IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

The Role Of Nutrition In Sports

Dr.Hanumanthayya Pujari
Professor
Dept of Studies in Physical Education and Sports Sciences
Karnataka State Akkamahadevi Women's University, Vijayapura

Abstract

Proper nutrition is the foundation of any successful athlete. It is the cornerstone that supports physical training, recovery, and overall health. Athletes need to understand that their bodies demand a specific balance of nutrients to meet the high demands of their training and competition schedule.

Nutrition is important for an athlete because it provides energy required to perform the activity. The food they take leaves an impact on strength, training, performance and recovery. Not only the type of food is important for sport nutrition but also the time is equally important for what they eat throughout the day.

Diet is of great importance to athletes, the key to achieving an optimal sports diet in relationship to peak performance and good health is balance. Athletes must fuel their bodies with the appropriate nutritional foods to meet their energy requirements in competition, training and recovery.

Elite athletes are some of the most physically fit people in the world. They train for hours every day, and they push their bodies to the limit, in order to be the best in their Sport. But even with all their hard work, they can't reach peak performance without proper nutrition.

A healthy diet is essential for elite athletes. It provides them with the energy they need to train and compete, and it helps to protect them from injuries. It also helps to improve athletes' recovery time, which allows them to train more often and improve their performance.

Key points;- Nutrition, Athletes, Physical training and Performance

The role of nutrition in sports

Introduction

Proper nutrition is the foundation of any successful athlete. It is the cornerstone that supports physical training, recovery, and overall health. Athletes need to understand that their bodies demand a specific balance of nutrients to meet the high demands of their training and competition schedule.

Nutrition is important for an athlete because it provides energy required to perform the activity. The food they take leaves an impact on strength, training, performance and recovery. Not only the type of food is important for sport nutrition but also the time is equally important for what they eat throughout the day.

Diet is of great importance to athletes, the key to achieving an optimal sports diet in relationship to peak performance and good health is balance. Athletes must fuel their bodies with the appropriate nutritional foods to meet their energy requirements in competition, training and recovery.

Good nutrition can enhance sporting performance. A well-planned, nutritious diet should meet most of an athlete's vitamin and mineral needs, and provide enough protein to promote muscle growth and repair. Foods rich in unrefined carbohydrates, like wholegrain breads and cereals, should form the basis of the diet.

The science of nutrition in sports performance is a growing field that looks at how diet affects athletic performance. Research has shown that a well-planned diet can help athletes train harder, recover faster, and improve their overall performance.

Sports Nutrition can be defined as the application of nutrition knowledge to a practical daily eating plan providing the fuel for physical activity, facilitating the repair and building process following hard physical work and achieve athletic performance in competitive events, while also promoting overall health and wellness. The basic concept for sports nutrition for athletes requires proper eating strategies and need to have a command of general nutrition as well as exercise science

The most important factor in sports nutrition

Carbohydrates are the main source of energy that powers your exercise regime and protein is required to aid muscle growth and repair. After exercising you need to replace the carbohydrates you have lost and you need to ensure proper muscle recovery by including protein in your post training meal.

The 3 principles of sports nutrition

Fuelling - providing the body with food to enhance stamina, strength and clarity.

Hydration - preventing dehydration and fatigue, whilst optimizing muscle performance.

Recovery - to aid in recovery after exercise,

The 3 main goals of proper sports nutrition

1. Provide the necessary energy for exercise,
2. Regulate body metabolism,
3. Provide nutrients to maintain and repair tissues

Benefits of sports nutrition

Injury prevention, strengthening of the immune system, Decreased muscle tiredness and soreness, Muscle healing and recovery Improved energy levels Increased focus and attention span

The awareness of nutrition playing an important role in sports performance Many factors can impact the performance of a sports person during competition which may be related to different domains. The most commonly encountered nutritional related problem among sports person is their failure to consume sufficient total of food energy.

Food is composed of six basic substances: carbohydrates, proteins, fats, vitamins, minerals and water. Each one of these has specific function in providing nourishment for the body. For the sportsman, it is of critical importance to recognize what each does to his body under the physical, mental and emotional strains of competition.

The duration and the intensity of the exercise involved in a given sports will determine the principal source of energy used in meeting the work demands of that particular sports.

The certain nutrition and dietary approaches an enhance the sports performance and also nutrition is essential for an athlete’s good performance. The athlete's diet should be high in carbohydrates, moderate in proteins and low in fat.

Every person’s needs are different. The amount of food you need depends on your age, height, weight, and sport or activity level. In general, you need to replace the number of calories you burn each day with athletic activity. Calories measure the energy you get from food. Most people need between 1,500 and 2,000 calories a day. For athletes, this number can increase by 500 to 1,000 more calories.

Calories come in different forms. The main types are carbohydrates, fats, and proteins.

- **Carbohydrates (carbs)** are your body's biggest source of calories. Simple carbs (fruits, milk, and vegetables) are easier for your body to break down. They provide quick bursts of energy. Complex carbs take longer for your body to break down. They are a better source of energy over time. Complex carbs in whole grain products are the most nutritious. Examples include whole-grain bread, potatoes, brown rice, oatmeal, and kidney beans. Doctors recommend that 55% to 60% of your daily calories come from carbohydrates.
- **Fat** is another important source of calories. In small amounts, fat is a key fuel source. It serves other functions, such as supporting good skin and hair. Do not replace carbs in your diet with fats. This can slow you down, because your body has to work harder to burn fat for energy. Fats should make up no more than 30% of your daily calories. When you can, choose unsaturated fats, like olive oil and nuts. These are better for your health than saturated and trans fats. Too much fat or the wrong kinds can cause health problems. It can raise your bad (LDL) cholesterol level and increase your risk of heart disease and type 2 diabetes.
- **Protein** should make up the remaining 10% to 15% of your daily calories. Protein is found in foods like meat, eggs, milk, beans, and nuts. Some athletes think they should consume large amounts of protein. While protein does help build muscle, high doses won't help you bulk up. Over time, too much protein can be harmful to your health. The digestion process can put strain on your liver and kidneys.

Athletes need the same vitamins and minerals as everyone else. There are no guidelines for additional nutrients or supplements. To stay healthy, eat a balanced, Nutrient rich Diet. It should include foods full of calcium, iron, potassium, and fiber. You also need key vitamins in their diet, such as A, C, and E. Try not to be tempted by junk foods, which are an empty source of calories. Instead, focus on lean meats, whole grains, and a mixture of fruits and vegetables to fuel your body.

For athletes, knowing when to eat is as important as knowing what to eat. Try to eat a pre-game meal 2 to 4 hours before your event. For a race, this could be dinner the night before. A good pre-game meal is high in complex carbs and low in protein and sugar. Avoid rich and greasy foods. These can be harder for you to digest and can cause an upset stomach. You may find it helpful to avoid food the hour before a sporting event. This is because digestion uses up energy.

Staying hydrated is the most important thing athletes can do. This is especially true on game day. Your body is made up of nearly 60% water. During a workout, you quickly lose fluid when you sweat. Thirst is a sign of dehydration. Don't wait until you are thirsty to drink. A good rule of thumb is to take a drink at least every 15 to 20 minutes. But don't drink so much that you feel full.

Water is the best way to rehydrate. For short events (under an hour), water can replace what you lose from sweating. For longer events, you may benefit from sports drinks. They provide electrolytes and carbohydrates. Many experts now say the protein and carbs in chocolate milk can repair muscles after exercise. Chocolate milk

can have less sugar than sports or energy drinks and contains many vitamins and minerals. Avoid drinks that contain caffeine. They can dehydrate you more and cause you to feel anxious or jittery.

Athletes require a lot of energy and nutrients to stay in shape. Because of this, strict diet plans can hurt your ability and be harmful to your health. Without the calories from carbs, fat, and protein, you may not have enough strength. Not eating enough also can lead to malnutrition. Female athletes can have abnormal menstrual cycles. You increase your risk of osteoporosis, a fragile bone condition caused in part from a lack of calcium. (These potential risks are worse in adolescence but still present for adults.) Get medical help if you need to lose weight. Be sure to talk to your doctor before making major nutrition changes.

Elite athletes are some of the most physically fit people in the world. They train for hours every day, and they push their bodies to the limit, in order to be the best in their Sport. But even with all their hard work, they can't reach peak performance without proper nutrition.

A healthy diet is essential for elite athletes. It provides them with the energy they need to train and compete, and it helps to protect them from injuries. It also helps to improve athletes' recovery time, which allows them to train more often and improve their performance.

The right nutrition can support athletes in a number of ways:

IMPROVED PERFORMANCE

With the proper nutrition, athletes will be able to train harder and recover faster as well as maintain a healthy weight.

PREVENT INJURIES

A good eating plan will ensure good bone structure and help to prevent injuries, which can keep athletes out of competition.

IMPROVE RECOVERY TIME

The right balance of protein, carbohydrates as well as vitamins and minerals can help them to recover from workouts and competitions more quickly.

REDUCE STRESS

A healthy diet can improve mental focus and performance.

Conclusion

Nutrition plays a positive role in improving sports performance. It helps you achieve all your fitness goals. Nutrition is essential for athletes because it provides them with the adequate energy they require while performing sports.

Good nutrition can enhance sporting performance. A well-planned, nutritious diet should meet most of an athlete's vitamin and mineral needs, and provide enough protein to promote muscle growth and repair. Foods rich in unrefined carbohydrates, like wholegrain breads and cereals, should form the basis of the diet.

The science of nutrition in sports performance is a growing field that looks at how diet affects athletic performance. Research has shown that a well-planned diet can help athletes train harder, recover faster, and improve their overall performance.

The food athletes consume impacts their training, performance, and recovery. In sports nutrition, the type of food matters, but so does the timing of what they eat throughout the day. It also influences the efficiency level and their body’s subsequent recovery after an exercise.

Before a game or contest, an athlete must pay special attention to when and how much he eats or drinks.

Elite athletes are some of the most physically fit people in the world. They train for hours every day, and they push their bodies to the limit, in order to be the best in their Sport. But even with all their hard work, they can’t reach peak performance without proper nutrition.

References

1. Congeni J, Miller S (2002) Supplements and drugs used to enhance athletic performance. Pediatr Clin North Am 49: 435-461.
2. Prochaska JO, Velicer WF (1997) The transtheoretical model of health behavior change. Am J Health Promot 12: 38-48.
3. Clarkâ€™s Nancy (2008) Sports nutrition guide book: The 1st Nutrition resources for active people. Health work fitness center chestnut hill, MA, USA, pp. 103-105.
4. Burke LM, Hawley JA, Wong SH, Jeukendrup AE (2011) Carbohydrates for training and competition. J Sports Sci 29 Suppl 1: S17-S27.
5. Bonci L (2010) Sport nutrition for young athletes. Pediatr Ann 39: 5.
6. Shirreffs, SM Sawka MN (2011) Nutrition for endurance sportsâ€™ marathon, triathlon, and road cycling, New Delhi. 101-107.
7. Jeukendrup A, Cronin L (2011) Nutrition and elite young athletes. 56: 47-58.

8. Costill DL, Miller JM (1980) Nutrition for endurance sport: carbohydrate and fluid balance. Int J Sports Med. 1: 2-14.
9. Slater G, Phillips SM (2011) Nutrition guidelines for strength sports: sprinting, weightlifting, throwing events, and bodybuilding. J Sports Sci. 29 Suppl 1: S67-S77.
10. Holway FE, Spriet LL (2011) Sport-specific nutrition: practical strategies for team sports. J Sports Sci. 29: Suppl 1: S115-S125.
11. Huberty J, Dinkel D, Beets MW, Coleman J (2013) Describing the use of the internet for health, physical activity, and nutrition information in pregnant women. Matern Child Health J. 17: 1363-1372.
12. Sharma S, Sharma A, Bhushanam GV (2016) Assessment of the knowledge of the adolescent female football players regarding the carbohydrate and its importance. J Sports Sci. 4: 102-104.
13. Pelly F, Meyer NL, Pearce J, Burkhart SJ, Burke LM (2014) Evaluation of food provision and nutrition support at the London 2012 Olympic Games: the opinion of sports nutrition experts. Int J Sport Nutr Exerc Metab. 24: 674-683.
14. Cermak NM, van Loon LJ (2013) The use of carbohydrates during exercise as an ergogenic aid. Sports Med. 43: 1139-1155.