

**LISC Nutrition Guide**  
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The LISC realizes the impact that proper nutrition and hydration plays in the role of peak performance in Soccer. Each athlete must be given guidance as to what is appropriate and not appropriate for performance needs. LISC goes a step further and understands the role of nutrition and good health in general.

The public is inundated with highly processed non-nutritional foods that offer little to no benefit to performance, and in fact, they detract from performance as well as good overall health.

### **Hydration**

The human body is a wonderful machine designed to regulate itself on an ongoing basis. One of the flaws of the human body's regulatory abilities is in detection of low hydration and the signal it gives to the brain.

When a person gets a thirsty response it is usually too late; this is a sign of dehydration. This is why it is vital to drink consistently throughout the day. In the book; *Your Body's Many Cries For Water*, pg. 8, it has been said that your body is made up of as much as 75% water and your brain is 85% water. After looking at these numbers it could be assumed that any loss in water to the body could dramatically decrease the function and performance of the muscular system. Cramping can exist and lack of muscle function. Now, if we realize that the brain is 85% water and any loss of water from the brain could result in slower response time, lower cognitive reasoning during play, poor decision making, headache, and many other potential issues.

The way to avoid this is simple; Drink more water! It has been said by many resources that you should drink 8 glasses of 8 ounces of water every day. If this is good for the

average person, what about a soccer player that is sweating profusely for several hours in the heat? The exact amount of water intake per person will vary, but it would be safe to say that 8-10 glasses of water per day at roughly 8 ounces for a highly active soccer player would be a minimum. Keep in mind this will vary from individual to individual.

It is important to NOT drink large volumes of water at one time during activity or just prior. This can cause a discomfort in the stomach and possible cramping. It is best to have small amounts continually throughout a practice or game so your hydration levels stay up. It might be a good idea to drink approximately every 15 minutes during competition.

Finally, soda, coffee, tea, juice, Gatorade, and other soft drinks are not to be substituted for water. Gatorade may be used during long (2-3 hours) hard intensity activity where sweat loss is high. You may need to replace electrolytes that get lowered due to such high levels of sweat. In this case drinking Gatorade in small amounts during and larger amounts immediately following are best. Hours later get back on the water wagon.

### **Goals for athletes**

There is a difference between a healthy diet for an adult just wanting to improve overall health and a soccer player that needs to improve performance.

### **Carbohydrates**

One of the biggest trends in the diet industry was to go on a low carbohydrate diet. Well this may be fine for not so active adults trying to reduce the blood sugar levels, but consider the soccer player that needs the higher glycogen (sugar) levels in the muscles for energy production. If the soccer player has a real low carbohydrate diet it can negatively affect performance. Here is the kicker, if the carbohydrates are in the form of simple sugars the glycogen stores can be available, but the nutritional content is so low it affects overall health. The carbohydrate needs to be complex and with fiber and whole foods.

It is important to realize that every bit of information on nutrition for athletes is going to have to be based on individual needs. The big picture can remain the same such as; hydration levels, eating whole foods, eating proper amounts of carbohydrates, proteins, and fats, and when to eat prior and after competition.

Another important aspect to realize is the balance between weight loss and gain due to food intake versus food expenditure. If an athlete is eating more than they are expending in energy- the result will be in weight gain. This may or may not be a positive. The opposite is true as well. If an athlete is burning energy quickly and more than the intake of food, weight loss is going to result. This may or may not be a good thing.

It is important to understand the concept of energy expenditure in performance. If an athlete is highly metabolic in nature- they burn calories quickly and easily. They may need to consume more food more frequently to maintain a certain body weight and level of energy. This may not be the same for a different athlete. The point is each athlete must regulate their own personal nutritional plan to meet the energy requirements.

### **Eating Protein for optimal performance and health**

Protein is basically the building block of muscle. It is made up of amino acids that in turn form a protein. When an athlete works hard in training or competition the body goes through micro trauma that needs to be repaired to gain the result of the workout. Protein will accomplish this job.

With in reason, the more protein intake the greater potential for lean muscle mass to be gained. The results of eating higher protein can also be seen in reducing the amount of fat that a person has around their body. This is due to the higher levels of energy required to burn protein and break it down into usable parts. This is a positive thing for an athlete. When an athlete can reduce the amount of fat and replace that body weight with muscle the potential for optimal performance is increased.

## **The Intake of Fat is Important**

Athlete and non-athletes alike were shunned from fat intake for a while in earlier diets. Now it is realized this was a mistake. Many fats are extremely important for normal functioning of the cells, and other processes in the body. There are fats that contain omega 3 and omega 6 fats that are beneficial to the development and maintenance of good health. There are essential fatty acids that are important for survival.

The one big stereotype of fat is that eating them will make you fat! This is not always the case. There are some fats that can cause you to loose weight. Fats can also improve overall immune system function with the ingestion of certain fats.

It is important to realize that many fats such as Flax seeds, fish oils, and vegetable oil fats have positive affects on the functioning of the body and therefore performance in sport. Now on the other hand, it is vitally important to avoid the bad fats such as Trans Fats. This is when the cardiovascular disease and other issues is seen when high consumption of Trans Fats. It is recommended that 30% of the diet in athletes should come from good fats.

## **Pre- and post competition meals**

In terms of pre-competition meals it is important to eat foods that will allow for good performances. What this means is that not everyone will eat the same things due to individuality. Certainly this doesn't mean that you can eat "junk foods" and expect to have good performances and health. Eating a proper diet that is comfortable for the individual to handle and not induce and upset stomach or cramping.

So, it is important for each individual to rely on what they know will not hinder their performance and will allow their energy levels to stay high.

Also, it is important to eat a larger meal several hours prior to competing to allow for digestion and gastric emptying to occur. You can eat smaller snack close to competition that, once again, don't affect your stomach and performance adversely. This form of snack may be a half of a sandwich, fruit, whole wheat crackers...

Post workout meals are crucial to take advantage of what is sometimes referred to as the "Golden Hour". This is a time when the cells are most absorbable to replace glycogen stores. This is when carbohydrates are important to consume. Protein synthesis is high at this point as well.

Many times it is difficult to have a full meal immediately following competition or practice. Even if it were possible, the absorption rates of a full or whole food are much slower. This is when replacement shakes and other sports drinks are good. They allow for quick absorption to take place and can aid in recovery much quicker than a food meal. Basically liquid meals are easy and convenient to take.

### **General Good Nutrition Habits**

Each and every athlete should follow some basic guidelines to better health and performance through nutrition.

- It is wise to eat good sources of fat, carbohydrates, and proteins on a daily basis.
- Be sure to pay extra attention to hydrating each and every day and especially during practices and competitions.
- Eat plenty of fruits and veggies all day long.
- Eat more often throughout the day. Don't skip meals if at all possible. This is when meal replacement shakes come in handy.
- Eat nutrition snacks in between the big meals. Eat at least 6-7 times per day.
- Try to eat veggies with each meal
- It is important to eat most of your carbohydrates after you exercise due to the absorption rate being higher after exercising.

- Eat quality protein at each meal. Protein is important for muscle repair and growth, plus positive energy burning affect all day.
- Eat fats that are healthy and promote greater immune system function such as omega 3 and omega 6, flax and fish oils...
- Take daily vitamin and minerals to improve health.
- Supplements can be used to aid in nutritional gain, but never replace good whole foods with supplements.

Here is a great resource to find the foods and the categories they fall under. This will make is easier for you to choose more variety:

[www.nalusda.gov/fnic/foodcomp/search/](http://www.nalusda.gov/fnic/foodcomp/search/)

Resources:

John Berardi at [www.johnberardi.com](http://www.johnberardi.com) Also John Berardi's Nutrition Chapter in the book for the IYCA. [www.iyca.org/](http://www.iyca.org/)

The book "Your Bodies many Cries for Water". By Dr. Batmanghelidj.  
[www.watercure.com](http://www.watercure.com)