

# Sports Nutrition and Diets

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**Abstract – Nutrition requirements of sports persons are different than that of normal people. In most cases nutrition of the sports persons depends on the type of sport they are involved in. each sport has uses different parts of the body and requires different levels of physical fitness and energy requirement. This is reason why sports nutrition is a science which requires proper study based on scientifically collected data. Most of the sports persons have sports nutritionists who guide sports persons what are the immediate foods they should have after exercising as well as after their sports events. These foods generally are aimed at replenishing the lost energy to muscles. Most of the times the above are carbohydrate foods which are absorbed immediately by the body and the body can maintain its energy levels. Sports nutritionists are available to guide all sports persons to educate them regarding what they should eat so that they can enhance their performance as well as maintain require fitness level.**

**The sportsman eats partly to satisfy the sense of taste but manly production of energy required to carry out various activities. Indeed it is energy that rotates the wheel of life. The food that generates energy upon complete oxidization is in the form of carbohydrates, proteins and fats. Of course the diets must be supplemented with more energy for the sport man so his/her diet must compose more energetically and nutritious food as a sportsman ship required. Finally we conclude that the sum of progresses by which a sportsman takes in food substance and utilizes them with clear cut differences between catabolic and anabolic processes which take place in individual bodies.**

## INTRODUCTION

Nutrition requirements of sports persons are different than that of normal people. In most cases nutrition of the sports persons depends on the type of sport they are involved in. each sport has uses different parts of the body and requires different levels of physical fitness and energy requirement. This is reason why sports nutrition is a science which requires proper study based on scientifically collected data. Most of the sports persons have sports nutritionists who guide sports persons what are the immediate foods they should have after exercising as well as after their sports events. These foods generally are aimed at replenishing the lost energy to muscles. Most of the times the above are carbohydrate foods which are absorbed immediately by the body and the body can maintain its energy levels.

Sports nutritionists are available to guide all sports persons to educate them regarding what they should eat so that they can enhance their performance as well as maintain require fitness level. For people who train in muscle building and physical fitness, sports nutrition is readily available in the market, this nutrition addresses their requirement for daily dose of required nutrients so that they can build muscle power along with getting adequate amount of energy and strength. These sports nutrients have the power of nourishing and building muscle power with low fats

and high calorie intake. These nutrients are available in the form of powders and bars. With powders you will require to mix these with water and drink after exercises and bars you can have them like any other chocolate bar. These are highly packed with nutrition.

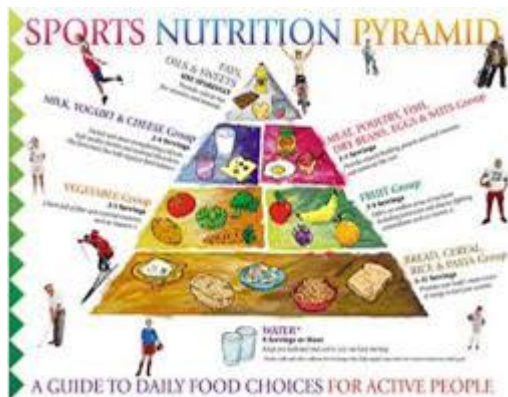
Since these products are mixed with nutrients, these might not be liked by all; therefore, the companies have also taken care to make these nutrients in different flavouring. So sports persons should not have any difficulty in drinking or eating these nutrients.

Sports nutrition packs are made from several different types of raw materials like whey, oats, gram, etc. these materials provide nutrition as well as muscle building power. Sports nutrition packages are created by doctors' consultation, several nutritionists decide compositions required by sports persons. Sports nutrition should include proteins, carbohydrates, iron, and vitamins. Not just that these should also include adequate fibre and other nutritional elements that are required for a healthy body. Sports nutrition also includes eating proper balanced diet so that nutrients normally required by the body are provided to the body.

## WHAT IS SPORTS NUTRITION?

Sports nutrition can be described as the practice and the study of diet and nutrition and how they

both relate to the athletic performance of a sports personality on the field. A sports nutritionist needs to be well versed, not just with the different foods that are good for sports personalities, but also with the type and quantity of fluids, as well as dietary nutrients, which make up an integral part of a diet for a sports person. The nutrients that should be included in high amounts in every sports diet are protein, carbs, calcium, iron, fibre, fats and other vitamins and minerals. However, it is mainly the sports diet plan for strength sports, like body building and weight lifting, along with endurance sports, like running, sprinting and cycling, which focus on adequate sports nutrition.



The ultimate goal of sports nutrition is to enhance an athlete's performance. However, before that, the athlete's body composition needs to be worked on, so that the athlete's speed, balance, mobility, strength and concentration can be sharpened. Moreover, the bodies of several athletes go through a lot of wear and tear and may also sustain injuries. The sports diet should boost their immunity system and increase their internal body strength so that they can recover from such afflictions at a faster pace. The ideal sport diet increases the athlete's overall energy, not just on the sports field, but also during practice sessions. Therefore sports nutrition is not just eating right for particular even, but making dietary changes to meet an athlete's long term requirements.

## HISTORY OF A DIET IN SPORTS

Although not a lot of people are aware of this, diets for sportsmen have been followed right since the time that the Romans and the Greeks began the Olympic Games. All the athletes that participated in the various events followed a special regimen that was crafted for optimal athletic performance. This regimen also included sports dietetics. Ironically, back then alcohol was regarded as a cryogenic supplement which was consumed for improved performance. This practice was carried on by most of the Olympic athletes till the 1900. However, the sport diet has undergone a drastic change since then, to incorporate more performance enhancing natural

foods and to eliminate steroids and drugs, which could harm the body eventually.

## MODERN DIET FOR A SPORTSMAN

Fortunately, in today's world a sports person's diet is very different from what was followed in the past. Whereas earlier sportsmen were encouraged by their trainers to eat huge amounts of just about anything, athletes nowadays are extremely careful about the foods they eat as well as the quantities and frequency of their meals. It has been seen that athletes no longer eat a lot more than what normal people eat. In fact, while most of them stick to the same quantity food, the types of food chosen are generally high in nutrition. Depending on the needs and requirements of the athlete, some of them may choose to eat higher amounts of calorie dense foods, whereas other athletes may stick foods that are low in calories and fat.

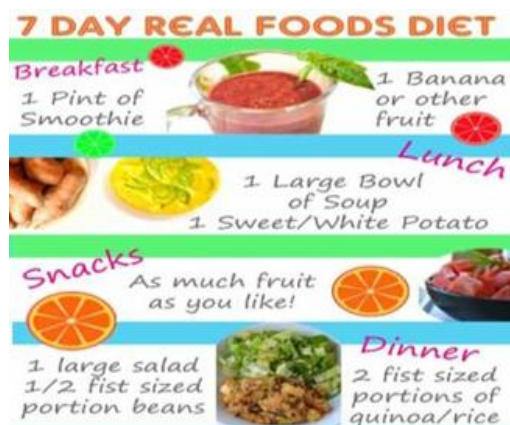
Moreover, since scientists, medical experts and sports dietitians are constantly carrying out new studies and researches on what foods and supplements are good for athletes and which ones should be avoided. The area of sports nutrition and diet can be a bit complicated, since it is so vast; however there are certain dietary tips that can be incorporated in almost any sportsman diet, be it a golfer or a weight lifter. The first thing to remember is that sports personalities may require additional calories, because of the amount they work out. However, these extra calories should come from nutritious foods, like fruits, vegetables, whole grains, dairy products, nuts, eggs, fish, and lean meat. Empty calories that come from sweets, confectionary, bakery items, fried foods and aerated drinks merely increase body weight, without adding any nutritional value to the body.

However, it is important to realize that every individual has different dietary requirements, based on their age, gender, body type and their levels of activity and all of these factors should be taken into consideration, while planning a diet for a sports person. For example, athletes that belong to a certain field may require bulk and muscle mass, like wrestlers, weight lifters, body builders and so on. Hence their diet will contain a lot of high calorie foods, like almonds, bananas, whole milk, beef, chicken, and so on. However, some athletes need to maintain a low body weight and lean physiques or figures, like professional high jumpers and skaters. They will need to consume foods that give their body's strength and stamina, but are low in calories, like green leafy vegetables, fresh fruits, seeds, skinless chicken and turkey and low fat dairy products. Runners, sprinters and other such athletes need to have average sized physiques and

hence they will need to include foods from all the healthy food groups in their daily diet.

### Are sports dietary supplements healthy?

The main reason that athletes turn to sports dietary supplements is that they are looking for a “magical ingredient”, which may have the ability to boost their strength and stamina, which improves their performance for a while or during a particular event. While some natural energy boosting foods are acceptable, the consumption of illegal drugs and steroids like anabolic steroids should be strictly avoided. Some of the sports dietary supplements like protein supplements may be helpful in boosting muscle mass. However, it is not advisable to take any supplement, even on a one-time basis, without consulting a sports dietician as well as a fitness trainer first.



In case a person is exploring the option of becoming a sports dietician, there are a few courses that will need to be taken, before getting certified in the field of sports dietetics in the USA. There is a lot of information easily available through online resources, on sports nutrition graduate programs, degree, internships, center, books, certification and articles too, for further reference.

### Eight Healthy Eating Goals

- **Make half your plate fruits and vegetables:** Choose red, orange, and dark-green vegetables like tomatoes, sweet potatoes, and broccoli, along with other vegetables for your meals. Add fruit to meals as part of main or side dishes or as dessert. The more colorful you make your plate; the more likely you are to get the vitamins, minerals, and fibre your body needs to be healthy.



- **Make half the grains you eat whole grains:** An easy way to eat more whole grains is to switch from a refined-grain food to a whole-grain food. For example, eat whole-wheat bread instead of white bread. Read the ingredients list and choose products that list a whole-grain ingredient first. Look for things like: "whole wheat," "brown rice," "bulgur," "buckwheat," "oatmeal," "rolled oats," quinoa," or "wild rice."
- **Switch to fat-free or low-fat (1%) milk:** Both have the same amount of calcium and other essential nutrients as whole milk, but fewer calories and less saturated fat.
- **Choose a variety of lean protein foods:** Meat, poultry, seafood, dry beans or peas, eggs, nuts, and seeds are considered part of the protein foods group. Select leaner cuts of ground beef (where the label says 90% lean or higher), turkey breast, or chicken breast.
- **Compare sodium in foods:** Use the Nutrition Facts label to choose lower sodium versions of foods like soup, bread, and frozen meals. Select canned foods labeled "low sodium," "reduced sodium," or "no salt added."
- **Drink water instead of sugary drinks:** Cut calories by drinking water or unsweetened beverages. Soda, energy drinks, and sports drinks are a major source of added sugar and calories in American diets. Try adding a slice of lemon, lime, or watermelon or a splash of 100% juice to your glass of water if you want some flavor.
- **Eat some seafood:** Seafood includes fish (such as salmon, tuna, and trout) and shellfish (such as crab, mussels, and oysters). Seafood has protein, minerals, and omega-3 fatty acids (heart-healthy fat). Adults should try to eat at least eight ounces a week of a variety of seafood.

Children can eat smaller amounts of seafood, too.

- **Cut back on solid fats:** Eat fewer foods that contain solid fats. The major sources for Americans are cakes, cookies, and other desserts (often made with butter, margarine, or shortening); pizza; processed and fatty meats (e.g., sausages, hot dogs, bacon, ribs); and ice cream.

### Why athletes eat more carbohydrates?

The quality and selection of food is an important part of a diet for an athlete. Athletes need to plan their carbohydrate intake, protein intake and vitamin intake as well. Athletes' carbohydrate intake depends on the type of sport they are training for. For example, bikers, long distance runners and swimmers or athletes that has to stay active for long periods of time, need to follow a diet that is high in carbohydrates. Athletes' carbohydrate requirement is determined by the sport that they are pursuing. Such endurance athletes carbohydrate intake should be about 50 to 70 per cent total calorie intake from carbohydrates.

When you exercise, your body changes glycogen into energy. If you exercise for under 90 minutes, you have enough glycogen in your muscles, even for high-intensity activities. But if your workout is longer than that, use these strategies:

- "Carbohydrate loading for 3 or 4 days before an event can help top up your glycogen stores," says sports dietitian Joy Dubost, PhD.
- Eat a diet that gets about 70% of its calories from carbohydrates, including breads, cereals, pasta, fruit, and vegetables, to achieve maximum carbohydrate storage.
- On the day of a big event, eat your last meal 3 to 4 hours before exercising, to give your stomach time to empty.
- Avoid eating sugary or starchy foods within 30 minutes of starting an activity; they can speed up dehydration.
- Replenish curbs, minerals, and water during long exercise sessions. Eat a snack and drink fluid every 15 to 20 minutes. Refined carbohydrates (with sugar or flour) pass quickly into the bloodstream, where they fuel working muscles. Many athletes prefer sports bars, sports drinks, or gels, since they're so convenient. But fruit and fruit juice are also excellent choices.

- Reload on carbohydrates after intensive exercise, too. "Since you don't need quick energy, it's best to choose less refined carbohydrates" such as a whole-grain bagel or carrot sticks, which provide both carbohydrates and a rich array of nutrients, Dubost says.

### What to Eat After Game to Gain Energy?

Carbohydrates provide quick energy. Foods which contain foods should be included in the list of foods to gain energy after a game. Most athletes eat carbohydrates before a game as the body burns carbohydrates for fuel first. Try eating these foods to gain energy after a game: fresh fruits and vegetables, cereal bars and so on. Healthy eating after a game also means including foods such as pasta, lean beef, fibre rich foods such as nuts, beans, whole grain breads, whole grain cereals, and so on. Food to gain energy after game could also be natural fruit juices and dried fruit.

### Get Enough Protein, But Not Too Much

Protein doesn't provide a lot of fuel for energy. But you need it to maintain your muscles.

- **Know what you need.** The average person needs 1.2 to 1.4 grams of protein per kilogram of body weight a day. That's about 88 grams of protein for a 150-pound person. A strength athlete may need up to 1.7 grams per kilogram of body weight. That's about 150 grams of protein for a 200-pound athlete.
- **Favor foods.** Getting too much protein can put a strain on your kidneys. Instead of protein supplements, eat high-quality protein, such as lean meats, fish, poultry, nuts, beans, eggs, or milk.
- **Drink up.** "Milk is one of the best foods for recovery after an event, because it provides a good balance of protein and carbohydrates," Dubost says. Milk also has both casein and whey protein. The combination may be particularly helpful for athletes. Research shows that whey protein is absorbed quickly, which can help speed recovery immediately after an event. Casein is digested more slowly, helping to ensure long-term recovery of muscle after a gruelling event. Milk also has calcium, which is important for maintaining strong bones.

### **Why High Protein Cause Dehydration?**

Research has shown that there is a connection between a high protein diet and dehydration. High protein diets are followed by athletes as such diets help to increase the muscle mass in their bodies. However, a high protein diet and dehydration are linked because as the amount of protein consumed by the athletes increased, the degree of hydrated decreased. A sense of feeling thirsty is a sign that dehydration has already set in. Dehydration causes other problems which include shock, acidosis, an irregular heartbeat, acute uremia and even death. The latter is more frequent in people who are sickly, aged or in infants.

### **Drink Fluids Early and Often**

Intense exercise, especially in hot weather, can quickly leave you dehydrated. Dehydration, in turn, can hurt your performance and, in extreme cases, threaten your life. "All high-intensity athletes should drink fluids early and often," Dubost says. "And don't wait until you're thirsty. By the time you feel parched, you may be seriously dehydrated." "One way to monitor hydration is to keep an eye on the color of your urine," says Joshua Evans, MD, a physician at Children's Hospital of Michigan in Detroit and an expert on dehydration. A pale yellow color means you're getting enough fluid. Bright yellow or dark urine means you're falling short. Because intense exercise makes you lose fluid quickly, it's a good idea to drink fluids before as well as during an event, Dubost says. Endurance athletes such as marathon runners or long-distance cyclists should drink 8 to 12 ounces of fluid every 10 or 15 minutes during an event. When possible, drink chilled fluids, which are more easily absorbed than room-temperature water. Chilled fluids also help cool your body down.

### **Go Easy on Fat**

For long events, such as marathons, your body turns to fat for energy when carbohydrate sources run low. Most athletes get all the fat they need by following the basic dietary guideline to eat mostly unsaturated fat from foods such as nuts, avocados, olives, vegetable oils, and fatty fish like salmon and tuna. Avoid fatty foods on the day of an event, since they can upset your stomach.

### **Replace Lost Electrolytes**

Sweating removes both fluids and electrolytes. Electrolytes help transmit nerve signals in your body. To replenish them, reach for sports drinks. If you're also losing a lot of fluid as you sweat, dilute sports drinks with equal amounts of water to get the best balance of fluid and electrolytes

### **What Is The Idea And Good Pre Game Meal?**

What is the ideal pre game meal? Some people feel that the ideal pre game meal is one that is loaded with carbohydrates as carbohydrates provide the body with quick energy. An ideal pre game meal is one that contains about 70% of carbohydrates. This will prevent the athlete from getting tired. Certain foods that should be a part of this pre game meal include cheese, whole grain bread, salad and cheese. Pregame diet guidelines include staying away from foods that have a high content of processed sugar and any new foods that have not been tried earlier. Choose your foods wisely for a pregame meal.

### **Healthy Snacks**

- For a handy snack, keep cut-up fruits and vegetables like carrots, peppers, or orange slices in the refrigerator.
- Teach children the difference between everyday snacks, such as fruits and veggies, and occasional snacks, such as cookies or other sweets.
- Make water a staple of snack time. Try adding a slice of lemon, lime, or a splash of 100% juice to your water for a little flavour.
- Swap out your cookie jar for a basket filled with fresh fruit.

### **Ways to Reduce Fat, Salt, and Sugar**

- Choose baked or grilled food instead of fried when you're eating out and implement this at home, too.
- Make water and fat-free or low-fat milk your go-to drinks instead of soda or sweetened beverages.
- Serve fruits as everyday desserts—like baked apples and pears or a fruit salad.
- Read labels on packaged ingredients to find foods lower in sodium.
- Skip adding salt when cooking; instead use herbs and spices to add flavor.

### **CONCLUSION**

The sportsman eats partly to satisfy the sense of taste but mainly production of energy required to carry out various activities. Indeed it is energy that rotates the wheel of life. The food that generates energy upon complete oxidization is in the form of

carbohydrates, proteins and fats. Ofcourse the diets must be supplemented with more energy for the sport man so his/her diet must compose more energetically and nutritious food as a sportsman ship required.



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