

Research Article

Nutritional Requirements Dietary Demand Research among Sports Coaches

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Abstract: The study proposed the balance between heat and nutrients, the balance of the nutrients intake and acid-base balance, etc. At the same time, the relevant departments should strengthen the monitoring of sports nutrition, so as to ensure the coaches can match with the biochemical index, making use of nutritional supplements with a reasonable choice, to supply the inadequate dietary intake. The training of athletic sports has been approaching to the physical limit of the athletes, it is proved by the evidence that without the scientific guidance for training and no other means to aid the simple "hard training" cannot guarantee the athletes defeat the other opponents and achieve more good achievements in the competition.

Keywords: Biochemical index, nutritional supplements, sports nutrition

INTRODUCTION

The training of athletic sports has been approaching to the physical limit of the athletes, it is proved by the evidence that without the scientific guidance for training and no other means to aid the simple "hard training" cannot guarantee the athletes defeat the other opponents and achieve more good achievements in the competition. Therefore, besides training, people look for all kinds of methods to enhance the ability of athletes, so as to accelerate the elimination of fatigue to help athletes improve the quality of training and create new sports achievement. With the efforts and measures of anti-doping gradually being strengthened in the modern track and field sports, the attention to the athletes' nutrition and recovery work has been achieved to unknown standard. Therefore, the nutritional aid to the athletes has become one of the focuses (Chen, 2012). America Dr. James Hickson brilliantly pointed out: "To solve the nutrition problem will become one of the last areas of human sports", thus we can see the position of nutrition in sports is very important. The coaching work is a kind of heavy and hard work, who is the key personnel to train the talents of athletic sports and develop the activities of mass sports with lot of physical and mental consumption, this has put forward a higher request for the state of coach's health.

Usually, the process of food intake and utilization by the organism is known as nutrition. The nutrients that food contained and what the body needed usually included seven categories, namely, sugar, protein, fat, minerals, water, vitamins and dietary fiber. Coaches have special requirements on the intake and intake ratio of these nutrients.

The researching status of the diet balance of the coach:

It has been got a lot of attentions from the sports training field, after the powerful means besides sports training has been applied in the athletic sports. Among them, the research of the strong means of sports based on the theory of sports nutrition has played a very important role, which improved the sports ability. The history of researching the sports nutrition has been decades of years, both at home and abroad, in recent years (Li and Zhang, 2006), Chinese throwing coaches put more and more attention to the nutrition work of the athletes training, the related research can be summed up in two aspects: one aspect is the study of the basic nutrients; the other aspect is the study of nutritional supplements.

MATERIALS AND METHODS

Sugar: Sugar is also known as carbohydrates, which is the main source of energy that body needed. The sugar can be metabolized into carbon dioxide, water and release energy under the condition of the sufficient oxygen being supplied in the body. Because it consume little oxygen in the metabolic process, therefore, it is one of the most economical energy substance. Sugar is stored in the body in the form of glycogen in liver and muscle tissues, the amount of the reserved glycogen will directly affect the body's physical strength, endurance and mental activities. The main factor that can affect the amount of the reserved glycogen is the sugar intake. Under normal circumstances, the amount of sugar intake that coaches have should be accounted for 65~70% of the total calories a day, the daily sugar amount needs 4~6 g for per kilogram of the body weight. The main source of sugar from the food is cereals and potato.

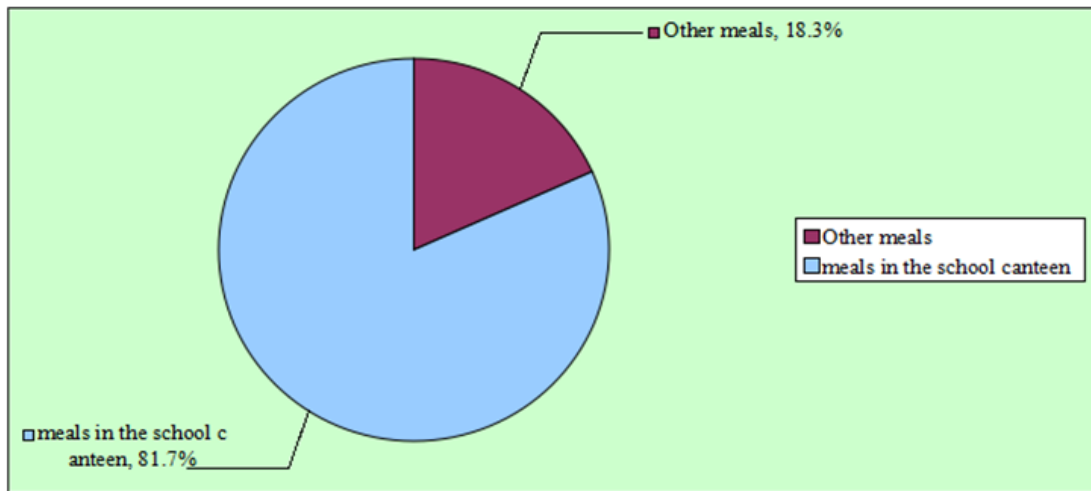


Fig. 1: Amount of canteen

Protein: Protein is the essential substance that can constitute, repair human tissue and regulate the physiological function, at the same time, it is also a kind of energy substance. The amount of protein intake should meet the needs of the body appropriately, the long-term inadequate of protein intake will cause the deficiency of protein, such as: weight loss, muscle atrophy, fatigue, anemia, slow wound healing and so on; excessive intake will be converted into fat, increase the burden for liver, kidney, more metabolic oxygen consumption. Animal protein and vegetable protein in diet should be reasonable with the diet of the coaches, who should try to have high quality protein, as we know, protein is mainly existed in fish, meat, milk, eggs, cereals, beans and some other foods.

Fat: Fat is the form of the energy that is stored in the body, which is the ideal form to reserve the energy for the coaches. Fat can be beneficial for the lasting, active physical work, which can provide about 80% of the needed energy. However, during fat supplies the energy, it needs to burn a lot of oxygen, which is not economic. In addition, the saturated fatty acid will lead to obesity, fatty liver, high cholesterol and other diseases. Therefore, the amount of fat supplying should be controlled within 30% of the total calories a day, moreover, it is better to choose vegetable oil or polyunsaturated fatty acids, etc for cooking the food in the edible range.

Minerals, vitamins, water, food fiber: In 2002, according to the Survey of Chinese Resident's Nutrition and Health, it showed, in our country, the body is lack of calcium, iron, zinc, iodine and other chemical elements as well as vitamin A, B1, B2, C, etc. The coach often works for a long time in the environment with high temperature, high humidity, as well as high activities, in order to maintain a normal body

temperature, it needs to emit large amount of sweat, which may lead to water loss with more loss of electrolyte also. Therefore, coaches should pay attention to the supplement of various minerals and vitamins in common days, who should have more water and minerals during the period of working (Luo, 2011). Generally, it is thought that it need not have rehydration at the beginning of the work, according to the amount of the activity, it can have a small amount of supplement for several times. Adhering to the equilibrium principle of water intake and water loss, it is better to choose water that is contained potassium, sodium with low sugar and low salt.

It is known by the survey of college coaches, the amount of coaches that can understand the dining way of college track and field throwing athletes is accounted for 94.3% of the total proportion, a few coaches do not understand the athlete's dining way. 91.4% of the coaches think that the school has not professional nutrition instructor. On investigating the problem whether the school canteen can provide reasonable diet according to the nutrition of athletes, 85.7% coaches hold negative attitudes, only 14.3% coaches think that it can have the relevant guidance (Fig. 1).

RESULTS AND DISCUSSION

Survey of nutrition study: In dietary nutrition work, the Average required nutrients for the Athletes dietary and recommended intake is the reasonable basis for the nutrition researchers to determine and evaluate the athletes dietary (He, 2008). In the survey, 57.1% of the coaches had little idea about Chinese athletes dietary nutrients and suitable food intake, which made it difficult for the coaches to make accurate, practical assessment on the athletes' dietary and may have deviation to guide the athletes' dietary dietary. Among them, 51.4% of the coaches can fully understand the

Table 1: Survey of nutrition study

	Fully understand The number of people (%)	Basically understand The number of people (%)	Have no idea The number of people (%)
The average required nutrients for the Athletes dietary and recommended intake	10 28.5%	20 57.1%	51.2%
The Application of its own researching technical innovation and researching result on nutrition and recovery field in our province	18 51.4%	13 55.3%	411.4%
The application level of college athletes' nutritional supplements	14 40%	17 48.5%	411.4%
All kinds of problems appeared in the practice of college nutritional supplements in our province	21 60%	14 40%	

application of its own researching technical innovation and researching result on nutrition and recovery field in our province, 55.3% of the coaches can basically understand. 88.5% of the coaches can understand the application level of college athletes' nutritional supplements (Table 1).

Making Strategy and Plan for Athletes' Nutritional Intake. Strengthening the Attention of Coaches to the Methods of Nutrition Intervention.

Coaches should carry out the collection of the relevant information and knowledge learning, improve the original single training method and gradually develop in the direction of diversification, reasonably coordinate the two-way development of training and recovery. Recognizing the importance of reasonable diet supplement, introducing the related knowledge and, which can make them learn and put into practice. Coaches had better have collective management to the athletes, after the athletic training is completed, they can maintain the collective dining system. The canteen must be able to offer reasonable diet, so as to ensure the balance of athletes dietary. If it cannot have the collective dining, it should adjust the training plan to ensure the athletes can eat hot food in the canteen (Wang, 2005).

The relevant departments and local governments should attach great importance and give active supports:

It is suggested that the relevant state departments and local governments should attach great importance to establishing college athletes' reasonable dietary supplying management system, at the same time, it is also hoped that the researching professionals can do more researches and give appropriate guidance for the college athletes, so as to perfect the reasonable structure and system of the dietary supplement, which can make coaches and athletes have more reference for people who are engaged in college sports education and training (Yang, 2011). But so far, because many domestic colleges and universities have not made great achievements in the aspects of cultivating high level athletes, the real learning opportunities and experiences of being athletes are not many, the people who can get the achievement is less. Now, the high level athletes

still belong to the General Administration of the State Sports or the local teams, so there is no national caring system, for the majority of the colleges and universities, it is not feasible to get the attention and support from the government departments and local government in the present stage. So, it is hoped that the school, especially the department in charge of the school canteen could pay more attention to the reasonable diet nutrition, which can provide the solid and effective premises for athletes' quick recovery after the trainings.

CONCLUSION

According to the characteristics and the special requirements on the nutrition of the coaches' work, the reasonable diet should balance the following four aspects. The balance between heat and nutrients, the balance of the nutrients intake and acid-base balance, etc. At the same time, the relevant departments should strengthen the monitoring of sports nutrition, so as to ensure the coaches can match with the biochemical index, making use of nutritional supplements with a reasonable choice, to supply the inadequate dietary intake.

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