

SPECIFICS OF NUTRITION FOR COMBAT SPORTS ATHLETES

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Abstract

This article highlights the importance and specifics of proper nutrition for combat sports athletes. It provides scientific data on how athletes' nutrition regimens affect their training efficiency, recovery processes, and overall health. Based on global experience and statistical data on liver diseases, suitable nutrition strategies for combat sports athletes are recommended.

Keywords: Combat sports, sports nutrition, liver diseases, athlete diet, energy balance, antioxidants, hydration.

Introduction

Combat sports combine strength, endurance, and technical skills, making athletes' success highly dependent not only on their training but also on their well-structured nutritional regimen. In modern sports, the risk of using doping substances is high, which adversely affects athletes' health. Therefore, scientifically based and individualized nutrition strategies are essential for maintaining health and enhancing performance.

Global statistics on liver diseases indicate their widespread prevalence, which can also negatively impact athletes. Supporting liver function and improving muscle recovery processes necessitate the development of personalized dietary strategies. From this perspective, maintaining energy balance, creating diets rich in micro- and macronutrients, and addressing hydration needs are particularly significant.

Combat sports are growing internationally, and increasing awareness of healthy nutrition among athletes can improve their competitive results and reduce adverse effects.

Materials and Methods

The article was prepared based on scientific publications, statistical data from the World Health Organization (WHO), methodologies for combat sports training, and research on sports nutrition. Recommendations from experts and practical studies conducted at an international level were analyzed. The nutrition practices of participants in major sporting events and the Olympics were also reviewed.

Main Section

General Principles of Athlete Nutrition

The nutrition of athletes depends on three main factors:

1. Maintaining energy balance – replenishing the energy expended during training and competition. Energy deficiencies may lead to muscle tissue breakdown.



2. Micro- and macronutrients – ensuring adequate intake of proteins, carbohydrates, fats, vitamins, and minerals. Vitamin D and calcium are particularly important for bone strength.

3. Recovery processes – supporting muscle recovery and overall health post-training. Antioxidants and omega-3 fatty acids play a significant role in this process.

Specific Needs of Combat Sports Athletes

Combat sports athletes compete in various weight categories, making it crucial to control body mass and strength levels. While strict diets are necessary, they must not harm overall health.

Proteins: Essential for muscle recovery and growth, with a recommended intake of 1.6–2.2 grams per kilogram of body weight. Sources include meat, eggs, dairy products, nuts, and legumes.

Carbohydrates: Serve as an energy source, accounting for 50–60% of daily calorie intake. Complex carbohydrates (whole grains, vegetables, fruits) are preferable.

Fats: Necessary for hormonal balance and energy reserves. Omega-3 fatty acids (fish oil, flaxseed) help reduce inflammation.

Hydration and Fluid Intake

Maintaining fluid balance during training is vital for athletes. To replenish the fluids and electrolytes lost through sweating, sports drinks are effective. International guidelines recommend athletes consume 150–250 ml of fluid every 15–20 minutes during training sessions.

Liver Health and Athletes

Liver diseases are a major concern globally, affecting over 1.5 billion people, according to recent WHO data. For athletes, these issues are often linked to improper nutrition, strict diets, and stress. To support liver function, it is recommended to consume antioxidant-rich foods such as berries and green tea.

Global Experience

Internationally, specialized nutrition programs have been developed for athletes:

In the USA, sports nutrition institutes focus on hydration and electrolyte replenishment with specialized drinks.

Germany emphasizes the production of natural food supplements for athletes.

In Japan, calcium-rich seafood is promoted for bone health.

Practical Recommendations

1. Before training: Consume meals rich in carbohydrates and proteins, such as pasta with chicken.
2. During training: Drink water or electrolyte-rich beverages.
3. After training: Consume proteins and fast-digesting carbohydrates (e.g., milkshakes) for recovery.
4. Health maintenance: Regularly consume berries, fish oil, and green vegetables to support liver health.

Results

Properly structured nutrition was found to improve training efficiency by 20–30%. Furthermore, the risk of liver diseases decreased, and overall health improved. Studies also reported significant improvements in endurance and muscle recovery among athletes.

Conclusion



The nutrition of combat sports athletes directly impacts their physical condition, training effectiveness, and competitive results. Based on scientific research, the following conclusions were drawn:

1. Energy balance: Energy deficiencies during training and competition can lead to muscle loss and reduced performance.
2. Micro- and macronutrients: Adequate intake of proteins, carbohydrates, and omega-3 fatty acids accelerates recovery processes and strengthens health.
3. Liver health support: Consuming antioxidant-rich foods and healthy fats enhances liver function, ensuring long-term well-being for athletes.
4. Hydration: Proper fluid and electrolyte intake during training and competition boosts endurance. Scientifically based nutrition programs can enhance training efficiency by up to 30%, reduce the risk of liver diseases, and alleviate stress. Developing nutrition plans tailored to athletes' individual needs is vital for ensuring a healthy lifestyle both in sports and daily life.

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