The efficiency of 9m shots, wings shots, 7 m shots (for all participating teams) and goalkeepers is below the recommended level; the other parameters are analyzed are in range and punctually they are even slightly exceeded.

**Conclussions**

One of the concerns of participating teams was to increase throws efficiency manifested by an ascendent trend (figure 1).

This positive trend for throws efficiency had repercussions on goalkeepers' efficiency that showed a decreasing trend (figure 2).

The average number of interceptions, respectively blocked shots is important for teams ranked in the top of the final standings because it favors increasing the defense efficiency and scoring goals easier (figures 3 and 4).

As a result of comparing the data obtained from the analysis performed should be reconsidered margins effectiveness of actions to be monitored useful landmarks in training and competition, imposing to reconsider the role model of the performance handball game for seniors. Thus for the teams seeking a qualification at the World Championship is recommended that game action efficiency to be places in the margins of the places 1-12 from Table 1 in the context of the playing games with teams that constantly qualify for the final tournament. In the qualifying games the efficiency must be much higher because the teams encountered are a lower value.

Teams that aspire to win the competition or medals is need to exceed average requirements for places 1-4 (table 1).

Taking into account that the study covers a period of 10 years which took place 6 editions of Men's World Handball Championships, the data obtained and analyzed got a high degree of reliability and can be used as benchmarks for the following competitions.

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# RATIONAL NUTRITION ROLE IN ENHANCING SPORTS PERFORMANCE

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**Abstract:**

In modern society sports performance reached levels, which, years ago they were seen only from the perspective of an ideal to be achieved. Activity athlete needs a healthy diet to satisfy the energy needs of the body and help to increase sports performance . Adopting a healthy diet provides a complete food energy to maintain body without leading to anemierea body and mind .

Sensible eating, sports, food must consist of providing training energy reserves, foods that produce enzymes, but which serve food plastic, repair and maintenance of tissues. Food has always played a leading role in the lives of athletes, improper nutrition weight causing major imbalances.

The conclusion of the work presented is that sports training is a process that takes time and a reasonable diet to achieve the desired performance. Theory and practice of increasing performance capacity is modeled using predisposing factors, but increase them with food.

The body consumes energy to sustain the movement, and this permanent energy expenditure must be brought back into the body through nutrient assimilated by a ration and a diet suitable for each sport.

*Keywords: food, performance , health*

Sports performance in modern society have reached levels, which years ago were seen only from the perspective of an ideal to be achieved. Radu Ababei underlined that the word „performance" found in the dictionary refers to"the result of an activity which exceed the common level" (2006, p201). To achieve this goal, athletes are included in a complex, multilateral. process of preparing, in which the effort is pushed to the maximum physiological limits.

Sport activity needs a healthy diet to satisfy energy needs of the body and help to increase sports performance. Adopting a healthy diet provides a complete food to maintain body energy without leading to weakening of body and mind . Therefore , it is recommended to those who want to have a healthy lifestyle to give up fast foods , high fat preparations, to the excessive consumption of coffee and alcohol and to prefer what nature generously gives us: fresh fruits and fresh vegetables , juices , milk and food cooked in a short time , so the final product not to lose the beneficial properties (vitamins, minerals).

The proper nutrition for athletes, must consist of foods that ensure formation of energy reserves , foods that produce enzymes , but also in food which has plastic role , in repairing and maintaining of tissues.Nutrition has always played a leading role in the athletes lives , improper nutrition causing major imbalances of weight. Adrian Dragnea , Alina Paunescu, Virgil Tudor and Magda Morenciu believes that in a proper diet must be respected the three principles about supply ratio: protein / carbohydrate/ lipid:1:1:4 and that, " according to the energy needs of the body, metabolism is of two types: basal metabolism and sportiv metabolism. "(2007, p.58). The balanced ration for an ordinary man , but also for an athlete must include proteins, lipids , carbohydrates , water , minerals and vitamins , the only difference is made by the caloric intake which for an athlete should be higher.

The proteins:

They are substances made up of chains of amino acids and are found in all living cells and tissues. Dr. C. Alexandrescu said that " in the diet of the athlete , in the total amount of protide , the animal ones must be in proportion of 60 % and the vegetable ones , in a proportion of 40 % " (1973, p.23). Depending on the branch of sport practiced ,on the effort , but also on the during of training , athletes have a higher necessity of proteins. (almost 2g/kg corp) . The role of proteins in the body is multiple : plastic , biocatalytic , energetic, immunological , and role in the formation of muscle contractile substance .

The lipids:

It is the main form of energy storage , which "provides maximum calorie concentrated in a minimum volume "(dr. Mihaela Bilic, 2007, p.170). They have animal and vegetable origins , releasing by combustion 9kcal / kg. The athletes need of fats varies depending on the environment in which they operates : the sports that take place at low temperatures as biathlon , alpine skiing , grain , etc. the lipid requirement is 2 to 2.3 g / kg during the day , while for other categories of sports the need is 1.5 g / kg.The lipids play a role in the body :plastic , protects the organs (heart, kidney) ,support role of the fat-soluble vitamins A, D , E, F , K, role in maintaining body temperature .

The carbohydrates:

The carbohydrates are found in the form of simple carbohydrates ( monosaccharides and disaccharides ) and complex carbohydrates ( polysaccharides ) . Like proteins , they release by burning 4,1calorii / g / kg

The need for carbohydrates increases when the ambient temperature is lower or when you work out , which develope a need for 10-11g / kg . Glycogen in the body is divided into two caveats : a muscular reserve ( 300-400g ) and a liver one ( 150-200) After some studies, dr. Constantin Alexandrescu reach the following conclusions (1973, p.41):

- Working out on an empty stomach leads to a rapid decline of the blood sugar;
- If you eat sugar before the start of an exercise the hypoglycemia is delayed by at least 60 minutes ;
- If the athlete ingests sugar in every hour while performing an exercise, then the blood sugar is stable ;
- When administered carbohydrate , proteins taken at the begining of the work out and the sugar ingested in every hour , the blood sugar level becomes constant .

The carbohydrates have energy role , the role of detoxification of the body, plastic role , catalytic role and thermoregulation role. (Adrian Dragnea, Alina Păunescu, Virgil Tudor şi Magda Morenciu, 2007, p.60). This last role is because carbohydrates turn into fat which reaches the subcutaneous fat .

Adrian Dragnea Alin Teodorescu Silvia Paunescu claim that in the body , the carbohydrates have four destinations: 10% of liver glycogen , muscle glycogen 40 % , 25 % in the fat tissue and 25 % is oxidised. (2008, p.123).

The temperature changes the needs of the body of carbohydrates , in the sense that , in the cold , the carbohydrates help the body to fight the cold. Studies have shown that the body has a higher carbohydrate content if its central temperature is lower.. Also , muscle contraction performed with carbohydrates , helps the body to fight against the cold, because there is an increase in temperature during muscular effort , which is subsequently removed in the external environment .Dr . Constantin Alexandrescu points out that " the chills have a role in the fight against the cold, the sharp drop in blood temperature. "(1973, p.43). In the warm environment is requisted the presence of a proper hydration and remineralization , and in terms of the carbohydrates is recommended an increase to 60 %, and between two hearty meals is required ingestion of savory and sweet drinks .

The water is considered a nutrient factor , structural and biocatalytic which has a high particularly importance to everything that is living matter . It comes from two sources: one from outside ( exogenous ) and one inside ( endogenous ) . The first category includes all types of liquids , including water , and in the second category includes the source resulted from the oxidation of hydrogen in proteins, carbohydrates and lipids. In addition to these two categories of sources, in the body is also water from the digestive juices, absorbed and filtered water from the kidneys . Removing water from the body depends on the ambient temperature , but also on the effort you submit organism during the physical activity and is achieved through several ways: through urine , perspiration, respiration and faeces within 24 hours. Dr. C. Alexandrescu appreciate an amount of approx 1200 ml of water eliminated by urine in over 24 hours , 300 ml eliminated by breathing , 750 ml eliminated by sweating and about 150 ml of water is eliminated through faeces. (1973, p.47).

The role of the water in the body is very complex :

- biocatalytic role in nature because through it all reactions are occurring in the body ;
- plastic role ;
- solvent role for organic and inorganic substances existing in the internal environment ;
- role in nutrition and disposal ;
- because it is evaporated through skin and through the mucous membranes, it plays a role in thermoregulatory ;
- helps the anaerobic oxidation ;
- it is solvent for soluble vitamins

In the body fluid balance should be maintained at a constant level the loss of an amount of water from the body without proper hydration in the future determines a number of disorders, which in severe form , can lead to death . The mineral salts are food substances which have a plastic role and act to restore the cells. ( calcium, sodium , phosphorus , potassium and iron ) and a catalytic role ( salts of iodine , cobalt , copper ) . They are eliminated from the body through urine and sweat. In the nutrition of an athlete must be present salts such as phosphorus , calcium, potassium , iron and sodium to facilitate the training..

Vitamins:

Are substances meeting the role of enzymes and in the redox chemical reactions helps which are taking place permanently in the body helping to increase reproduction and its recovery after exercise . The vitamins which are dissolved in water are the ones from the B complex , vitamin C and vitamin P and are called water-soluble vitamins ; those that are dissolved in fat are called fat-soluble vitamins and are the one from the next category A , D , E, F , K. Unlike from the vitamins from the first category , the last ones are not eliminated through the urine and are going harder through tissues..

In athletes , the vitamins intake is higher than at a normal person and therefore , especially in winter , the vitamins must be taken from a medication administration , because the food in this period, contains less vitamins .

The proper nutrition for an athlete must bring food to an appropriate level both quantitatively and qualitatively. The findings nutrition of an athlete is using three factors (dr . C. Alexandrescu , 1973 , p.132 ) : the weight curve , the subjective sensations and the laboratory researches . If the athlete has adequate an nutrition , the weight curve goes down in the first weeks , which applies to the next period . The subjective sensations appear as digestive signs such as loaded language , nausea, bitter in the mouth, etc. , only when athletes do not show a normal appetite for food and their disposition to training is not high. In the last category of factors enter the laboratory tests that are designed to sense with greater precision than subjective sensations , if food is quality or not.

The conclusion of the work presented is that sports training is a process that takes time and a reasonable diet to achieve the desired performance . Theory and practice of increasing the performance capacity is modeled using predisposing factors , but increases with food aid.

. The body consumes energy to sustain the movement, and this permanent energy expenditure must be brought back into the body through the nutrient assimilated by a ration and a diet suitable for each sport .

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