HERNANDO SOCCER CLUB

RECOGNIZE TO RECOVER
Presented By THORNE

# NUTRITION GUIDE:
# NUTRITION INTRODUCTION




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# NUTRITION GUIDE: NUTRITION INTRODUCTION

When people think about being a good soccer player, they tend to talk about an individual's abilities. Can he or she dribble well? Is he or she fast? Do they have a knack for scoring goals? What most people forget is that for any individual at any level, being a good soccer player starts with being healthy and eating right.

Soccer is a demanding sport that requires both endurance and sprint ability, and those high-intensity efforts result in a high-energy demand. Especially during periods with many matches or a lot of training, nutrition is important to recover and protect against overuse injuries. A good diet and the right nutrition can support intensive training while limiting the risks of illness or injury and are also important in the preparation for games and speeding up recovery afterwards.




Soccer is also demanding because it is a brain sport, too. It requires agility, concentration, quick processing of information and decision making. Making sure that the brain is functioning well is an important factor when optimizing performance, and there is increasing evidence that the brain responds to certain foods.

**So, we can all agree that making the right choices to get the best nutrition is important for soccer players at all levels.** But what is the right nutrition? And how do you know what is good and not good? The truth is there is no easy answer to this and the solution will be different for every player, but a good place to start is the basics.



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# NUTRITION INTRODUCTION

## NUTRITION - THE BASICS

Food, nutrition and healthy eating are constantly spoken about in the media, in homes and by top athletes. However, before trying the latest diet or super food it is extremely important to know the basics. The basics of eating right will provide you with a great starting point to live a healthy and active lifestyle, and will allow you to investigate any specific needs you may require.

## ENERGY

### Why do I need it?

Energy is required by the body for all sorts of functions such as growth, development and repair. The most important energy function for soccer players is its use in muscle contraction that allows players to kick, jump, run and tackle. Without energy in the body all these functions – and many more – would not be possible, and whether it's a 90-minute soccer game or a three-second sprint the body uses the same energy source. However, the body does not have unlimited storage space for energy and therefore must continually make and replace energy that is being used up by the person and the activity they are doing.

### Energy Storage

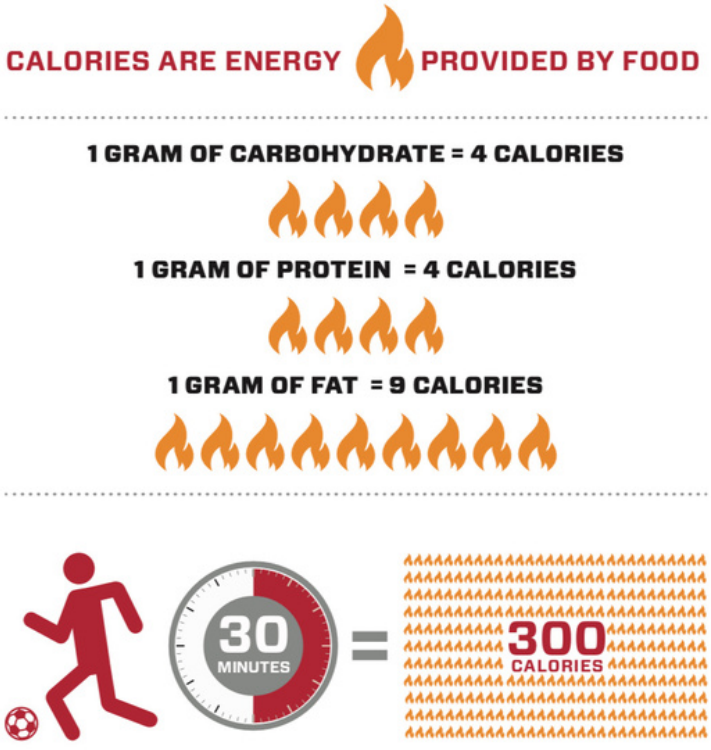
The body is very clever and when it has enough energy it begins to save and store energy across the body for use in times when it might need it in the future, such as playing soccer. If you did not have energy stored, then playing and training for soccer would not be possible and you would get very tired and slow. However, if you continue to consume high amounts of energy without using it, your body will continue to store it every day, week, month and year and this is when individuals can gain excess weight. Simply put, if you eat more than you work off you will put on additional weight.

### What is a calorie?

The word calorie is a widely used term and can be found on the front of almost all food packaging. We use the term calorie to help us understand the amount of energy a food source possesses. If you look to the right you can see the calories available from 1g of each of the main three food sources.

**As you can see, you get more than 100 percent of calories from fat than you do from carbohydrate and protein.** That is why if your diet is made up of mainly fat you would probably have excessive energy intake, which could lead to weight gain and health issues.

The U.S. government recommends that the average male should consume around 2,700 calories per day and the average female around 2,200. However, this is individual and dependent on weight, height and of course physical activity levels. For example, research has shown that **soccer players can use around 300 calories for every 30 minutes of training or playing.**



# NUTRITION INTRODUCTION

## NUTRIENTS

**What are they and why are the important?**

You may hear the word nutrient used to describe food and its content. The term nutrient is a way of describing a substance that provides nourishment essential for the growth and maintenance of life.

There are six categories of nutrients that are essential to keep us alive that we must take in from food because the body does not have the ability to produce them on its own. We will go into more depth about some of these later.

### THE SIX NUTRIENTS

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| Carbohydrates | Proteins | Fats | Vitamins | Minerals | Water |

### Macro-Nutrient

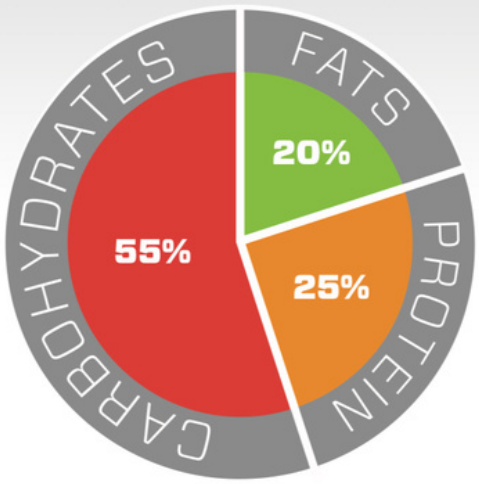
A macro-nutrient is something **the body requires in large quantity** to provide all the energy needed to function. Macro-nutrients include: carbohydrate, protein and fats.

VS

### Micro-Nutrient

A micro-nutrient, is something **the body requires in smaller amounts** for maintaining health, growth and development of all body functions. While small in quantity, these are again essential for living a healthy active life. These micro-nutrients include vitamins and minerals.

### MACRO-NUTRIENT DAILY MEAL DISTRIBUTION



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## CARBOHYDRATE

### What is it?




Carbohydrates are the body's preferred method of receiving food and turning it into energy. While many diets try to suggest restricting the intake of carbohydrates, it is actually an important source of food for the body and **should make up 55 percent of your diet**. The reason why people often try to reduce carbohydrate is because if the body does not use the energy it will transform the carbohydrate into fat to store for another day. However, soccer players live active lifestyles and should be eating well-balanced diets; therefore, this should never become an issue.

### What does it do?

When you eat carbohydrate rich food, the body goes to work breaking it down into easy to use energy (glucose). This glucose is absorbed by the body in the small intestine and then carried to the liver where it is changed to glycogen, which is the storage form of glucose. The liver can hold around 2,000 calories of glycogen, while the muscles can hold a small amount as well; however, anything above this will be stored as fat to be broken down later when needed. As soon as your body requires energy to perform a function or exercise, the glycogen that the body has stored acts as a quick release and is broken back down into glucose to support the energy needs of the muscles.

### What foods should I eat to get carbs?

Carbohydrate can be found in a lot of food that you eat, but it is really important to know the form of carbohydrate you are eating as it makes a difference. You may have heard carbohydrates referred to as "simple" or "complex" but it might be easier to consider them as "whole" or "refined" instead. A whole carbohydrate is something that has not gone through processing and is found in the natural environment and contains fiber (important for health and digestion), while refined carbohydrates have often been processed and have all the natural fiber taken out. The best approach is to stick to whole carbohydrate and avoid refined carbohydrates. If it is a single ingredient food it is probably a whole food and a good choice. A multi-ingredient food is often refined and is a bad choice.

### Refined / Complex

VS

### Whole / Simple

You should try to avoid refined carbohydrates. The process of making refined carbohydrate food products often takes away and removes any of the essential nutrients we talked about earlier. Instead, there refined foods provide the body with a quick sugar spike that it can not handle or helpfully utilize. Also, long term abuse of these products can lead to health problems including obesity and diabetes.

Whole carbohydrate products can be best for us even when they get a bad reputation for being related to the refined products. Whole carbohydrates are packed with essential life nutrients and fiber that the body can slowly breakdown and decide how to use, these products do not cause sudden swings in blood sugar levels.

**Bad carbohydrate choices:**

- Sugary Drinks are packed with useless refined sugar
- White Bread, white pasta and white rice (due to the process of making these foods, they are packed with refined carbohydrate and low in nutrients)
- Pastries, cookies, cakes and ice cream (these are high in refined sugar and provide little use for body or athletic function)
- Candies and Chocolate (these are high in refined sugar and provide little use for body or athletic function. Some dark chocolate products that are high in cocoa percentage can be better for you)

**Good carbohydrate choices:**

- Vegetables (a variety of colors and types should be consumed with every meal, including broccoli, potatoes, carrots, spinach, lettuce and cucumber)
- Whole Fruits (should have a variety of colors and types. Includes: apples, oranges, bananas and strawberries)
- Legumes (lentils, kidney beans and peas)
- Nuts and Seeds (the best are unsalted and in raw form, including almonds, walnuts, hazelnuts, macadamia nuts, peanuts, chia seeds, flax seeds and pumpkin seeds)
- Whole Grains (whole oats, quinoa, and brown rice)

**Lastly, one myth you may hear is that you need to "carb load," which is the idea of loading your body full of carbohydrate prior to a game or event. This practice is not required within soccer and could lead to bloating and excessive calorie intake.**

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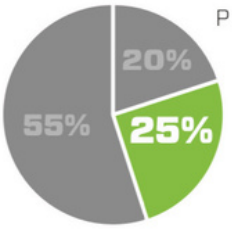
## PROTEIN

### What is it?

Proteins are the building blocks (think Legos) for the human body and are important for every single area. Human hair and nails are mostly made of protein, but more importantly, the body uses protein to produce hormones and chemicals that help support the overall function of the body, such as building bones, muscles, cartilage, skin and blood. All in all, protein is a pretty great thing for our bodies.




Protein is a macro-nutrient, but unlike carbohydrates and fats, the body has no way of storing protein and therefore the body does not have the ability to draw on it when it might need to. **About 25 percent of your diet should be made up from a protein source.**

### What does it do?

When people exercise – whether it is playing soccer or lifting weights in the gym – the muscles on your body get damaged from the activity. This is why, after a heavy workout, your muscles hurt and feel painful to move.

The body is clever, and to try and prevent the damage from occurring again, it decides to build the muscle stronger in case it is asked to do the same exercise again. Protein is hugely important and required for the body to repair this muscle, and without it the body would not be able to recover and get stronger. That is why after playing soccer it is a good idea to have a protein rich meal to ensure the body has a source to start the rebuilding process.

**Protein is important after training to help repair the body and muscles. While food choices would be the preferred source of protein, when quality protein rich foods are not available, whey protein isolate can become a useful alternative.**

**Good protein choices:**

- Fresh Meat (chicken, turkey, pork and beef)
- Fresh Fish (cod or salmon)
- Animal Products (milk, cheese, eggs and yogurt)
- Vegetable Product (tofu, soy protein, soy milk, legumes, lentils and nuts)
- Whey Protein (Isolate)



**Bad protein choices:**

- Processed Meats (turkey, ham, chicken, sausages and burgers)



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## FATS

**What is it?**

Fat gets a very bad reputation because it is strongly linked to obesity and chronic health issues. However, fat is one of the three essential nutrients we discussed earlier that the body requires for energy and health. Fat is essential for the proper functioning of the body, and provides fatty acids which are not made by the body and must be obtained from the food we eat. These essential fatty acids help control inflammation, blood clotting and brain development. Fat also helps provide people with healthy skin and hair, as well as supporting and delivering vitamin A, D, E and K through the bloodstream.

When we consume more calories than required, the body stores these as fat, which serves as energy storage, insulation and protection of vital organs. When we use all the quick energy storage of carbohydrate (around 20 minutes of exercise) the body needs an energy source, and this is when the fat storage becomes crucial in maintaining function and exercise. The body breaks down the fat stored and then uses it as an energy source.




AFTER ABOUT 20 MIN. OF EXERCISE **BODY BEGINS TO USE STORED FAT AS AN ENERGY SOURCE**

While the importance of fat is noted above, there is also serious side effects if over consumption of high fatty foods is regularly consumed. Too much fat in the diet increases the risk of heart disease because of its high calorie content, which also increases the chance of becoming obese (which in turn leads to other health complications).

You may hear people saying to stop eating any food with fat. While excessive fat consumption can lead to increase in weight, in moderation and from good sources, fats are an essential part of a healthy soccer player's diet.

**What are good and bad fats?**

### THE GOOD = UNSATURATED FATS

The good fats are known as unsaturated fats. These unsaturated fats include polyunsaturated fatty acids and monounsaturated fats. Both polyunsaturated and monounsaturated fats have been shown to have a positive effect on reducing blood cholesterol levels as well as reducing the risk of heart disease. A specific polyunsaturated fat know as omega-3 fatty acids has had positive results on decreasing the risk of coronary artery disease, reducing blood pressure and guarding against irregular heartbeats. The take home message is when introducing fat into your diet make sure it is the good fat and not the bad fat.

**Good Fat Choices**

- Nuts (almonds, cashews, peanuts, pecans)
- Vegetable Oils (olive oil, canola oil, peanut oil)
- Peanut butter, almond butter, cashew butter
- Fish (salmon, herring, sardines, trout) **high in good omega-3 fatty acids
- Seeds (sunflower, pumpkin, sesame)
- Tofu, roasted soy bean and soy nut butter
- Avocado
- Omega 3 and/or Fish Oil

### THE BAD = SATURATED AND TRANS FATS

The fats you should avoid and reduce from your diets are saturated fats and trans fatty acids (trans fat). Simply put, these fats are not good for your body and increase cholesterol levels, clog arteries, increase risk of heart disease and can increase the rates of cancer. The aim for all people, including athletes, should be to remove this from your diet and make better choices when integrating fat within the diet.

**Bad Fat Choices**

- Butter and lard
- Processed meat
- Fried chicken
- Coconut products
- Palm oil, palm kernel oil
- Dairy foods (cheese, butter, milk, cream, ice cream) **skimmed is fine
- Cookies, cakes, pies, pastries and fast food



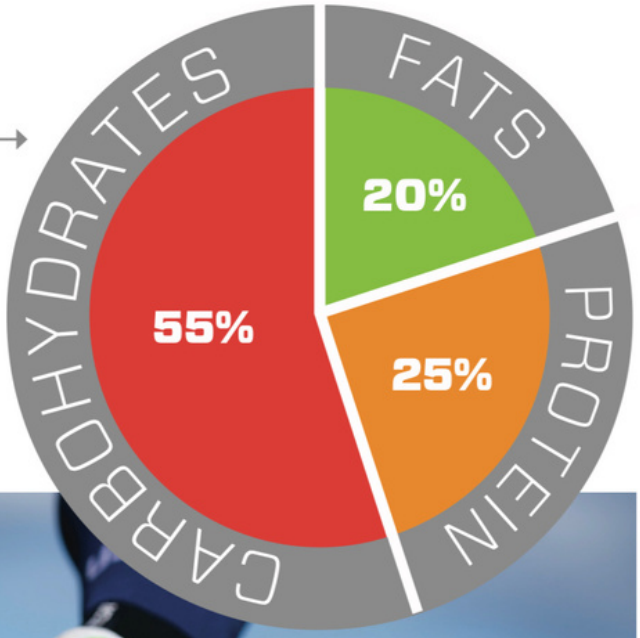
# NUTRITION INTRODUCTION

## IN THE END, HAVE A FOOD FIRST MENTALITY

Whether you are a junior athlete, professional athlete, or don't take part in any sport, it is important to make sure you are getting the proper energy, nutrients, and minerals daily. While a food first mentality is the preferred source of nutrients, when nutrients are lacking, supplementation is an option in your nutrition routine. If choosing supplements make sure to consult a health care practitioner and look for supplements labeled NSF-Certified for Sport.

## WHAT SHOULD MY MEAL LOOK LIKE?

Each meal will contain different amounts of carbohydrate, protein and fat. This illustration visualizes the rough distribution of intake that you should be aiming for within your daily meal plan.




## MEAL PLAN BREAKDOWN



Contributors: Professor Asker Jeukendrup, James Bunce & Dr. George Chiampas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