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BASICS OF DEVELOPING THE QUALITY OF ENDURANCE IN CADETS

Abdullaev Zokhidjan Zokirjanovich

Institute of Advanced Training of the Ministry of Internal Affairs of the Republic of Uzbekistan teacher of the cycle of Combat and physical training

e-mail: akrom.mir1988@gmail.com

Annotation: *Endurance is the quality of the human body to overcome the impending fatigue. Distinguish between physical, emotional, emotional and mental fatigue. In physical education, all types of fatigue are in different proportions, but physical fatigue is most important. Therefore, the whole technique described below is associated with the development of physical endurance.*

Keywords: *endurance, physical qualities, motor, fatigue, muscle, physical education, general and special endurance, energy, ATF.*

Endurance is rightfully considered one of the most important motor qualities of a person. It largely determines the health of a person, his general physical indicators and is the main basis for the effective development of all other motor qualities. Therefore, in the system of internal physical education, great attention is paid to increasing endurance in all its joints.

Any human activity, if it is engaged in it for a long time, inevitably leads to a temporary decrease in the quality of work, i.e. to exhaustion.

It is customary to distinguish between two types of durability - general and special. General endurance is the quality of the human body experiencing fatigue when performing physical labor of moderate intensity for a long time with the performance of most of the muscles (for example, skiing, swimming, rowing).

Special endurance is the quality of the body experiencing fatigue when performing certain types of work. There are many types of special durability. For

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example, the following special types of endurance form a combination of endurance with other physical qualities: strength endurance, speed endurance, coordination endurance, etc.

On the basis of the mechanism of energy supply of work, all types of special durability can be divided into three types of its manifestation: 1. Anaerobic-aerobic mode of work (endurance). A characteristic manifestation of this endurance is long-distance running, swimming 800, 1500 m; ice skating 5 and 10 km, etc. 2. Anaerobic-glycolytic mode of energy (MIT - track endurance) - 400, 800, 1500 m running and similar distances in other forms. 3. Anaerobic-alactate mode (sprint endurance) - short-term sprint distances such as running 60, 100, 200 m. In energy supply mechanisms, with the exception of certain cases of similarity in working parts of the body and muscle groups, direct transmission between different types of special endurance does not occur.

Factors affecting the manifestation of physical endurance:

1. Features such as the activity of the central nervous system, in particular, the balance of nervous processes (excitability and orientation to activity). The central nervous system controls the functioning and coordination of all body systems that ensure muscle function. This is, first of all, the functioning of the cardiovascular, respiratory and muscular systems. In addition, the central nervous system regulates the supply of oxygen to the muscles and the release of carbon dioxide from the body, participates in the work of the mechanism for providing energy for the work performed.

2. Aerobic and anaerobic performance of the body. It is known that the direct source of energy is the breakdown of energy-rich ATF (adenosine triphosphoric acid). In body cells, the content of ATF is relatively small, but constant. Therefore, during work, the ATF split should be immediately replenished, restored, otherwise the muscles will not be able to contract. ATF is recovered by chemical reactions involving oxygen (aerobic reactions), or by cleaving creatine phosphate or breaking down glycogen into lactic acid (anaerobic reactions).

The total aerobic capacity of the body is MKS (maximum oxygen consumption) of 5-6 l/min in highly qualified athletes. Additional indicators such as maximum lung ventilation (MVL), oxygen capacity of the blood, minute blood count, AK criterion (anaerobic indicator), etc.are used for full characterization.

The anaerobic productivity of an organism is determined by the value of the maximum oxygen debt. Naturally, the more oxygen debts, the higher the anaerobic quality of a person.

The universal criterion for the level of endurance of both types is the time when it is performed without reducing the intensity of physical labor. This indicator can assess the endurance of sprinter and steer, boxer and shooter, etc.

Through the development of general endurance, it is assumed to achieve the following goals:

1. Contributing to the increase in the maximum amount of oxygen consumption as the main factor in aerobic work.

2. Develop the quality of long-term work in conditions of maximum oxygen consumption.

3. Increase the speed of coordinated work of the cardiovascular, respiratory and muscular systems of the body.

In the development of general durability, the following tools are used. Various cyclic and acyclic physical exercises that are performed for a long time mainly in the aerobic mode of energy supply and ensure active participation in the work of large muscle groups. These include swimming, rowing, skiing, cross-country skiing and other similar exercises. Additional tools for the development of durability can also include environmental factors such as: saunas, the use of bathrooms, pressure chambers, etc. Under these conditions, the adaptation of the body increases its resistance to hypoxia and thus has a positive effect on endurance.

An important requirement for the methods used in the development of endurance is to find the optimal combination of duration and intensity of the load. Combined and variable methods are key in improving overall durability. At the

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same time, it is recommended to gradually increase the duration of the load, thereby constantly making high requirements for establishing consistency in the operation of the working systems of the body. At an early stage in the development of endurance, the intensity is maintained at a low level. After a while, it gradually begins to grow and is maintained at the level of the so-called "critical speed", in which aerobic qualities, when fully mobilized, satisfy the need for oxygen during Operation.

Naturally, oxygen debts are not formed, since an increase in the load-bearing intensity is accompanied by a slight decrease in working time. For healthy practitioners, the optimal intensity for practitioners who have prepared a state of developing intensity so that the heart rate is at least 120 - 130 beats per minute, is in the range of 140-170 beats per minute. In this case, the highest systolic blood volume is achieved, the heart muscle and the walls of blood vessels are strengthened.

The duration of the load at the above intensity has a fairly wide range of individual fluctuations, which depend on the degree of readiness of people. However, it has been found that working for less than 4-5 minutes is ineffective, since breathing processes do not have time to open, and the oxygen transport system (heart, blood vessels, breathing) must be brought to the maximum level of oxygen consumption.

In general physical education training, there is no need to significantly increase endurance at all, only 15-20 minutes of working time are enough. With an increase in the functional capabilities of the body, if this is associated with sports, the constant working time can be gradually increased to 30-40 minutes. With such a duration of work in conditions of" real stable state", a balanced functioning of the cardiovascular, respiratory and muscular systems and an improvement in the mechanisms of energy supply are ensured.

As mentioned above, constant exercise methods are fundamental for beginners and important for well-trained athletes. They are able to create and

improve the basis of overall durability. In addition, they allow you to correctly dose the individual load and serve well for health in general.

The intermediate method of increasing overall endurance is mainly used in sports training. This is a sufficiently effective way to improve it by performing anaerobic work.

The idea behind this method is as follows. Anaerobic work is in the form of high intensity, but short-term repetitions are divided into small intervals of rest. The anaerobic decay product stimulates respiratory processes at rest. Therefore, during the first one and a half minutes of rest after exercise, oxygen consumption increases, and the amount of systolic blood also increases. If the next load is carried out at a time when these indicators are high enough, then from repeated to repeated, oxygen consumption gradually increases.

The approximate parameters of the intermediate method used to increase aerobic performance are as follows:

1. The intensity of the work should be high enough, approximately 75-85% of the maximum distance. In the heart rate, this repetition means 160-170 beats per minute by the end.

Modification by height change of the intermediate method:

1. It is necessary to change the intensity and speed of work, The Force is 75-85% of the maximum distance. In the heartbeat, this repetition approaches the end, means 160-170 beats.

2. Rest times last so long that the heart rate does not drop below 120-130 beats / minute by the end of the rest, which means it is about 3-4 minutes.

3. The nature of the rest should be active. The stop is complemented by low-intensity motor activity, which simultaneously accelerates the recovery of the body and ensures its reproduction.

4. The number of repetitions depends on the quality of work of a person in conditions of significant fatigue. In any case, it is necessary to start 3-4 repetitions in one session, and gradually repeat 10 or more repetitions.

The considered intermittent method for the development of general endurance, carried out in an anaerobic-aerobic mode, is also used to develop special endurance to a stationary type.

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