PARTICULARITIES OF THE IMPACT OF THE GAME SPORT ACTIVITIES ON THE BODY OF QUALIFIED ATHLETES

Aklas Hussein Doham, the Doctor philosophy,
Mustansiriya University – Faculty of Physical Education,
The Republic of Iraq

Annotation
The article considers two main factors that affect the athlete's body. First of all, it is the monotony (uniformity) of competitive activity, as each time an athlete performs the same action and movement in training as well as in competitions, and various kinds of stress, which affects all athletes, without exception, whether professionals or amateurs.

Keywords: athlete, competition, mental pressing, stress, monotony and endurance.

The relevance of the study. The body of each athlete is very well prepared for different kinds of competitions, it is able to withstand heavy loadings and perform an enormous amount of work. However, each competition depletes the body as an athlete participates in it to his limit in order to achieve the best possible result.

This topic will always remain up to date, as any competitor will want to minimize the body consumption, and to increase the results. For this reason is s very important to know...
which the most "destructive" effects of competitive activities are in order to restores the body most effectively and to prepare it for a new start.

The hypothesis of the study is the following: competitive activity of athletes contributes to high mental and nervous pressure; the daily long hour monotonous exercises reduce the tone of the nervous system.

In this regard, the fact of taking into account individual characteristics of the athletes from the point of view of their endurance and exposure to mental stress is of great importance in the individualization process of preparing for the start in the important competitions.

The aim of the article is to study the main factors that have an impact on the body of athletes.

The results of the study. Sporting activities causes the human body to adapt to a variety of factors, raises a wide variety of demands to the human body. All competitive activity takes place under time deficit against continuously changing situations. All of this contributes to the high mental and nervous stress, besides everyday prolonged monotonous work lowers the tone of the nervous system.

Competitive activity is a specific physical activity of man, which is usually done during the official competition, when a man is at the limit of his mental and physical strength in order to achieve high results. The competitive activity itself takes place directly at the competition. The competition also serves as a form of communication among people or groups of people. The sporting achievement is a result of competitive activity [4].

Let’s consider the main factors that affect the body athletes.

1) Mental and nervous pressure. In all kinds of sports, especially in situational sports (sports games, martial arts), the terms of wrestling cause in a person exceeded mental and nervous pressure. The athlete must process a huge amount of information with a very little time given, often only a few tenths of a second, and in conjunction with a huge motivation of athlete performance, all this leads to stress and if aggravated by even more complex conditions – lead to negative experiences – distress.

Stress (from English – pressure) is a general systemic response of the human body to extreme irritation.

Canadian scientist Hans Selye identified three stages of the stress response, which, in his opinion, were not depending on the specifics of the stimulus:

Stage 1 – the alarm, which includes phase of the "shock" (sharp autonomic responses) and "antishok" (mobilization of functional reserves).

Stage 2 – resistance (stability and high efficiency).

Stage 3 – exhaustion – the general decline of the functional state, development of pathological reactions and, ultimately, death of the organism.

Sport is so multi-faceted, that provokes various types of stress, which occur in the course of sports activities.

Physical stress arises at the time when an athlete is producing high efficient locomotor activity. Physical stress is not related to any emotional experience (e.g., trainings, especially in the standard types of sport).

Emotional stress reflects the high mental and nervous pressures during competitive activity. At the time of its occurrence, is happening mobilization of all functional reserves of the body; mental, autonomic and hormonal responses arises.

When an athlete is influenced by the emotional stress, then all stimuli, called stressors have an impact on the higher parts of the central nervous system. As a result of these influences arise impulsion of the sympathetic nervous system; the secreted hormones and neurotransmitters are segregated, and over the hypothalamus they are influencing the hormonal activity of the pituitary gland. As a result a complex of adaptive body reactions appears.

The frequency and regularity of breathing increases, inspiratory phase is shortened relatively to expiration, heart rate increases and arrhythmia almost disappears, blood pressure is
raised, metabolism and energy are accelerated, the amplitude of the EMG increases and force of contraction of skeletal muscles becomes higher, the severity of EEG in the rhythm of rest (alpha-rhythm) is reduced; manifestation of rhythms voltage (theta)and activation (beta rhythm) are raised; attention is concentrated. All these reactions provide a high capacity.

It should be noted that the excessive mental and nervous pressure develops distress and may cause various negative reactions:

- deterioration of blood supply to certain parts of the brain;
- slowing of the heart rate;
- decrease of blood pressure;
- Increase of time of motor responses and decrease in motor activity.

The derivation of sports injuries of athletes directly depends on the multiple stresses through which undergo the competitors.

Mental and nervous pressure can occur in different people in various stress reactions.

Emotional stress is expressed in athletes stronger when the goal achievement (their necessity) is more important for them; and less information, energy and time they have available. The elements of novelty and uncertainty increase the tension in the athletes’ body.

In more experienced and self-confident athletes, having strong and balanced nervous processes, the state of mental and nervous pressure is less expressed. They Stage 1 goes faster in their bodies. Oppositely, in less-trained athletes, with a weak or unbalanced nervous system, 1st and 3rd stages are more expressed and 2nd stage is expressed less.

The athlete’ body tries to maintain constancy (homeostasis) of its inner body, consistency levels of functioning of their systems. When new conditions arise, there is a chain of different transformation restructuring, aimed at restoring the old equilibrium. The new conditions of existence cannot be determined solely by physical stimuli, but also by the psychological reasons, in particular – the particularities of motivation.

Mental aspects of sport are the most powerful stressors. We should especially mention mental adaptation in sport, meaning rather intellectual and emotional processes, than physiological. As result, the terms as "mental stress", "emotional distress", "mental stressors" are being used more and more. However, it must be said about the uniqueness of practical and individual experience of each athlete. In sports activities an athlete, depending on his individual characteristics, meets with more or less complex stressors and reacts on them in individual, complex but coherent and unified way.

The structure of the adaptive stress response is quite complex and involves many mechanisms of life support. The mental stress is often accompanied by changes in muscle tone, tremors, and impaired coordination. Stress is the emotional and mental pressure that affects the adaptation and productivity of actions performed, the activity of the personality and attitude toward yourself, others and towards the social environment [3].

Competitions are the biggest stressor for an athlete. “Situation of achievement” is very important in this case, and it is characterized by the presence of tasks, accomplishment of which guarantees a reword or a punishment.

A lot of practical research was carried out, based on which we can concluded that the level of stress resistance is higher in highly skilled athletes. This is due to a high level of their mental preparation. Low-skilled athletes tend to inability to regulate their psychological impulses. Before important competitions, an athlete is being in a state of emotional stress, and it is more likely for him to "break" or at least to show the results below his potential. At this stage, an athlete is in the position of the breaking excitation. In such a state, a mental stress can occur due to a minor irritant. Therefore, high-class athletes are more emotionally stable and physically tough; they confront better the stressful situations. High-class athletes are characterized by the following qualities: increased stamina, emotional stability, better ability for self-regulation and self-control.

While studying the individual reactions of athletes to the stressful situations we should
consider not only the psychological complexes, included in organization of devices and affecting the entire complex of biological mechanisms, but also baseline psychological characteristics of the current individual, which serve the background for the process of adaptation, and that influence this process. In this regard, the study of mental stress in sport has a direct connection to the study of the individual characteristics of the athlete’s personality.

- Increased level of reactive anxiety;
- Reduction of the level of concentration;
- A sense of panic;
- Dizziness;
- A sense of fatigue.

2) Monotony of activities. The search for the new information, new ways of solving movement and tactical tasks is being the source of positive emotions for an athlete, as for everybody else. During a long-term performance of repetitive motor acts (e.g., in cyclic operation of middle capacity) the flow of information is greatly reduced, which causes boredom, loss of interest for training, reduced functionality.

Monotony – a condition that is manifested in the monotonous performance of work and combined with a large number of simple stereotyped movements.

This work provokes in a person a number of negative body states, which is necessary to be prevented:

- state of reduced mental activity;
- sense of apathy, fatigue, sleepiness;
- reduction of heart rate and breathing;
- decrease in the amplitude of the EMG of active muscles;
- decrease of working capacity.

Addiction is one of the mechanisms of appearance of the state of monotony. When the same stimulus is repeated many times, the attention to it is weakened, the reaction is decreased, meaning its novelty is being lost. In the process of automation of simple motor skills, the emotional stress progressively decreases. This activates non-specific brake divisions of the brain stem, which, in the absence of tonic sensory inflow to the brain from the environment, cause deceleration of higher brain activity.

In a monotonous activity, the role of the left and right hemispheres in motor control is changed. Right-handers athletes have the decreased activity of the dominant left hemisphere of the brain and the increased role of the right non-leading hemisphere. This allows one to continue work, but makes it less effective. Each person reacts differently to monotonous work. In order for the body to effectively resist to monotony, the athlete needs to have the necessary innate properties of the nervous system. This is a main factor needed for successfully overcoming of this process [1].

In these conditions, phlegmatic athletes – people with strong and balanced nervous processes and their low mobility – show a better performance. Surveys of highly skilled skiers – runners, distance runners, cyclists road racers showed that phlegmatic constitute the majority of athletes in these sports. Personality characteristics of athletes are also of big importance. Introverts are easier to cope with monotonous activities than extroverts are. To combat the monotony speed varying of athletes’ movement, different segments of distances are used; competitive situations are being created, etc.[2]

**Conclusion.** Sports activities have a strong and significant influence on the athlete’s body. However, the tendency can be identified, according to which the level of stress is higher in highly skilled athletes with a higher level of mental preparation. The athlete with a considerable psychological stability can withstand a lot of stress for a long time. As it was noted in the article itself, the nervous system is the one that is mostly effected, and leads to the depletion of the whole body. In order to be at the limit of its capacity and to continuously achieve high results, constant work is needed to maintain physical fitness, as well as daily loads that are rea-
reasonably uniformed and monotonous, because in every sport one needs to develop certain skills, which will contribute to the result’ achievement. Knowledge of the individual characteristics of athletes from the point of view of their endurance and exposure to mental stress is of great importance in the individualization process of preparing for the start of important competitions.

Effective stress resistance is provided by the rational use of the available resources of the individual and is assessed in terms of effectiveness of spent energy and resources, achievement of the goal of combating stress and renovation of functional status, personal development in a way of raising capacity and self-esteem.

REFERENCES
1. Isaev, A.P. and Ehrlich, V.V. (2004), Multifunctional mobility and variability of athletes of Olympic reserve. Mechanisms for effective adaptation to stress in the sport of high and highest achievements, Publishing House of the South Ural State University, Chelyabinsk.

Contact information: dr.roes20 @ yahoo.com

Статья поступила в редакцию 05.08.2013.