

## ANALYSIS OF THE ACTUAL NUTRITION OF HIGHLY QUALIFIED JUDO ATHLETES OF UZBEKISTAN

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**Abstract:** Rational diet is a major factor affecting the training process and sport success. The aim of the study was to assess the energy value and the intakes of nutrients, minerals, vitamins, dietary fibre and water in daily food rations including and excluding supplements among high-rank male judo athletes.

**Keywords:** nutrigenetic testing, genetic analysis, genetic variations.

**Introduction.** Currently, one of their popular directions is the development of ways to individualize the diet of athletes based on genetic analysis data. Among the genetic factors that can influence the correct choice of diet and intensity of physical activity, nucleotide polymorphisms of the FABP2, PPARG, ADRB2 and ADRB3 genes are most often analyzed. These genes, or rather their genetic variability, significantly affect how quickly and efficiently the nutrients coming from food are absorbed. These genetic variations (polymorphisms) are not pathogenic mutations, they are quite widespread, but having information about their presence or absence, you can more accurately assess the individual characteristics of your body.

**Goal.** To analyze the actual nutrition of judo athletes and assess the compliance of the food menu with the indicators of nutrigenetic testing of judo athletes.

**Materials and methods.** 14 highly qualified athletes specializing in martial arts (judo) of male (78.5%) and female (21.5%) gender, average age  $25.4 \pm 2.37$  were examined. The actual nutrition was evaluated by analyzing the finished weekly menu according to the indicators of BZHU, the energy value of the diet and its balance. The data of the genetic analysis of each athlete was carried out by the method of nutrigenetic testing using PCR kits of the NPF "Litech", the "Metabolism" panel of nucleotide polymorphisms of the FABP2, PPARG, ADRB2 and ADRB3 genes. Results. The analysis of the actual nutrition (menu-layout of the weekly diet of the Judo Sports Federation) for proteins, fats and carbohydrates is equal to the ratio of 25%:20%:55% of the total caloric content. Based on the obtained laboratory data of nutrigenetic testing, each athlete received the recommended diet: balanced - carbohydrates 55%, proteins 20%, fats 25%, low-fat - carbohydrates 65%, proteins 15%, fats 20% and low-carbohydrate - carbohydrates 55%, proteins 20%, fats 25%.

**Conclusions.** Based on the conducted nutrigenetic tests, the judoists under study were recommended to change their diet. A low-fat diet is recommended to the largest percentage of judoists surveyed (57.1%), a balanced diet (28.5%) and a low-carb diet (14.2%).

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