

## **DIET AND SPORTS PERFORMANCE**

**ANJANA CHAUDHURI**

Assistant Professor, Shree Agrasen Girls College, Korba, Chhattisgarh, India

### **ABSTRACT**

Physical fitness as a set of attributes related to the to perform physical activity coupled with genetic makeup and the maintained of nutritional adequacy. Nutrition play important role in sport performance .It is not important to make sure that eating just enough calories to make weight healthy but it is also sure that one should get energy from right sources The food and drinks taken must in supply energy.

The relationship between nutrition and sport activity determine how effective a faith based nutrition upon physical activity of people. The increased physical activity is linked to better quality of life. If the participants are educate on proper intake of nutrition on physical activity this successfully bring about improvement in many area of health and fitness.

**KEYWORDS:** Physical Fitness, Nutrition, Health and Fitness, Good Diet

### **INTRODUCTION**

Good diet and nutrition can enhance sporting performance. C. For most athletes, a varied healthy diet carbohydrate, vitamins and minerals, as well as protein is required in balanced amount.as well as adequate fluid intake is essential to help performance and prevent dehydration. The link between good health and good nutrition is well established. Interest in nutrition and its impact on sporting performance is now a science in itself.

### **WHY SUFFICIENT DIET REQUIRED FOR ATHLETE?**

The basic training diet should be sufficient to: provide enough energy and nutrients to meet the demands of training and exercise enhance adaptation and recovery between training sessions include a wide variety of foods like wholegrain breads and cereals, vegetables (particularly leafy green varieties), fruit, lean meat and low-fat dairy products to enhance long term nutrition habits and behaviors.It enable the athlete to achieve optimal body weight and body fat levels for performance and provide adequate fluids to ensure maximum hydration before, during and after exercise ,promote the short and long-term health of sportsmen.

### **ENERGY INTAKE OF DIET**

An athlete's diet should be similar to that of common man with more than 55 per cent from carbohydrates ,about 12 to 15 per cent from protein ,less than 30 per cent from fat(coming from olive oils, nuts, avocado, nuts and seeds).

Athletes who exercise strenuously for more than 60 to 90 minutes a day may need to increase the amount of energy they get from different sources of carbohydrate. High-fat foods such as biscuits, cakes, pastries, chips and fried foods) should be avoided.([www.google.com](http://www.google.com))

### **Carbohydrate**

It is required for aerobic and anaerobic energy systems and delay fatigue in exercise lasting longer than 60 minute, athletes require approximately 5-7gms/Kg body weight for hard training. During digestion, all carbohydrates are broken down into sugar (glucose), which is the body's primary energy source. Glucose can be converted into glycogen and stored in the liver and muscle tissue. If carbohydrate in the diet is restricted, a person's ability to exercise is compromised because there is not enough glycogen kept in storage to fuel the body. This can result in a loss of protein (muscle) tissue, because the body will start to break down muscle tissue to meet its energy needs, and may increase the risk of infections and illness.. More refined carbohydrate foods (such as white bread, jams and lollies) are useful to boost the total intake of carbohydrate, particularly for very active people.

### **Glycemic Index**

The GI has become of increasing interest to athletes in the area of sports nutrition. Moderate to high GI foods and fluids may be the most beneficial during exercise and in the early recovery period. However, it is important to remember the type and timing of food eaten should be tailored to personal preferences and to maximize the performance of the particular sport in which the person is involved.

### **Sources of Energy during Exercise**

Intake early in exercise and to consume regular amounts throughout the exercise period. It is also important to consume regular fluid during prolonged exercise to avoid dehydration. Sports drinks, diluted fruit juice and water are suitable choices carbohydrate is sufficient, and can be in the form of lollies, sports gels, low-fat muesli and sports bars or sandwiches with white bread. For people exercising for more than four hours, up to 90 grams of carbohydrate per hour is recommended, eating carbohydrates with a moderate to high GI in the first half hour or so after exercise. This should be continued until the normal meal pattern resume, sports drinks, juices, cereal and low-fat milk, low-fat flavored milk, sandwiches, pasta, muffin/crumpets, fruit and yoghurt. Can give compensate energy lose.

### **PROTEIN**

Large Organic compounds made of amino acids, Complex structure difficult to break down, The body rarely uses protein as a source of fuel, Protein often used as a food supplement to aid muscle growth Proteins are an extremely important macromolecule. The body uses protein from the diet for growth and repair of tissues – which is of great importance if you suffer from strain/injury during training. Protein can help build muscle in resistance sports such as weight lifting but be warned excess protein is turned into adipose tissue.

Protein is an important part of a training diet and plays a key role in post-exercise recovery and repair. Protein needs are generally met by following a high-carbohydrate diet, because many foods, especially cereal-based foods, are a combination of carbohydrate and protein.

### **VITAMIN AND MINERAL SUPPLEMENT**

No evidence in .S. studies that taking vitamin and mineral supplements improves athletic performance, being deficient in vitamins or minerals is rare in the U.S. compared to the rest of the world, a few studies outside U.S. showed an effect, vegetarian athletes are at risk for being deficient in vitamins B12, D, riboflavin, iron, zinc and calcium athletes who are strict vegetarians should take a multivitamin to prevent deficiencies and a calcium supplement (1000 mg/day) to help prevent bone loss.. ([www.google.com](http://www.google.com)). Supplement diet should for calcium and iron deficiency can take through pills.

## Water and Sporting Performance

Dehydration can obstruct athletic performance and, in extreme cases, may lead to collapse and even death. Drinking plenty of fluids before, during and after exercise is very essential. Don't wait until you are thirsty. Fluid intake is particularly important for events lasting more than 60 minutes, of high intensity or in warm conditions. Water is a suitable drink, but sports drinks must be according to endurance events or warm climates. Sodium containing help in reabsorption. A sodium content of 30 mmol/L (millimoles per litre) appears suitable in sports nutrition. But salt tablets to combat muscle cramps must be avoided. It is lack of water not sodium that affects the muscle tissue. Persistent muscle cramps might be due to zinc or magnesium deficiencies. Excess amount may affect blood pressure.

## CONCLUSIONS

Healthy diet directly affects sport performance. Athlete should take diet according to requirement of their sports. Overdoses is dangerous to their health. So whether a competing athlete, a trainer, a weekend sports player or a dedicated daily exerciser, the foundation to improved performance is a nutritionally adequate diet.

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