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WORK ABILITY AND INFLUENCER FACTORS (IN THE EXAMPLE OF ATHLETES)

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Abstract: Working capacity refers to the state of the organism, its level of health, vitality, competence, fitness, resistance to external environmental factors, the level of endurance, the ability of organisms to develop skills in adverse conditions, the state of the organism's response to stress factors, and many other similar conditions. Athletes have higher physical performance than other groups of the population. Of course, this does not mean that they have lower mental performance, on the contrary, logically speaking, an individual with high physical performance will also have higher mental performance. The performance of athletes is expressed by the following concepts:
• readiness,
• state of readiness,
• training (Zatsiorsky B. M., 1980).
It is emphasized that the athlete's performance is understood as "a specific state accompanied by morphological and functional changes in the body as a result of training" (Encyclopedic Dictionary of Physical Culture and Sports. - M.: Fis, 1962, vol. I-III). To determine the performance of athletes and the level of training, they are mainly examined by a doctor. In this case, almost all indicators in the body are determined and a comprehensive conclusion is drawn from them. This represents the functional activity of the body. It is also emphasized that performance is understood as the work, function of a certain organ or system in the body, directed towards some activity.
Key words: Athlete, working capacity, organism, organ, stress, tension, quality indicators, norm, vegetative indicators, morphological.
Introduction. The performance of athletes is also expressed in terms of maximum activity at high intensity. That is, it is measured by the sum of the quantitative and qualitative indicators of the work performed. For example, wrestling and cycling, or swimming and equestrian sports, tennis and football, track and field athletics and weightlifting, or other sports differ significantly from each other. Accordingly, the level of impact that each sport has on the body is also inherently strong or weak. This causes different indicators in the body in people involved in different sports.
As we know, it is the indicators in the body that determine the body's working capacity. So, a change in the indicators of one or another organ or system in the body is accompanied by a change in their working capacity. More precisely, with a change in the indicators of organs or systems, the athlete's working capacity also increases or decreases. Usually, if sports exercises are performed correctly, in moderation, and on time, the athlete's working capacity should also increase. However, as a result of certain influences, it is also possible to observe a decrease in the working capacity of athletes.

Analysis and results. As mentioned, each sport has its own unique effect on the body. In sports that require more intense training, the physiological and morphological indicators of the body change accordingly. For example, in wrestlers, the heart rate is expected to be 150-180

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beats per minute, while in volleyball players or swimmers this indicator is relatively lower. This means that different types of sports cause different changes in their bodies.

In sports that require more static exercises (for example, jumping on the bar, performing exercises on the horizontal bar or lifting weights), completely opposite processes are observed. That is, the vegetative indicators in their body increase not during the exercise, but after it. This also has a corresponding effect on the body. In sports that involve running, that is, performing dynamic exercises, the work of the cardiovascular or respiratory system changes differently, unlike heavy exercises. All of these are indicators that increase the performance of athletes in a unique way. Physical exercises should always be performed when there is no heavy load on the body, when the body is ready for physical exercises. Otherwise, sports exercises will have a negative effect on the work of organs and systems, and instead of increasing their performance, they will have a negative effect on them. At the same time, if there are symptoms of a disease in the body or pathological changes are observed in any organ, the body's performance will decrease.

The body's ability to work is also affected by the duration and frequency of physical exercises performed on time and in a certain order. Physical exercises must be performed at the required intervals, i.e. every other day or every day or once every three days, i.e. in a certain order. Otherwise, the body will not be able to show sufficient activity and its ability to work will decrease sharply. The strength of the body and its functional capabilities in athletes depend on the correct execution of exercises.

In addition to the above, the performance of athletes also depends on other factors. The high performance of athletes is determined not only by the level of training of the body, but also by the physiological and biochemical properties of the body. Accordingly, a number of reserves are distinguished in the body. The human body has morphological, biochemical and physiological reserves. Morphological reserve refers to the tissues that make up the body and organs. Biochemical reserve usually refers to the chemical substances in the body, their quantitative and qualitative indicators in the body, for example, the activity of enzymes or the activity of substance and energy metabolism. Physiological reserve refers to the functional capabilities of organs and systems in the body.

The more reserves the body has, the better its adaptation to any conditions, its response to stress factors, and other indicators. This means that the athlete's working capacity will also be at a high level. For example, the resistance and flexibility of an organism that does not engage in physical exercise to external influences and adverse factors is much lower than the ability of athletes to adapt to similar conditions, or rather, the working capacity of athletes is higher than that of others. The fact is that continuous physical exercise dramatically increases the physiological reserves of the body. In this case, the working activity, activity, that is, working capacity of almost all organs increases.

The most important factor affecting the body's ability to work is the level of training. The higher the level of training of an organism, the higher its ability to work. As a result of training, the functional capabilities of the organism increase, and the work of internal organs in the athlete's body is intensified during training. As a result of regular training, the physiological reserves and functional capabilities of the cardiovascular, respiratory, musculoskeletal and a number of other systems increase.

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The more you exercise, the less energy and effort your body expends during subsequent workouts. This is because the respiratory system adapts to the effects of exercise, muscles thicken, and the systolic and minute volumes of the heart increase in volume rather than frequency. That is, not the number of heart beats per minute, but the amount of blood ejected by the heart with each beat increases (which also increases the minute volume). The number of formed elements in the blood, in particular. erythrocytes, increases, which leads to a greater supply of oxygen and carbon dioxide to tissues and cells. Blood pressure also changes from normal, hypertrophy of the heart is observed (working hypertrophy). Energy processes in the body also change. As a result, a number of biochemical changes occur, which improves the energy supply of the muscles.

As is known from the literature, the working capacity of athletes, and indeed, of the population groups engaged in physical activity or any physical labor in general, is closely related to active rest. The more a person is able to actively rest after performing physical work, the more his working capacity increases. On the contrary, physical activity performed without rest, chaotically and haphazardly, without following certain biorhythms, does not increase, but rather decreases the body's working capacity. Similarly, athletes must also organize their rest appropriately. In particular, it is very important to organize rest during competitions and during preparation for competitions, due to the large amount of physical exertion performed.

The most important tool for increasing the performance of athletes, the factor that affects one or another level of performance, is undoubtedly nutrition. Nutrition is one of the most important vital processes in the body, which has a significant impact on the state of the entire organism, the biochemical and physiological properties of each of its organs and systems, the functional capabilities of the organism, including the performance of the organism, namely athletes.

The performance of athletes in each sport is determined using appropriate methods based on the sport. The Harvard stop test and the PWCi 70 test are used to determine the physical performance of athletes under the influence of various exercises.

In the Harvard stop test, the subject is tested on a 51 cm (20 in) stair for men and 43 cm (17 in) stair for women, taking 120 steps per minute until fatigue sets in. The duration of the work should not exceed 5 minutes. The duration of this work and the recovery period are the heart rate in the first half of 2 minutes. The work capacity index is measured by the following formula:

Duration of work=(s) × 100 IQI÷5 × pulse count

Here, ***IQI*** is the performance index. If the ***IQI*** is
- less than 55, the performance ability is very low,
- if it is between 56 and 64, then the performance ability is low,
- if it is 65-79, then the average,
- if it is 80-90, then the performance ability is high, and
- if it is more than 90, then the performance ability is very high.

The second method, as mentioned above, is the PWC170 (physical Working Capacity) test. In this test, the ability to perform physical work is measured by a person's physical ability to perform work, that is, the power to do work, based on a bicycle ergometer or climbing stairs with a precisely measured load. The following formula is used:

M = B × h × n × 1,5

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Here, ***M*** is the working capacity, ***B*** is the mass of the subject, ***h*** is the height of the stairs, ***n*** is the number of steps per minute. This test determines the working capacity when the heart beats 170 times. The higher the working capacity, that is, the higher the PWC170 indicator, the higher the ability to perform physical work.

Conclusion. In general, nutrition is a key factor in increasing the performance of athletes and their (as well as other population groups). Therefore, organizing a rational diet for athletes and their athletes is one of the current issues.

List of used literature:

1. Sh. Gurbanov, S. Amirkulov, A. Gurbanov "Nutrition of athletes", Karshi, 1999.
2. Shaniyoz Kurbanov "Eating culture", Tashkent, 2005.
3. Ellen Coleman. Pitanie dlya vynoslivosti. Murmansk: Izdatelstvo Tuloma, 2005.
4. Maggie Greenwood-Robinson. Sportivnoe pitanie pobediteley. 4th quest.
5. O.O. Borisova. Training of sportsmen: practical experience and practical recommendations. Ucheb.-metod.posobie/M.:Sovetsky sport, 2007.