the sympathetic part of the vegetative and enhancing the excitation of the central nervous system. This leads to an increase in speed and power qualities.

Cold colours (blue, cyan) have a trophotropic effect, i.e. soothe, reducing the activity of the sympathetic department and enhancing the activity of the parasympathetic department of the autonomic nervous system.

In this connection, the respiratory rate, pulse, blood pressure are reduced, speed-power qualities lower.

Yellow and green promote stamina.

It is clear from what has been mentioned that with the help of certain colours one can regulate a person's mental state. For instance, a number of trainers to reduce the monotony of training swimmers offer to wear glasses with different coloured glass.

The influence of music on the performance of athletes. The strong influence of music on the human psyche was known even to the ancient Greeks, who believed that the Phrygian fret excites courage, the Lydian one - sadness and boredom, the Aeolian one - a pleasant, blissful state, Dorian - religious ecstasy, solemn elation. The first observations about the influence of music on the performance of athletes date back to 1910, when six-day bicycle races were held in New York in a festive setting with a periodic playing of the orchestra.

It was noticed that when the music was playing, the distance of one mile was covered by the racers faster than without music.

Music influences a person as rhythmic and emotogenic stimuli. In the first aspect, it has a positive effect on the activity of athletes if the latter is performed in the rhythm of music. Therefore, rhythmic music and even just a metronome are used as sound leaders to overcome the psychological speed barrier and to increase the pace of work, especially when tired. If the pace of work does not coincide with the rhythm of the music, the effectiveness of the athlete's performance deteriorates.

The influence of music as an emotogenic factor is much more complicated. Causing certain emotional experiences in a person, music through them affects the effectiveness of his activities. Moreover, the nature of the relationship "music - the effectiveness of activities" is determined by many

intermediate factors: the nature of the music, the attitude towards it, the state of a person, his individual characteristics, etc.

Chemical stimulants of athletic performance. Dope. The use of various natural and artificial chemicals as stimulants has a long history. Even at the Olympic Games in Ancient Greece, athletes tried to improve their achievements through the use of stimulants. The professionalization of sports in the capitalist countries has given a new impetus to the use of stimulants during sports competitions, especially for cyclists participating in multi-day races. In the future, the practice of cyclists began to spread to other sports (boxing, football, athletics). Due to the extreme danger to the health of athletes of a number of stimulants, a new direction has emerged in sports medicine - anti-doping control (dope from English - dope - drug). On the other hand, the direction of sports biochemistry has expanded, which develops nutritious products and preparations of natural (plant and animal) origin that help athletes overcome fatigue during competitions.

Conclusion on the first chapter. Today's sport is one of the aspects of our modern culture and social life of society, which has its own content, structure, laws and manifestation mechanisms.

Problems and strategies for the development of sports are relevant and discussed at all social and power levels, right up to government meetings. Many social institutions accompany sports and are actively involved in sports - science, education, business politics, art, journalism, medicine, fashion, etc.

The constant desire of a person to satisfy his needs for movement, to develop physical qualities contributed to the fact that physical exercises gradually transformed into modern sports. It is with this that the competitive nature of

motor actions and the regulation of their specific rules are associated.

Thus, physical exercises are isolated in a separate type of human activity - in sports activity, which is distinguished by a number of specific features.

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