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THE IMPORTANCE OF NUTRITION AT THE STAGE OF BODY WEIGHT CORRECTION IN SPORTS

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ABSTRACT

Correction of body weight is one of the significant factors on the way for athletes to achieve the much-desired success and victories. An individual approach to nutrition, correct water balance, additional administration of vitamins and microelements can make the process of body weight correction safer and more harmonious.

KEYWORDS

Sports nutrition, weight management, body composition, performance enhancement, athlete health, dietary interventions, nutritional strategies.

INTRODUCTION

The most important condition for achieving sports success and maintaining health is properly organized, rational, nutritious nutrition. It must fully satisfy the athlete's needs for energy, nutrients, biologically active components and microelements. The most important condition for achieving sports success and maintaining health is proper and rational nutrition [3].

Adaptation to systematic physical activity takes place in several stages, and at each stage, at each stage, the features of adaptation processes are not the same, in particular at the stage of body weight correction. Modern knowledge of biochemical and physiological processes makes it possible to make the processes of body weight correction safe, and to carry out this

process without noticeable losses in athletic performance.

Nutrition is an integral and basic life-sustaining part of life. Many nutrition strategies have been developed, but the main criterion for all is the general principles of healthy eating. Sports nutrition stands out separately. For elite sports, that is, for professional sports, an appropriate level of health is the basis for the athlete's reliability [4].

A certain problem lies in the existence of generally accepted nutritional standards and recommendations, which, without taking into account the individual characteristics of the athlete, the stage of his sports training, the given volume and intensity of the training process, set theoretical norms for the consumption of energy and nutrients.

In sports, weight is a significant factor that largely determines performance, especially in wrestling [8,9]. Regulating weight to enter the boundaries of a weight category is a labor-intensive, complex process, where all athletes are looking for the most optimal option, but everyone reduces weight in their own way. There are as many weight cutting methods as there are wrestlers who cut weight (O.P. Yushkov, V.I. Shpanov, 2000). As a result, all this can cause athletes to acquire various negative and sometimes pathological conditions. An assessment of the health status of children and adolescents involved in sports showed that 24.2% of all

examined young athletes were considered practically healthy, 57.6% had functional abnormalities (health group II), and 18 had chronic pathology in a compensated form. 2% of adolescent boys [2]. A diet inadequate for energy expenditure by athletes during long-term and high-intensity physical activity can be the cause of many negative conditions, primarily associated with the depletion of the body's reserve capabilities and incomplete recovery after exercise (Olenik S.A., 2008; Mokeeva E.G., 2009). In practice, athletes are faced with the problem of a discrepancy between the received energy and the complex of vitamins and microelements and real energy consumption. Noteworthy is the significant spread of morphofunctional disorders of the body of athletes, which is probably due to the specifics of sports specialization and the organization of the training process, insufficient medical supervision during the selection and in the process sports, irregular diet and diet.

An individual approach to nutrition makes it possible to organize an individual way of nutrient-metabolic support for the body of athletes using nutrition at various stages of competitive activity through the correction of metabolic processes aimed at: providing energy by burning carbohydrates, increasing the efficiency of strength characteristics, vigor and overall tone of the nervous system , stimulation of immunity, which consists in the nonspecific resistance of the

body, correction of electrolyte metabolism aimed at restoring the loss of electrolytes through sweat, providing the body with vitamins and microelements during periods of stress, which promotes adaptation, rapid recovery and normalization of metabolism, building muscle mass, increasing endurance and strength by improving amino acid supply, intensifying fat metabolism (increasing the efficiency of lipid catabolism in the processes of energy production), absorption and digestion functions of the gastrointestinal tract, ensuring the strength of capillaries, the elasticity of the venous wall and the condition of blood vessels. The chosen form and diet is important, which implies not only the specific characteristics of the needs in the sport, but also the phase of the sports cycle: the basic, pre-competitive, competitive or recovery period (Ugolev A.M., 1986; Rogozkin V.A., 1989; Makarova S. G., Borovik T. E., Chumbadze T. R. et al., 2010; I. T. Makarova S. G. Polyakov S. D. et al., 2015). Nutrition also plays a role in determining body weight, which allows an athlete to occupy a certain weight category.

Typically, the most intense cutting occurs in the final days or day before the official weigh-in, with junior or bantamweight wrestlers losing the largest percentage of weight. Weight loss is repeated many times, since participation in competitions ranges from 15 to 30 times a year. For wrestlers in the weight category up to 95 kg, the fat content is 1.6–15.1% of body weight (this

is on average about 8%). Weight loss is achieved by limiting the amount of food and liquid consumed, as well as by sweating during heat or physical exertion. Studies have shown that during the cutting process, not only water is lost, but also fats and proteins. As a result of a combination of various procedures during weight loss, the following changes can be observed: muscle strength decreases, the time of maintaining high performance is reduced, blood and plasma volume decreases, cardiac function deteriorates with submaximal relative power; This is associated with an increase in heart rate, a decrease in stroke and minute volumes of blood, a decrease in oxygen consumption - especially with strict diets, a decrease in glycogen reserves in the liver, thermoregulation processes are disrupted as a result of lack of energy, etc.

A gradual reduction in body weight has the advantage that with this approach, changes in metabolic processes are expressed to a much lesser extent and, therefore, there are fewer restrictions on the dosage of physical activity. Water balance is of utmost importance. Normally, its content in an adult is 60–70% of body weight. The daily water requirement of a person with a body weight of 70 kg is 2.5 liters, of which 1.2 liters are for drinking water, 1 liter for food, and 0.3 liters for the oxidation of fats, proteins and carbohydrates. The same amount (2.5 l) of water is excreted per day: 1.5 l of urine, 0.5 l of sweat, 0.4 l of inhaled air [6]. Water consumption should be

consistent and thoughtful. Experts recommend drinking 500 ml of water a few hours before training and another 200 ml at the beginning of training. If training is carried out in the summer or in a damp room, the amount of fluid consumed should be increased by 30%. During training, you should drink 200 ml of liquid every half hour. You need to drink water in small sips [5]. After training, you need to drink about 0.5 liters of water within two hours. This will help reduce fluid deficiency that occurs during exercise. You should drink water at a comfortable temperature to prevent the development of inflammatory diseases of the upper respiratory tract. Even when training in high temperatures and wanting to quench your thirst with cold water, you should refrain from drinking drinks with a temperature below 12°C. Also, do not drink large volumes of water at once. This increases the load on the kidneys. It is also worth drinking water before meals, especially during weight loss. The body often perceives thirst as a feeling of hunger. Drinking liquid 20-30 minutes before meals reduces the feeling of hunger and also prepares the gastrointestinal tract for the digestion process. The average daily fluid intake for women who regularly exercise is 2.7 liters, and for men 3.5 liters. However, it is worth focusing on subjective sensations. Don't force yourself to drink water against your will. Daily water consumption can also be found using the formula of dividing body weight by 30. It is not recommended to drink sweet carbonated drinks or packaged juices, as they contain a high sugar content.

You should also avoid energy drinks and coffee to avoid unnecessary energy loss and disruption of circadian rhythms.

With any method of weight loss, the athlete's body experiences dehydration to varying degrees. Dehydration will lead not only to swelling, but also to weakness and loss of strength, which should not be allowed; cutting training should be very intense. Long-term (for 10 days) and gradual restriction of the water and food diet has the least negative effect on the body. This method of regulating body weight ensures the greatest weight loss. The most favorable ratio of losses of individual body components is created: less water (at the corresponding percentages of weight loss) and more fat. There is a weaker effect of this method on hematological parameters and maximum heart rate. The effectiveness of weight loss depends not only on the course of physiological processes, but also to a large extent on the influence of psychological factors that influence not only the functional state of the body and the course of metabolic processes, but also the success of performing sports activities [7].

Since the functional state of the athlete – the “beater” – affects the psyche, a complex of interdependent physiological and psychological processes is created, to correct which the coach needs to know how the process of weight loss affects the athlete's psyche. A slight voluntary decrease in body weight (within 1.0–1.5 kg) has a beneficial effect on the athlete's mood and

well-being and improves mental performance. Excessive (especially forced) weight loss has a negative effect on the psyche: lethargy, headache, and insomnia may occur. Some people experience increased irritability; others, on the contrary, are characterized by a depressed state of mind, passivity, apathy, a state of anxiety, and restlessness. There is a reluctance to perform loads of large volume and intensity, the motivation to achieve victory decreases, volitional qualities deteriorate, etc. With artificial dehydration of the body, muscle strength decreases and speed qualities decrease. Weight loss also has a detrimental effect on the nervous system.

The process of weight loss requires constant overcoming of a number of objective and subjective difficulties, therefore it has a pronounced volitional orientation and is characterized by an internal orientation towards the constant use of volitional efforts and self-influences.

In order to reduce the risk of injury while maintaining entertainment, weight categories were introduced in judo: 7 for men and 7 for women. To get into a certain weight category and maintain weight, athletes have to resort to weight loss, and everyone uses different methods. One of the most difficult problems in the training system in combat sports is the control and regulation of athletes' weight, since this indicator largely determines the success of their performance [1,10].

In the last decade, the means and methods of reducing body weight among athletes in martial arts have been widely presented in the scientific literature, however, in practice, due to the lack of knowledge about weight correction, athletes use a forced method in the process of preparing for competitions, when the required weight is reduced on the eve of the competition or several days before. days before it, which leads to dehydration of the body and is accompanied by a number of changes in metabolic processes, and also leads to the development of acidosis. This negatively affects the physical condition of even adult, experienced athletes, and for adolescents it is even fraught with loss of health, not to mention athletic performance [3].

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