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Sports Nutrition: A Plan for Successful Diet Management

Dr. Ramesh Chand[1]

[1]Assistant professor, (Physical Education) Centre of Excellence, Govt. College Sanjauli, Shimla, H.P., India

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Abstract

The aim of this Paper is to throw some light on nutritional aspects of sports, in particular those related to the nutritional demands made by sporting activities, and how these can be addressed. High levels of physical activity as a consequence of training or competition significantly increase daily energy expenditure (by up to 3-fold) depending on an individual's physical fitness, body size, and the type and intensity of sport. Sports nutrition plays a key role in optimizing the beneficial effects of physical activity. For this reason athletes must increase their energy and nutrient intake. This increased food intake should be nutritionally balanced and particular attention paid to carbohydrate and water intake. There are lot of food stuffs which are concentrated sources of nutrients, vitamins or other substances with a nutritional or physiological effect whose purpose is to enhance the normal diet. Consuming the right balance of food and drink is important for everyone. Making better decisions with your nutrition and hydration can result in improved performance, recovery and injury prevention. It also focuses on their types and needs according to requirement.

Key Words: Dietary Supplements, Food, Anti Oxidants, Lifestyle, Nutrition and Health.

INTRODUCTION:

The importance of sports nutrition

Consuming the right balance of food and drink is important for everyone. Yet those actively participating in sport on a regular basis need to be aware that it can also affect their performance. Athletes, for example, may need more calories than the average person. So if you're an athlete, or simply someone who's made the decision to start exercising on a regular basis, you shouldn't let a good nutrition plan fall down on your list of priorities.

Sports performance and energy

Fats, protein and carbohydrates all provide your body with fuel to maintain energy. Carbohydrates are the primary fuel used by working muscles. Adequate intake is essential for preventing muscle fatigue. While you should monitor your fat intake, you should not remove it from your diet completely. Fats provide fatty acids that can be used as a source of energy - especially if your exercise sessions last longer than one hour. Fats also provide the building blocks for hormones and formation of cell walls. Protein can be used as a source of energy and is critical for building new muscle tissue. If you are taking part in resistance training, your body will require additional protein.

Sports nutrition is nothing short of essential. All the athletes you see on the television, competing in the Olympics and breaking world records have a nutrition plan in place that allows them to succeed. If you are to succeed in the sports, you need to ensure that your nutrition is the top of the line.

Ask yourself these questions:

· Do you know when to eat before your game?

· Do you know what foods are going to help to ultimately win the game if eaten before you compete?

· Do you truly know how much hydration your body needs to power its way through?

· Did you know that with proper nutrition, the right plan and consistency, your body can do better, perform harder and be more likely to be successful?

- Why isn't there just one diet which will give you all nutrients?

Your Goals:

Your goals will follow these needs specifically:

1. Learn when you need to feed your body to succeed.

2. Learn what amounts your body will need to be successful.
3. Develop a plan to help you to succeed at sticking with your goals.
4. Work the plan and find success.

After following these tips you will be well on your way to a successful sports nutrition plan that will provide you body with excellent fuel to give you that winning edge.

Foods: A Plan for Successful Diet Management

What you eat is just as important as how much you eat, so let's break it all down for you.

What You Need

The more you demand from your body, the more it will need. Mainly the food groups are as under:

Dairy Group: Your body needs dairy to provide calcium. Proteins, vitamin A, and riboflavin are also found in dairy, making it necessary for good nutrition. You should consume at least 3 servings per day which is about 8 ounces of liquid or about one and a half ounces of solids. You will find dairy in milk, yogurt, and cheese. You should limit the amount of fat that comes in from these items though. Low fat products increase the good while decreasing the bad.

Vegetable Group: Green vegetables (like kale, wheat grass and spinach, for example), sea vegetables and fresh vegetable juices are considered some of the healthiest foods on earth, known to dramatically **help slow aging** . They help restore the body's proper pH, prevent nutrient deficiencies, curb hunger and detoxify the blood. They are also super low in calories, yet beaming with antioxidants, phytonutrients and vitamin C, vitamin K, magnesium, potassium, iodine and fiber.

Antioxidants found in vegetables are an amazing thing: They develop within plants to protect the plant from its damaging environment including ultraviolet radiation, predator pests, toxins and pollution. Phytonutrients have the purpose of shielding plants from predators (and also provide their color, flavor and smell), and we obtain the same benefits when we eat them.

You should have five servings of vegetables per day where 1 serving is about half of a cup of raw or cooked vegetables, one cup of leafy vegetables or six ounces of juice. Great choices in vegetables include tomatoes, broccoli, and Brussels sprouts for their high levels of vitamin C. For vitamin C, go with carrots, sweet potatoes, pumpkin, greens, and spinach. Darker colours, like dark greens, deep reds, oranges and yellows are ideal for a good overall nutritional value.

Meat Group: Meat is a good source of protein, the very building block for muscles. Therefore you need to ensure that you get enough protein in your diet to allow you to build your strength. Organ meats, including beef or **chicken liver,** are some of the most nutrient-concentrated foods available to us. Liver is a true superfood and exceptionally high in zinc, iron, vitamin A, vitamin B12 and more. It might not seem appealing to you at first, but consider that a "nose to tail" approach of eating animals has been practiced for thousands of years — and for good reason!

Consuming nutrient-packed organ meats and all edible parts of an animal, plus making **bone broth** with the remaining parts that are normally discarded (like bones, skin and ligaments), provides us with hard-to-find nutrients like **collagen**, glucosamine and an abundance of electrolytes and trace minerals. These nutrients help ward off and treat illnesses like irritable bowel disorders (IBD), arthritis and joint pains, chronic fatigue, leaky gut syndrome, anemia and allergies.

Meats also provide your body with iron, thiamin, riboflavin, niacin and zinc. You need to consume three servings of protein per day. This is about three ounces of cooked meats, two eggs, one cup of cooked beans or lentils, or four tablespoons of peanut butter. Good sources of protein include lean amounts of beef, pork, lamb, poultry, dry peas and beans, peanut butter and eggs.

Grains Group:

Carbohydrates are a necessary building block for energy in the body and many will come from grains. These provide complex carbohydrates including starch and fibre, along with protein, the B vitamin group and iron. People who eat whole grains as part of a healthy diet have a reduced risk of some chronic diseases. Grains are important sources of many nutrients, including fiber, B vitamins (thiamin, riboflavin, niacin and folate) and minerals (iron, magnesium and selenium). Try adding flaxseed and oatmeal, which contain phytochemicals that are being studied for added health benefits, to your balanced diet.

Dietary fiber from whole grains, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower risk of heart disease. Fiber is important for healthy bowel function and helps reduce constipation.
You need to consume eleven servings of carbohydrates per day. One serving is equivalent to one slice of bread, three or four crackers, half of a cup of cereal, rice or pasta, or one ounce of breakfast cereal. Good choices for sports nutrition include grains that are whole grain, which include cereals, bread, pasta, and rice.

Fruits: Fruits are nature's marvelous gift to the humankind; indeed, they are life-enhancing medicines packed with vitamins, minerals, antioxidants and many phytonutrients (Plant-derived micronutrients). They are an absolute feast to our sight, not just because of their color and flavor but of their unique nutrient profile that helps the human body be fit, rejuvenate, and free of diseases! Fruits have vitamin C which is powerful and can be found in your citrus foods. Additionally, melons, strawberries and blueberries are all great sources. Apricots are great for Vitamin A. You need to consume four servings per day in fruits which is one whole fruit item such as a banana or an apple, half of a grapefruit, six ounces of fruit juice, or a quarter of a cup of dried fruits.

Tips to Remember

1. Eat often, but eat less. Your body should not need to wait hours before its next meal, and you need to provide it with fuel on a consistent basis, so eat a small meal every few hours.
2. Snacks are ideal between big meals, but don't go for empty calories or poor nutrition. Great choices for snacks are vegetables, fruits, salads, and nuts, which provide high levels of minerals and vitamins your body needs.
3. Get your energy from all the food groups. Carbohydrates are ideal for times when you are pushing yourself hard - perfect for a workout, but leave out the bad stuff! Go without the butter and the dressings.
4. Breakfast is essential. Your body needs a kick start in the morning to get the metabolism moving and get your body working the right way from the start. Don't skip it.
5. Skip late night meals. They will not provide you with anything necessary for your health. You need to provide your body with nutrients. Food is fuel. It is important to know when to eat and how these elements of your diet improve your sports abilities.

Aspects of Sports Nutrition:

There are several aspects that you need to consider when it comes to sports nutrition.
Hydration: Good hydration means getting the right amount of water before, during, and after exercise. Water regulates your body temperature and lubricates your joints. It helps transport nutrients to give you energy and keep you healthy. If you're not hydrated, your body can't perform at its highest level. You may feel tired, have muscle cramps, dizziness, or other serious symptoms. Whether you're a serious athlete or simply exercise for recreation, it's important to stay hydrated.

The Importance:

If you lose 2% of your body's fluid, your overall performance will considerably drop. If you lose 5% of your body's fluid, you can find yourself facing heat exhaustion, which is not good. Now, you are barely moving. If you lose 10% of your body's fluid, you are at risk of heat stroke and even death through dehydration. In other words, game over!

How Much Is Enough?

Thirst is the first sign of dehydration. If you get to the point of being thirsty, you have already lost at least one percent of your body's fluids and are already putting your body at risk. You need to drink more than enough to quench your thirst (don't stop when you are no longer thirsty either). It is essential that you are always keeping those fluids moving in your body, pumping energy to your cells so that you can perform.
There are no exact rules for how much water to drink while exercising, because everyone is different. You need to consider factors including your sweat rate, the heat and humidity in your environment, and how long and hard you are exercising.

The American Council on Exercise has suggested the following basic guidelines for drinking water before, during, and after exercise:

- Drink 17 to 20 ounces of water 2 to 3 hours before you start exercising.
- Drink 8 ounces of water 20 to 30 minutes before you start exercising or during your warm-up.
- Drink 7 to 10 ounces of water every 10 to 20 minutes during exercise.
- Drink 8 ounces of water no more than 30 minutes after you exercise.

Athletes may want to measure how much fluid they lose during exercise to get a more specific measurement of how much water to drink (16 to 24 ounces of water for every pound of body weight lost).

Carbohydrates: Here we are not talking about any type of diet. Carbohydrates are an essential building block for your body's workout, and we need to know when to eat them, what they will do for you, and how much to consume.

How They Effect Your Body

- Carbohydrates are necessary for the production of energy in your body.
- The body will take carbohydrates and convent them to sugars for easy consumption.
- The starch in carbohydrates is used for energy in the form of glucose (the sugar) to power the body through exercises.
- Carbohydrates are also stored in your liver as well as in the muscle tissues throughout your body. This is called glycogen.
- Carbohydrates provide a high power boost of energy for a short time period.
- When the body does run out of carbohydrates in this type of fuel, it will then burn other elements including fat and then it will go to protein to use for energy output.
- When your body goes to fat usage for energy, your performance level will drop.
- When the body goes from fat to protein, it is beginning to take apart muscle mass which is counterproductive and therefore will cause performance to further drop significantly.
- Not enough carbohydrates when you begin to exercise, play your game, or physically exert yourself and your body will resort to turning to stored fat and stored protein.
- Do not exercise heavily for more than 60 minutes without consuming any carbohydrates.
- Do not do any high intensity sport without carbohydrates available to power your body through fuel.

Proteins: Protein is the building block of our body's muscle. Without the right types of proteins in your body, your body can not successfully build the muscle groups you would like to build. You need to learn what you need, when you need to consume it, and the foods which will provide it.

The Need of Protein

Another aspect of the athlete's sports nutrition is protein. Protein is yet another fundamental building block that you need to incorporate into your diet in the right manner in order to succeed at building your body into an energy producing machine so you can win at your game, whatever that is.Too much protein can be detrimental to your performance. As part of your body's necessary team for success, protein intake should be monitored carefully, especially around your events and competitions. Protein is present in every cell of the body and is important for helping to build and repair tissues. It's also used to make enzymes, hormones and a variety of additional body chemicals as well as forming the building blocks of bones, muscles, cartilage, skin and blood. Similarly to carbohydrates and fats, protein is a macronutrient and the body requires a large amount of it, but unlike fat and carbohydrates, the body has nowhere to store protein for when it requires a new supply. Protein foods include meat, fish, eggs, pulses, nuts, seeds and soya products.

Fats: Are they good or bad? Your body does need fat, no matter what those diets tell you, but you need to know what fat is good and what is bad, and your body needs to have it delivered at the right time for it to be useful.

What Is Fat?

Fat is a product that you ingest when you eat foods. While there is not just one food group that it comes from, there are many things that you need to realize contain higher amounts of fat. Fat comes from anything that is from

animals. This type of fat is called saturated fat and is the worst of the two types. This would include: Meats of all types; even lean meats will have some levels of fat in them.

· Eggs have a high amount of fat.

· Milk, even low fat milk, still contains a good amount of fat.

· Cheese too may be low in fat, but will still contain a good amount of fat. Unsaturated fats are fats that come from vegetable products of all types in varying amounts.

How Much To Consume

When it comes to how much fat you should be consuming, it is not as complex as that of your carbohydrate or your protein calories. You should not consume more than 25 to 30 percent of your calories in fat. Generally speaking, this is not hard to do, unless you are used to eating deep fried products or those that are covered with saturated butters and sauces. Sorry, but the body needs to be regulated here!

Where Fats Are Used

There are three main times in which fat will be used to burn energy in your body or will be needed for you to have on hand for that reason.

1. If you are participating in extreme or intense exercise, your body will need more energy to burn than you have stored in glycogen or in carbohydrates readily available. It will then turn to stored fat for help in providing you with the energy that you need.

2. When your body is at rest or you are just doing low to moderate amounts of work, your body will then primarily use fat to burn as fuel. During this time, just small amounts of fat will actually be burned.

3. If you continue to exercise for long periods of time, such as when you run a marathon or a long endurance race of any type, your body then needs to tap into fat stores to help it to power through all of these needs. When it comes to fat and sports nutrition, it is something that you really do need to monitor. Consuming a lot of fatty foods, especially those that are made from saturated fats, will put your health at risk. As far as sports nutrition goes, too much fat can cause your performance to slip. The body does not perform as well as it does with carbohydrates or even by burning protein when you are consuming fats.

Foods That Work Well:

Ok, so you would like some help in determining what foods are ideal or the pre game meal or perhaps an overall look at what you should be eating. Here's a break down that will help you.

Foods High In Carbohydrates

The first and most important aspect of sports nutrition is to provide your body with the building blocks of what it needs to perform, i.e. carbohydrates. Following are some ideal foods to consume as high in carbohydrates. These are the foods to eat prior to your game, your competition or your events.

Potatoes

For a carbohydrate to be considered a good carb, it needs to provide vitamins and minerals in addition to the carbohydrate. Most importantly, a good carbohydrate needs to contain fiber. Fiber is helpful in managing blood sugar levels, lowering blood cholesterol levels and creating a feeling of fullness. Potatoes meet this definition under certain parameters, including the way they are prepared and the amount consumed.

Potatoes are high in starch and carbohydrates, and is the ideal pre event meal choice. You can eat them any way that you would like - baked mashed, pan fried, broiled, etc, but just avoid deep frying them (no French fries please).

Pasta. Pasta is a quick and easy meal and it's great for sports nutrition preparations. It can be topped with spaghetti sauce or taken plain. However be careful when you add oils, butter, or heavy sauces to the pasta though, and you shouldn't top it with too much meat, especially when this is a pre-game meal. Cheese too should be avoided or kept at a minimum especially as it contains lots of fat.

Rice. When it comes to rice products, you have all types of options. Consider mixing the rice with vegetables, add some hot peppers for taste (don't over do it though or you'll end up with stomach ache) Again, you should limit the additions to the rice - no foods that are high in saturated fats. Avoid gravy, butters or other heavy cream sauces.

Cereals. Almost all cereals are okay, but you do need to look at what is in them. Avoid foods that are high in sugar or fats as many cereals are. You should consider foods like oatmeal, porridge and other warm cereal type foods, but again make sure that you check the ingredients. Always use the cereal with low fat, with milk product and avoid adding additional sugar.

Bread. Bread can be a right choise. There are plenty of ideal products, from slices to rolls, you have many choices to pick from. But, again, you really do need to limit what you put on the breads. You should not top them with lots of butter or fill them with high protein or high fat foods. Spreads and other products that are added that are high in fat will greatly reduce the benefits.

Fruits. Some confusion surrounds fruit in sports nutrition. While they do have sugar in them, it is natural sugar that allow our bodies to better stay hydrated and to take in the carbohydrates that we need. Your options are many and should include things like oranges, bananas, and apples. In the form of whole fruits, most of them are easy to digest and will provide the necessary nutrition. In the way of juices, you should look at the ingredients. One should not use fruit juices to have more than 8 percent carbohydrates or electrolytes as this will make them harder for your body to digest.

Dairy Products. By all means you have to have your milk with your breakfast have. Actually low fat dairy products are perfect for the sports nutrition guide. Try a variety of things including low fat milk, low fat cheeses, low fat yogurts and others. Again, avoid things that are high in fat or that are added to the dairy products (such as chocolate).

Foods That Will Hurt:

There are so many wonderful foods in this world, sometimes it's hard to stop eating your favorites! However, there are plenty of good reasons to practice moderation in your life, one of them being that some foods can actually harm you if you eat too much! It's absolutely mind-blowing to imagine that simply eating too much of something can cause you bodily harm, but it's true! Keep reading and find out if any of your favorites are on this list!

Unfortunately, all foods are not good for our sports nutrition diet. Here are some foods that one should avoid and reasons why they are anything but helpful to your overall performance.

1. **Candy.** There we said it. You have to give up candy products because of the amount of sugars in them. They can throw off your blood sugar and cause you to have less than ideal results in your performance. They can also make you feel awful after only a few minutes of being in your system. They create a natural rush that can only be sustained for a short period of time, after which your energy level will drop dramatically.

2. **Caffeine**. Caffeine will slow you down, keep you away from staying hydrated, and it will ultimately ruin your game.

3. **Junk Food**: Keep yourself away from foods that you know upset your body. While these foods may seem healthy and helpful to you, they can cause your stomach to hurt, your body to shift it focus to concentrate on healing and consequently loss of performance edge.

This would include any food that gives you gas, things like raw vegetables, beans and popcorn. This can be a very individual thing, but you know your body and what you should avoid.

4. **Fatty foods**. We have talked a great deal about the harmful effects of fatty foods in your diet as an athlete. It has to be on our list here because of the amount of performance success it is likely to steal from you. This should include foods that are high in saturated fats like creams, fatty meats, deep fried products, and high fat dairy products. Cut out these products from your diet and you will ultimately have a better result overall for all of your hard work.

5. Fruit Juices. The fruit juices you find at the supermarket aren't always what they seem.They may have small amounts of real fruit in them, but often they are little more than water, artificial flavor and sugar. But *even if* you're drinking real

fruit juice, it is still a bad idea. Fruit juice is like fruit with most of the good stuff removed. All that is left is the sugar and a few vitamins. Orange juice, for example, contains the same amount of sugar as Coca Cola. There's no fiber in it, no chewing resistance and nothing to stop you from downing massive amounts of sugar in a short amount of time. Eating too much sugar is associated with all sorts of diseases. These include obesity, type II diabetes, cardiovascular disease and many others. It is much better to avoid fruit juices and eat real fruits instead.

Conclusion:

In conclusion it is important thing to remember is to stick to the nutrition practices currently supported by scientific research and to avoid looking for a "magic bullet" to cover all your specific nutritional needs. One should be able to accurately evaluate your both pre/post game and sports and physical activity diet. You should also be able to compose a regimen of proper sports nutrition including the correct amount of carbohydrates, fats and proteins, water to hydrate yourself, electrolyte replacement, and vitamins and minerals. By learning appropriate sports nutrition, you can help to eliminate the risk of possible injuries, health problems, and even possible death.

Your dedication to a good sports nutrition program is the only way you will succeed and achieve maximum performance. With knowledge and practice, you can have the best of both worlds: good health and maximum performance.

Success can and does happen when you look at all areas of your game including sports nutrition

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Corresponding Author:
Dr. Ramesh Chand,
Assistant professor,
Centre of Excellence,
Govt. College Sanjauli,
Shimla, H.P., India