Think India (Quarterly Journal)
ISSN: 0971-1260 Vol-22, Special Issue-13
National Conference on
Psychological Contributions in Sustainable Human Development in Sports, Organizations and Community Health
Date of Conference**:** December 20-21, 2019,
Organised by **Department of Psychology, Physical Education & Sports and Home Science V.P.S.P.M.S. Arts, Commerce & Science College, Kannad,** Aurangabad, Maharashtra 431103 India

Nutrition and Sports Performance

Dr. Shaikh Aslam Zhabbu

Physical Education,

Kohinoor Art's Commerce & Science

College, Khuldabad Aurangabad.

Abstract

A well balanced and varied diets will usually be enough to meet the nutritional needs of most physically active people. A balance of Carbohydrates, Proteins, Fats minerals, Vitamins and water will give your body what its need for peak performance. Nutrition play an important role on sports performance .Following an adequate Nutrition pattern determines winning the gold medal or failing in the attempt. That is why it is commonly referred to as in "Invisible". Many factors can impact the performance of a sports person during competition which may related to different domains .The most commonly encountered Nutritional related problem among sports person is their failure to consume sufficient total of food energy. The certain Nutrition and dietary approaches can enhance the sports performance and nutrition approaches can enhance the sports performance and nutrition is also essential for Athletic good performance.

Key words =Nutrition, Sports, Performance, Vitamins, Minarals, Athletes.

Introduction

Sports nutrition is an study and practice of nutrition and diet related to athletic performance. It is concerned with the quantity and quality of food including fluid to be consumed by an athlete. Success in sports depends on three factors, namely, genetic endowments, state of training and nutrition. As genetic make cannot be changed, specialized exercise training and nutrition are the major means to improve athletic performance.

The search for kind of food for exercise and sports, building strength and endurance has been an ancient phenomenon. Initially, it seems that the only sportsmen who took nutrition seriously were the body-builders. Other sports caught up later and now in activities such as cricket, football, athletics, swimming, tennis and most others, nutrition is assuming the same importance as training.

Nutrition

Mere good nutrition may not generate good athletes but inadequate nutrition would reduce the ability of an athlete to play to his/her maximum potential. Without the right food, even physical conditioning and expert coaching are not enough to achieve the best results. Nutrition plays not only a prominent role in performance, but also helps to prevent injuries, enhances recovery from exercise, helps in maintaining body weight and improves overall health. It is important for all sportspersons to have a good working knowledge of exercise science and sports nutrition so that these can help in their own performance potential.

In Indian sports, nutrition hitherto not so organized fully, needs to be a part of physical fitness classes, community adult fitness and rehabilitation programme and athletic training.

Need Of Optimal Nutrition For Athletes

There is universal agreement that poor nutritional status impairs performance. Optimal nutrition is thus a necessity for optimal performance for athletes. The issue of optimal nutrition for athletes must be considered for two different situations, i.e., during the training and for the competition. The athletes have to try variations in pre-com-petition and competition food and fluid intake for optimal nutrition. Optimal diet/nutrition helps in the achievement and maintaining of optimal body composition and body weight and promoting recovery from training sessions and physiological adaptations.

Energy Requirement

Sports persons are routinely engaged in exhausting exercises. They need to be aware of their daily nutritional needs. Maintaining a healthy diet that provides adequate energy and nutrients is vital to support intense training as well as to optimize immune system functions. In order for sports persons to meet their daily energy needs, they must consume sufficient calories. If energy intake is

insufficient, the body will start using fat and lean body tissue as fuel. This will cause a loss of strength and endurance. Moreover, immune system, endocrine, and musculoskeletal function will be compromised.

1. Carbohydrate and needs

Carbohydrates include both complex and simple sugars. Simple sugars are naturally found in milk products, fruit and vegetables. Complex and starchy sugars are found in whole grain, potato, sweet potato, corn etc. Carbohydrates maintain blood sugar levels to fuel exercise. They also restore glycogen which is the storage form of carbohydrates within muscles. The recommended daily carbohydrate intake for athletes ranges from 6-10 g/kg body weight. Main source of carbohydrates in diet are cereals, pulses, roots and tubers and fruits.

2. Protein and needs

Protein is the building block of muscle tissue. They are needed for growth, maintenance and repair of body tissue. Sports persons are recommended to consume between 1.2-1.4 grams of protein per kilogram of body weight each day. Sports persons who participate in continuous training for continuous hours or several days should consume slightly more protein than this; still, consumption of more than 2 grams of protein per kg of body weight is not recommended. High quality protein sources such as meat and meat products, fish, egg, oil seeds, nuts, soybean, whey, casein, or soy are equally effective in the maintenance, repair, and synthesis of muscle proteins.

3. Fat and needs

Fat is an essential component of diet as it helps the body to absorb nutrients as well as being a great source of energy. Appropriate intake of fat is essential for various metabolic activities that promote good health. For example, vitamins A, D, and E require fat for proper absorption. Fat consumption by a sports person should range between 20-35% of total daily calories. Normally 10% of fat intake should come from monounsaturated sources, 10% from polyunsaturated sources, and not more than 10% from saturated fat. Sources of fat are nuts, oil, seeds, butter, ghee and oil.

4. Vitamin and mineral and needs

Vitamins do not provide energy, but they are essential for turning food into energy. The high activity levels of sports person may increase their vitamin needs. Vitamins will not intensify performance but a shortage is sure to impact on performance.

Body contains about 24 minerals, all of which must be provided by the diet. Athletes who take vegetarian diets may be at risk for low intakes of calcium, iron, riboflavin, vitamin D, zinc and vitamin B12. Functions of minerals in body are to constitute bones and teeth, body cells of soft tissues such as muscles, liver etc. They help in energy-production, blood synthesis, maintenance of bone health, immune function, and the prevention of oxidative damage. They also help in the process of muscle and tissue repair during recovery from exercise or injury. Important sources are milk, meat eggs, nuts and oilseeds, fruits, vegetables and cereals.

Generally, athletes who consume a healthy diet do not need any additional micronutrients supplements. A registered dietician with advanced training in sports nutrition however is the best professional to provide nutrition information and advice to athletes on supplements.

REFRENCES

B.SriLakshmi, V Suganthi C kalaivani Ashok: 2017, Exercise Physiology Fitness and Sports Nutrition.

Bean Anita, 2009, The Complete Guide to Sports Nutrition, A & C Black Publishers Limited, London.

Clark Nancy,2008,Sports Nutrition, Human Kinetics, USA

Cordain Loren and Joe Friel, 2005, The Paleo Diet for Athletes, Rodale, USA. ;

Lai Priti Rishi, 2006, Nutritional Recommendations for Indian Sportspersons - A review, J.Indian Dietetic Association, 31