

THE 
OPTIMAL
SOCCKER
DIET

**HOW OPTIMIZING YOUR DIET WILL
IMPROVE EVERY AREA OF YOUR GAME**

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Welcome to the Optimal Soccer diet book. By purchasing this book, you're obviously committed to taking your game and your health to the next level. I'm excited that I get to be apart of your journey for becoming a better soccer player. Helping you become better at soccer is the entire reason I've created Optimal Soccer and have written this book.

The entire point of this book is to teach you the things I wish I knew when I was playing competitively. I was surprised to find out, that while I was playing at a division I level, and reading about how professional soccer players trained and ate, that everything related to diet was lacking, to say the least.

While my coaches tried to address how to eat, and nutritionist took a shot at addressing how soccer players should eat, they were always off. It was either that they didn't know exactly what soccer demands of the players, and how this makes for special diet needs, or they are working with outdated information.

For example, a lot of the professional nutritionist and diet books talk about eating less red meat and avoiding saturated fats like butter. Now this was what everyone thought was right about 20 years ago, but it's turned out to be false.

The study that everyone was going off of for avoiding red meat turned out to be debunked in that the scientist who put out the study was cherry picking the data to fit his agenda. The correlation between saturated fats and clogged arteries has since been shown to be mistaken.

However, this is still the nutritional advice your parents and coaches are telling you and that's understandable. You can't get mad at them for being ill informed, because it's hard to stay completely up to date on the science of nutrition. That's why I've created Optimal Soccer. So I can put in the work of being up to date while you can focus on playing.

So in this book, we'll be getting into the details of how and why you should be eating a certain way as a soccer player.

We'll start out by covering what playing soccer demands of your body, and what this means for the way you need to eat. Then we'll work our way through the basics, like what your overall diet should look like from a calorie and macronutrient standpoint. Macronutrients are simply carbohydrates, fats, and protein, the three different sources of calories.

We will then dive deeper into each macronutrient. We will cover where are the best places to get your carbs, fats, and proteins, and how many we should be eating.

This book is intended to provide you with the resources you need to be competitive in the sport, but before we can get into different nutrition and training strategies we need to establish why we are even doing this in the first place.

Disclaimer: I am not a doctor or registered dietician, check with your doctor and/or nutritionist when you start a new exercise or diet program. I do not claim to cure any cause, condition or disease. I do not provide medical aid or nutrition for the purpose of health or disease. Again, I am not a doctor or registered dietician, so if you experience any unsettling changes while experimenting with the methods mentioned in this book stop IMMEDIATELY, and get medical help.

What Soccer Demands of Your Body

There are plenty of books on sports nutrition that you could read. There are a lot of articles online you could check out and learn about nutrition. The problem with this however, is that these aren't specific to soccer players.

As soccer players, we have a different blend of fitness than other sports. Most other sports don't need to have the blend of endurance and strength that we do. We have to not only cover a ton of ground in a game, but also be fast and strong.

This is why following other sport's diet plans won't work. You can tell by looking at the body type differences in different sports. Soccer players need to be leaner than basketball, baseball, and American football players. However, we need to have more muscle than cross-country runners.

With this in mind, I think it's important for us to start out at what soccer demands of your body. With a combination of training, games, lifting, and conditioning, your body takes a beating. Food can improve your ability at those, but can also help you recover. The first step is to know what soccer demands of us though.

Here is a breakdown of an average game for an elite player:

- Players cover 7 miles per game, on average. This can differ by about a mile depending on position, with midfielders running the most, and strikers and defenders running less.
 - Take into consideration that 7 miles is not that great of a distance overall. 7 miles in 90 minutes comes out to about 13 minute miles
- Soccer players spend about 2/3 of the game at low intensities of walking and jogging.
- However, soccer players sprint about 1400 yards a game in bursts of 10-40 yards, change direction every 5-6 seconds and have an average heart rate of 150-170 beats per minute

The part that stands out about this is the average heart rate. That is really high for 90 minutes. And what these statistics don't show is the physical fighting that goes along with soccer, the intensity of having the ball at your feet and the intensity of defending someone 1v1. Soccer is extremely demanding on the body, especially when you add up all the practices along with the lifting and conditioning sessions. You need to be giving your body the nutrients that it needs.

Let's go even a little deeper into how soccer is affecting your body. We'll look at what lifting does to your muscles, then this will give us a better understanding of how eating can improve all this.

Muscles are big pieces of tissue that contract to give your body movement. These big tissues are made up of smaller muscles called muscle fibers. These fibers are long and cylindrical, resembling a strand of hair. There are two types of muscle fibers; slow twitch or Type I fibers and fast twitch or Type II fibers.[1]

Type I fibers are used for aerobic exercises. They are resistant to fatigue and they move slowly. As soccer players have to run hard and consistently for long periods of time, strengthening these muscle fibers will greatly improve performance on the field.

Type II fibers are the opposite of Type I fibers in their function. Type II fibers move quickly and also fatigue quickly. Also, there are two subsets of Type II fibers; IIA fibers, which are used for sprints, and IIX fibers, which are used when you max out on back squats and lift heavy for one rep.

So what exactly happens when we lift? We know that we get tired and sore from lifting, but what is going on inside of our bodies? When muscles experience a lot of stress, they break down. After they break down, your body repairs itself by making the muscle fibers bigger and stronger. This process is called hypertrophy. To complicate things a little more, there are three kinds of hypertrophy: sarcoplasmic hypertrophy, myofibril hypertrophy, and transient hypertrophy.

Sarcoplasmic hypertrophy builds overall muscle size.

Myofibril hypertrophy strengthens muscle fiber and builds stronger denser muscles.

Transient hypertrophy is the well known "pump." It is the immediate increase in size when lifting due to fluid accumulating in the exerted areas.

For soccer players, the most important hypertrophy is myofibril hypertrophy. However during a period of muscle growth you want to make sure that the rate of muscle protein synthesis is greater than the rate of muscle protein breakdown. [2] What this means is that we want to make sure we are building our muscles faster than we are breaking them down.

This is a huge issue for soccer players as they are constantly running and working in high-intensity situations. To optimize your training, make sure that you are training smart (in the work

that you are doing while focusing on the right muscles) and that you are allowing yourself adequate time to recover and that you are supplementing certain macro and micronutrients into your diet. We'll go over this later in the book, but for now let's go over types of training.

Soccer players need to be really strong, without giving up mobility. The intended result is strong, lean muscle that is functional for any situation in a soccer game.

How can we build this strong lean muscle? In general, a good weight lifting program that complements the work you do in practice will help you develop into a competent soccer player.

But it's never that simple, is it?

The problem I've seen in the sport is that coaches are not giving their players the information or the resources they need to become better. They go through the motions thinking that doing sprints at the end of practice will somehow develop their team into an athletic powerhouse that dominates the field. The problem with this method of training is that it neglects the importance of weight training, and it does not account for the huge amount of running soccer players already have to do. The result is a LOSS in the productivity of players. They lose their capacity to run fast and maintain that intensity for long periods of time. The study "Negative Associations between Perceived Training Load, Volume and Changes in Physical Fitness in Professional Soccer Players" presents interesting results that show the amount of training soccer players do, coupled with the exertion they make in games can impair their improvement physically (namely, through their ability to build muscle) and, more importantly, their performance on the field.[3] Weight training is certainly a part of what will help you optimize your soccer performance, but there are other variables that need to be addressed.

We've talked about how training affects the body, but there are a ton of other factors that affect how your body operates. One important stimulus that certainly affects soccer players (and everyone else for that matter) is stress.

While general stress is a problem for ordinary people, soccer players deal with a special type of stress; exercise-stress. Exercise-induced stress is the same sort of thing as regular stress, but instead of being brought on by outside stimuli (car accident, late for work, relationship problems) exercise stress is brought on by the intense work that soccer players put their bodies through as they are playing or practicing.

When your body is stressed, a number of things occur. You know that your heart rate increases, you become focused, and you have anxiety. When your body is stressed, it produces a hormone called cortisol, which increases sugars in your bloodstream and curbs functions of "non-essential" systems such as your digestive system and reproductive system.[4] The problems that occur with stress can affect your performance as a soccer player. Stress can disrupt gut bacteria which can lead to a number of unpleasant symptoms such as increasing your risk of heart disease, depression, and obesity, stress decreases your cognitive performance,"[5] as well as inflammatory bowel disease, fatty liver, colon cancer, irritable bowel

syndrome and leaky gut.[6] Essentially, stress messes with your overall health and for soccer players this means not performing at 100% capacity.

So how can stress be managed? What steps can be taken to reduce and control stress? There are a number of ways to reduce stress and control your hormones. You can do this through stress management practices such as meditation or by taking supplements and changing your diet.

Personally, I feel that meditation is huge in not only optimizing performance but also in its application to more than just sports. Through meditation, you can develop more control of your body as well as your emotions, which is pretty powerful when used in conjunction with playing sports.

Studies show that through meditation your brain actually operates differently, and at a higher capacity when compared to those that do not meditate. Specifically, in a study called, “Neurophysiological Effects of Meditation Based on Evoked and Event Related Potential Recordings” it was found that “meditation can induce a mental state which is characterized by efficient brain resource allocation with greater emotional control.”[7] The results in this study are really important because it shows that through meditation, a person can take control over their cognitive functions, and in relation to stress this is some pretty powerful stuff. Just think, simply by taking a few minutes out of your day you can take control over your stress, and manage it to your advantage. More than this, soccer players will see an increase in their performance. Through meditation, stress can be managed and because it affects cognitive function. With meditation, you’ll be able to think more clearly, react quicker, and be able to function at a higher capacity than others because you’ll be able to manage stress.

Aside from meditation, diet and supplementation are huge factors that can contribute to stress management. The big thing that is connected with stress is that hormone cortisol. Through diet and supplementation, you can actually tell your body to not produce it. An interesting study showed the effects that cherries had on a person’s body when introduced into their diet. The results of this study show that cherries inhibit cortisol while promoting serotonin production, which is great for your stress management![8] Another supplement that is beneficial to stress management is oleuropein. Oleuropein is a compound found naturally in olives and studies show that it promotes testosterone production and acts as an inhibitor to cortisol.[9] This is great for soccer players in that it will boost their ability to put on muscle mass, and reduce the stress on their bodies. This can be taken as an extract (pill), or you can start using olive oil when you cook.

Another huge supplement that helps with exercise-induced stress is phosphatidylserine, which is a phospholipid nutrient that is found in organs associated with metabolic activity. A study on this particular nutrient shows that subjects who ingested 600mg of it each day showed promising results as subjects combatted exercise-induced stress and physiological deterioration better than subjects who ingested a placebo.[10] For soccer players, this is huge because of the amount of stress they put on their bodies as they train and play.

The point I'm trying to make with these supplements and minor diet changes is that you can eat for certain things. Diet is the foundation for building your body. Simply look at any bodybuilder, football player, and any athlete out there. They all have specific diets that help them perform better than they would otherwise. This is huge for soccer players because it seems that developing soccer players do not pay attention to their diets and this negatively impacts their performance.

I bet you are itching to know what the Optimal Diet would look like. It's never that simple, though. Instead of simply giving you a list of "the foods you should eat" it is much better if I break down the principles of the diet and what a diet is supposed to do for you. For our purposes, we are tailoring a diet that is specific to soccer players and is meant to help them perform better than they would otherwise. So if you're on the Internet looking for a diet and you come out with a list of "the best foods," be wary, because that really does more harm than good. You are sacrificing a foundation of understanding for a shopping list.

Rather than give you a list of foods you ought to eat, I will break down the components of a diet, give a few examples of good things to implement into your own diet, but leave the construction of it to you by giving you the tools you need to make good decisions everyday. We do include meal ideas for you at the end, but at the end of this book, since you will know the details of what an optimal soccer diet looks like, you will be able to create your own meals.

The Building Blocks of the Optimal Soccer Diet

So what is a diet composed of? And how can we optimize this diet to fit the needs of a soccer player? These questions help guide us as we break down the diet into macronutrients and micronutrients. After we go over the basics of these different types of nutrients, we'll go into some depth into hormones and how we can eat and supplement certain foods and nutrients to optimize these hormones to become a better soccer player.

Let's start with macronutrients. Macronutrients are essentially what makeup food items. So when you buy a can of soup you can look at the nutrition facts on it and it'll tell you all about different things that make up the soup. You might see things like protein and carbohydrates listed there. These are macronutrients. Specifically, there are three macronutrients that we want to focus on: carbohydrates, fats, and proteins.

Optimizing Your Carbs as a Soccer Player

Carbohydrates are the most commonly misunderstood macronutrient out there and for good reason. From all the media surrounding carbohydrates they seem to be THE macronutrient that is linked to fat and unnecessary weight gain. For those “in the know,” carbs are better understood, but there are still questions of “should I carbo load?” and “what about gluten?”

With this section, I’m going to dispel the common misconceptions of carbohydrates and answer those questions that leave athletes scratching their heads. So let’s dive right in and discuss what this macronutrient is and why it’s important for soccer players.

Carbohydrates are a collection of sugar molecules that the body breaks down into glycogen.[11] Glycogen is how our bodies store glucose which our bodies use for fuel. There are two ways that our bodies store this fuel: either in the muscles and liver, or it converts the glycogen into adipose tissue (a.k.a. fat). The distinction is important as because the glycogen stored in the muscles can ONLY be used by the muscles. Alternatively, glycogen in the liver can be transported throughout the body. For soccer players, it is important to make sure our bodies have plenty of glycogen in our muscles in liver since we push our bodies in training and in games.

For our purposes, this definition of carbohydrates is sufficient, but to complicate things we’ll break down carbs into two categories: simple carbs and complex carbs.

Simple carbs are so simple because they are made up of only one or two sugar molecules. This means that simple carbs can be broken down really easily, but the energy they provide the body isn’t too substantial. Some examples of simple carbs are table sugar, syrup, candy, beer, cookies, etc. As you can tell, these foods aren’t really the ones you should be eating if you are maintaining a healthy diet.

Complex carbs, on the other hand, are big chains of sugar molecules that are a bit harder for the body to break down, but the energy that can be taken from these molecules is great for doing intense work, like playing soccer! Moreover, because complex carbs are bigger the body can use them to produce not only glucose but also vitamins and goodies like that to keep the body performing in tip-top condition.

The bottom line here is that the body needs carbs. An optimal soccer diet will have a lot of complex carbs so that your body can perform better for longer.

So why exactly do we eat carbs?

Simply put, carbohydrates fuel anaerobic activity, they refill glycogen stores used for training, and they help grow muscles by spiking insulin at the correct time.

How much is enough though?

About 125 grams of carbohydrates is enough to cover our bodies' natural function, but as soccer players we do more with our bodies than most people so we need a bit more. This complicates how we determine the right amount of carbohydrates. While there may not be an exact number for how many carbohydrates a soccer player should consume, there are some guidelines we can use to help determine the right amount for YOU.

The Guidelines:

1. Our liver stores about 120 grams of glycogen and our muscles store around 300-400 grams of glycogen. In total, our body needs about 250-350 grams of glycogen to fuel itself.[12]
2. To establish a sort of baseline from which we can work from, let's take a look at a study done on cyclists and their how their activity affects their glycogen stores. This study showed that cyclists ran out of glycogen in 4 hours of intense cycling. If we apply this to a soccer game (90 minutes) that means we use about 250-300 grams of carbohydrates.[13]
3. Our livers can burn glycogen at 10 times the normal rate, so during soccer games as we push our bodies we are using a ton of fuel.[14]
4. Once our muscle glycogen levels are full they do not get depleted until we put our bodies through anaerobic exercise.
5. Low carbs can lead to low blood sugar, which can cause unpleasant symptoms such as dizziness, weakness, and hunger. This can be really bad for soccer players who need to be alert, especially during games. Making sure that we get enough proteins, fats, and carbs will keep our glycogen storages full and our bodies healthy.
6. Glycogen refueling can take up to 24 hours which means for the 24 hours after an intense workout, practice, or game, our bodies are trying to send glucose to the muscles in order to refill them; provided that the liver has plenty of glycogen to keep the body running.

Insulin and Carbohydrates

Insulin is a powerful hormone that is at the base of carbohydrate confusion. Essentially, hormone takes extra glucose from the bloodstream, which comes from the liver, and then finds a home for it. Insulin can either convert the glucose into glycogen for the muscles to use or it can store the glucose as fat. Another important role insulin serves is to stimulate protein synthesis, which helps our bodies grow muscle. It does this by transporting amino acids into our muscle cells which is stimulates muscle repair and growth.

By understanding insulin we can better understand why carbohydrate intake is important and shows that depending on your position in soccer you will need a different amount of carbohydrate intake. For example, midfielders need more carbs than a keeper would do to the strain they put on their bodies.

Carbohydrate Food Selection

Now that we've gone over why carbs are important and their relation to the hormone insulin, we must ask ourselves which foods should we be implementing into our diet, and why.

The don'ts of carb intake are as follows: avoid high fructose corn syrup and sugars. Essentially, don't eat foods that are obviously bad for you. These foods are addictive due to the flooding of dopamine in the brain that occurs when they're ingested.

The foods we should be eating to get the right carbohydrates are:

- Plants: they're full of nutrients and digest slowly, allowing our body a steady source of glycogen as it's put to work.
- Fruits: these are known as sugar carbs and they provide more glycogen than plants do, and they digest a bit more quickly than plants do. I always like to eat a banana before a big game so that I not only have some potassium in my system, but a little extra insurance in case by glycogen stores are not full.
- White rice: this stuff is better than brown rice due to brown rice having phytic acid in it. Essentially, this means brown rice has inflammatory properties which is not good for us soccer players who want to keep our bodies in peak condition. We can eat white rice to spike our insulin levels and deliver glucose directly to our muscles. So yes, eat white rice.[15]
- Root vegetables: not sure what a root vegetable is? Some examples are yams, sweet potatoes, and plain old potatoes. These are good sources of complex carbs that your body can digest slowly and refill its glycogen stores.

Carbs are really important to the optimal soccer diet. Remember, carbohydrate intake should be based off of activity level. Keepers who don't run a lot will want to take in less carbs than a midfielder would. Fruits and veggies are where you should look to get your carbs, but make sure to track your intake. Gaining unnecessary fat is not the goal of this diet, and does not suit a soccer player.

Gluten Free: Just a Fad or Something You Should Take Seriously

Along with this discussion of carbs, I find it necessary to talk about gluten. Yes, gluten. That pesky protein that everybody is getting their panties in a bunch about. So let me give you some information on gluten and its place in the optimal soccer diet.

Gluten is bad. It does some sinister stuff to the body. Initially, I had a hard time believing this because it went against everything I was taught, but the more I researched gluten the more I found that it wasn't a dumb diet fad that would fade out of existence like the Atkins' Diet.

Gluten is a general term for proteins found in three grains: wheat, rye, and barley.[16] For this reason, we should avoid breads, crackers, and beverages that contain these grains. Studies show that gluten messes up the gastrointestinal tract in people that are gluten intolerant.[17] When the gastrointestinal tract is messed with, it causes a number of nasty things to happen to your body. These symptoms include[18]:

- Joint inflammation
- Bloating
- Irritability
- Dermatitis
- Skin rashes
- Diarrhea
- Acid reflux
- Unexplained iron deficiency
- Celiac disease

There are two problems when it comes to gluten: Celiac disease and non-Celiac gluten sensitivity. Celiac disease is an autoimmune disease in which the body attacks itself when gluten is ingested. While Celiac disease seems scary, it is far less common than non-Celiac gluten sensitivity. Non-Celiac gluten sensitivity is similar to lactose intolerance in that the body has trouble breaking down gluten. As more studies on gluten gain traction, we see that gluten sensitivity is actually fairly common among people. One study shows that 29% of people have gluten sensitivity.[19] Although it is difficult to determine if you are gluten sensitive, the best way to find out is a blood test that you can order through your physician.

The importance of the budding research that's coming from gluten is the effect it has on world-class athletes. Athletes who are gluten free have given public testimonials that describe how their gluten-free diet helps their performance and recovery.[20]

As you can see, gluten is not that great, especially for soccer players who would be devastated by joint inflammation and gut problems. For this reason, the optimal soccer diet will focus on complex carbs that do not rely on riskier whole grains like wheat, barley, and rye.

Should Soccer Players Fear Fats?

Let's switch gears and take a look at fats. Fats usually get a bad rep because of their close association to—you guessed it—fat. However, fats are actually super important for your body and a necessary component of an optimal diet. They assist in testosterone production, good for heart muscles, critical for coating nerves, which help your brain send signals throughout the body, they promote hormones called eicosanoids which help regulate blood pressure, inflammation, and blood clotting.[21] So you see, fats are actually really important for your body to function. Like with carbohydrates, let's break down fats into four categories: monounsaturated fat, polyunsaturated fat, saturated fat, and trans fats.

Monounsaturated Fats

Monounsaturated fat at the super sciency chemical level is fat molecules with one unsaturated carbon bond in the molecule.[22] This basically means that monounsaturated fats are liquid at room temperature. An example of this is olive oil. Olive oil is liquid at room temperature and its full of monounsaturated fats. Some more examples of monounsaturated fats that can be implemented into an optimal soccer diet are avocados and nuts.

Polyunsaturated Fats

Next let's turn our attention to polyunsaturated fats. Going back to the molecular level, polyunsaturated fats are fat molecules with more than one carbon bond in the molecule.[23] Like monounsaturated fats, polyunsaturated fats are liquid at room temperature. Also like monounsaturated fats, olive oil is oil that contains polyunsaturated fats. More examples of polyunsaturated fats are those found in salmon, fish oil, sunflower oil, and seeds. Things filled with polyunsaturated fats are also full of essentially fatty acids, which cannot be produced by the body. So you see, polyunsaturated fats are really important because they give the body the stuff it cannot produce naturally. Plus, salmon is great!

Saturated Fats

Now that we've gone over the unsaturated fats, let's take a look at saturated fats. Unlike unsaturated fats, at the molecular level saturated fats are fat molecules that do not have a carbon bond in the molecule, because they are saturated with hydrogen bonds.[24] This is an important difference because saturated fats are solid at room temperature, not liquid like the unsaturated fats. Saturated fats are awesome because they are a great source of energy. Saturated fats can be found in red meat, dairy products, and eggs. Also, the body naturally stores carbs as saturated fat because they are great at storing energy. Another plus for saturated fats is that they fill you up so you don't run the risk of overeating. Basically, saturated fats are the bees' knees, and they are really important for an optimal soccer diet because of the demands soccer players put on their bodies.

The Evil Fats

The past three fats we've covered have been really good for your body and certainly a part of the optimal soccer diet, however, there is one more fat we need to go over and this one is not good. Trans fats are considered the worst type of fat. Trans fats are typically artificially processed through a process called hydrogenation. At the molecular level, this means that hydrogen is added to liquid vegetables to make them more solid. Already this sounds gross, right? Well, it gets worse. Trans fats can be found in some seriously processed foods like fried foods, potato chips, and French fries. Though these foods may seem tasty, they can wreak havoc on your body and mess with your gut bacteria, which I have mentioned briefly already and will go into detail later in this book.

Should We Be Avoiding Cholesterol?

Like with gluten and carbohydrates, it is necessary to discuss cholesterol along with fats. Cholesterol isn't the scary microscopic monster determined to stop your heart that many people make it out to be. Oh no. At its most basic definition, cholesterol is simply a waxy fat-like substance that's in our bodies. It's produced naturally by our body but is also consumed through foods that we eat.

See, not that scary right?

Primarily our liver produces cholesterol[25], but in order for our bodies to use this cholesterol it needs to get around to different parts of the body.

How exactly does cholesterol do this, you may ask?

Well, lipoproteins pick it up and those lipoproteins transport cholesterol all over the body so that it can be used.[26] There are two lipoproteins that transport cholesterol: HDLs and LDLs.

Traditionally, HDLs have been considered "good cholesterol" and LDLs have been considered "bad cholesterol."

Before we agree with these labels let's take a look at what these lipoproteins are. HDLs are "high-density lipoproteins." Essentially, these guys take cholesterol from your body's tissues and transport it back to the liver.[27] That's why it's considered "good cholesterol," because it lowers your overall blood cholesterol level.

LDLs are "low-density lipoproteins." These particles take cholesterol from your liver and transport it to your body's tissues.[28] LDLs are considered "bad cholesterol" because of the

potential for it to oxidize and stick to the walls of your arteries.[29] This is not a good thing because it can build up plaque in your arteries and increases the risk of arterial diseases or even coronary heart disease.

So, HDLs are important because they reduce the amount of unused cholesterol in your body, and LDLs are important because they distribute cholesterol all over your body.

Suddenly cholesterol doesn't seem like such a bad thing, right? Managing cholesterol is a large part of balancing any diet, and especially in optimizing a diet for soccer players because of the role that cholesterol plays in creating and storing energy.

What do Soccer Players Need to Know About Protein?

Now that we've covered carbohydrates and fats, we'll go ahead and move to the last type of macronutrient: proteins. Proteins are molecules used by the body to repair damaged muscle, bone, skin, teeth, and hair.[30] They work to keep our body running at 100% and are very important to the optimal soccer diet. You see, proteins create an anabolic environment meaning that your body can gain muscle and burn up fats as energy.[31] It is important for athletes to get the right amount of proteins so that they can perform well.

Proteins are comprised of twenty-two smaller molecules called amino acids. Nine of these proteins you have to ingest because your body does not produce them. These nine essential amino acids are:

- Tryptophan
- Lysine
- Phenylalanine
- Threonine
- Valine
- Leucine
- Histidine
- Isoleucine

Molecules called whole proteins will have these in them. These amino acids help the body create hormones that regulate blood pressure and blood sugar levels. They are responsible for metabolic rate and muscular growth.[32]

Best Complete Proteins

The best complete proteins are:

- Red meat: grass-fed and organic to make sure your body is getting good protein that isn't contaminated by unnecessary hormones.

- Fish: wild caught and organic.
- Poultry: free-range and organic.
- Eggs: organic and from free-range poultry.
- Full-fat dairy: from grass-fed livestock.

Animal foods are the best way to get protein and the essential amino acids. You may be wondering about plant proteins and their benefits. Essentially, plant proteins tend to have less of one or more amino acids so it is far better for soccer players to eat animal foods so that they can get the right macronutrients. Take beans and quinoa, for example. These are plant proteins that are classified as complete proteins, however they are mostly carbohydrates. That is great for soccer players focusing on carbohydrate intake, but protein should be consumed through animal foods.

Protein and Dopamine

We've all probably heard of dopamine. It's also called the happiness chemical and it is in charge of basic primal emotions that make us happy. High dopamine is connected to energy, drive, a feeling of purpose, and it plays a large role in our sex drives.

The takeaway for soccer players here is dopamine allows us to access greater motivation to work harder and work more than the average athlete. However, when our bodies run out of dopamine but continue to be stressed, our bodies begin to burn cortisol, which is not good. Cortisol, the stress hormone, is associated with lower energy, poor recovery, and poor performance. Soccer players must learn how to limit stress and maintain dopamine levels in order to perform well.

To maintain healthy dopamine levels the diet is the first place to look. By eating whole-food meals with complete proteins we provide our bodies with phenylalanine and tyrosine, which are the building blocks for dopamine production.

Protein and Muscles

When we workout our muscles develop micro tears. The 21 amino acids help repair these tears. Again, we get these essential amino acids through complete proteins. Complete proteins are found in animal foods such as:

- Red meat: grass-fed and organic to make sure your body is getting good protein that isn't contaminated by unnecessary hormones.
- Fish: wild caught and organic.
- Poultry: free-range and organic.

- Eggs: organic and from free-range poultry.
- Full-fat dairy: from grass-fed livestock.

It's hard to get these organic and naturally raised animal foods, plus it's expensive. For those athletes who want to eat well, don't want to break the bank, and are interested in making the effort to optimize their diet I suggest looking at U.S. Wellness Meats which will deliver meats to your door in bulk.

Protein Shakes

We've all seen people at the gym downing protein shakes and lifting heavy in hopes of gaining muscle. Drinking protein shakes is an extremely convenient way to ingest protein, however athletes should look to whole-food meals to get their protein because of all the other macronutrients that can be ingested from these whole-food meals.

Personally, if I'm going to drink a protein shake (as I do occasionally when I'm hitting an intense workout) I choose to drink whey protein isolate. Whey protein isolate is the most easily digested protein shake out there. It comes from a milk protein where 99% of the lactose is removed, plus it has fewer carbohydrates than regular whey protein. In this way, I am putting the protein that my body needs to repair itself as I workout, and I don't mess with extra nonsense like fat and dairy that I can focus on ingesting through whole-food meals.

BCAAs

BCAA stands for Branched Chain Amino Acid. While discussing protein, branched chain amino acids deserve an honorable mention. Essentially, these are amino acids with a branched chain which means they can be converted to energy more easily. BCAAs are great because they don't provide our bodies with unnecessary calories and with BCAAs our muscle cells don't break down as easy which improves recovery. Moreover, when used in conjunction with protein powder, BCAAs help increase muscle mass after lifting.[33]

In short, BCAAs are an excellent way to prevent muscle breakdown during intense training and even a game. Because they don't provide calories and you only need to ingest 10 grams of BCAAs, they don't make you feel full.

For collegiate soccer players, it is illegal for your school to provide you with BCAAs, but it is not illegal for you purchase them and take them on your own.

Protein is a huge part of a balanced diet. This macronutrient plays a significant role in muscle recovery and muscle growth. Not only that, it plays a role in dopamine production. By ingesting enough protein, athletes are making sure that they not only have the motivation to work harder, but are also able to recover from those hard workouts and intense games. In conjunction with protein, adding BCAAs to your diet will help you to become a stronger athlete and an optimal soccer player.

Micronutrients: Paying Attention to the Details

Moving on, micronutrients are the other half of the diet. Micronutrients are dietary components often referred to as vitamins and minerals. Micronutrients play an important role in energy production, hemoglobin synthesis, and maintenance of bone health, adequate immune function, protection of the body against oxidative damage.[34] They are only required in small amounts, they are vital to development, disease prevention, and well-being.[35] The body does not produce them, so they must be ingested through whole food meals, or supplemented. For soccer players, exercise stresses many of the metabolic pathways where micronutrients are needed which means that more micronutrients must be implemented into the diet.

There are a TON of micronutrients, so rather than going through a long and tedious list of them, I have picked out the ones soccer players could be deficient in, and given you ways to incorporate them into your diet or to supplement them.

The B Vitamins

Thiamin, riboflavin, vitamin B6, pantothenic acid, biotin, folate, and vitamin B12, are vitamins that soccer athletes could be deficient in. They are important for energy production and the building and repairing of tissue.[36] These vitamins should be supplemented for soccer players due to the large amount of work these athletes have to go through regularly.

Vitamin D

Vitamin D is another micronutrient soccer athletes could be deficient in. It is required for calcium absorption, regulation of serum calcium and phosphorous levels, promotion of bone health, and it regulates the development of the nervous system and skeletal muscles.[37] Considering the

amount of stress soccer players put on their bodies, having a nervous system and skeletal muscles that can handle that sort of stress is necessary. This too can be supplemented.

Antioxidants

Vitamin C, vitamin E, β -carotene, and selenium are antioxidants soccer players could be deficient in. These guys play a role in protecting cell membranes from oxidative damage. Oxidative stress occurs when you exercise and it leads to lipid peroxidation of the membranes.[38] More simply, this means that your joints and muscles become inflamed when they are put under stress. Vitamin E is helpful in reducing this inflammation and muscle soreness so it should be supplemented. Vitamin C should be supplemented too because deficiencies in this micronutrient can occur during intense exercise. So for soccer players who want to help themselves recover better, look to supplementing antioxidants into your diet!

The Minerals

Calcium, iron, zinc, and magnesium are important because without them our bodies would have a hard time producing energy. Calcium is important for growth, maintenance, and repair of bone tissue, regulation of muscle contraction, and normal blood clotting.[39] Deficiencies can lead to stress fractures. Iron is required for forming oxygen-carrying proteins, hemoglobin, myoglobin, and for enzymes involved in energy production.[40] Oxygen-carrying capacity is important for soccer players because they are working so hard for so long. Supplementing this mineral is great because it increases work capacity by improving oxygen uptake, makes your blood better, and it reduces muscle fatigue. Zinc is another important micronutrient because of its role in growth, building, and repair of muscle tissue, energy production, and immune system function.[41] However, unnecessary zinc supplementation may lead to low HDL cholesterol and nutrient imbalances by interfering with the absorption of nutrients like iron and copper. Finally, magnesium is an important mineral in that it helps cellular metabolism, it helps your cardiovascular, immune, and hormonal functions.[42] Supplementation of these minerals will definitely help build a better body and soccer player.

The Last Few Micronutrients

Sodium and potassium are important for soccer players for a number of reasons. Sodium is a critical electrolyte and necessary for maintaining endurance. Potassium is also important because of its role in fluid and electrolyte balance, and nerve transmission.[43] A diet rich in veggies, fruits, nuts and seeds, dairy foods, lean meats and whole grains should have no problem with deficiencies in either of these minerals.

As you can see, macronutrients and micronutrients are really important for the body to function correctly. Learning about these parts of the diet and optimizing a diet around them can create a very powerful person. Along with this breakdown of the diet is hormone optimization.

Hormone Optimization: The True Foundation of an Optimal Player

Hormones are the body's chemical messengers; they travel in the bloodstream to tissues and organs to signal the creation of chemicals that can affect the body in different ways.[44] Hormones are involved in growth and development, metabolism, sexual functions, reproduction, and mood. Already, you can tell that hormones and optimizing hormones can lead to some drastic changes in the body. By learning about hormones, and how to promote some and inhibit others, we can optimize our bodies to become designed to play soccer even better than before.

Here I will give you a list the different hormones, why they are important, and how you can affect them.[45] Let's get started.

Serotonin: This hormone controls your mood, appetite, and sleep cycles. To maintain a healthy amount of serotonin you can supplement with 5-HTP or you can implement pineapple, kiwi, plantain, bananas, plums, tomatoes, walnuts, meat, nuts, bran, flax seed, or flax seed oil into your diet.[46]

Cortisol: Cortisol is an adrenal hormone that is really important for your body's maintenance of homeostasis. Also known as "the stress hormone," regulates your body's blood sugar levels, immune responses, anti-inflammatory actions, blood pressure, and central nervous system activation. You can optimize this important hormone by taking fish oil, supplement magnesium, eat foods rich in vitamin B, and breathe. Yes, taking a few minutes to simply breathe deeply will help you manage this hormone.

Testosterone: We all know about testosterone. It is the major male hormone that is responsible for sex drive, development of sex organs, as well as growth and development of the body. By supplementing zinc, vitamin D, eating healthy fats, taking BCAAs and protein, you can promote testosterone production.[47]

Dopamine: This hormone controls your heart rate and assists in perception. You can maintain it by supplementing L-theanine, fish oil, tyrosine, and phosphatidylserine.[48]

Melatonin: It's your biological clock. It affects alertness and drowsiness. This you can supplement and pick up at your local grocery store.

Thyroxin: This is a form of the thyroid hormone and increases the rate of your metabolism. It affects protein synthesis. Eating good whole food meals and getting enough calories is enough to maintain a healthy amount of thyroxin.[49]

Epinephrine: This is also known as adrenaline. It's the get-up-and-go hormone. Coffee, tea, citrus fruits, bananas, chocolate, cocoas, and vanilla can help in its creation and healthy maintenance.[50]

Norepinephrine: This hormone controls the heart and blood pressure. It'll help you control your sleep, arousal, and emotions. However, too much will make you anxious, and too little will make you depressed or sedated. Make sure you're getting enough micronutrients and you will have a healthy amount of norepinephrine.[51]

Adiponectin: This protein hormone regulates the metabolic processes such as the regulation of glucose. To optimize this hormone, increase your magnesium intake and eat more leafy greens.[52]

Adrenocorticotrophic Hormone: This hormone assists in corticosteroids which are the stress response. It helps in the creation of cortisol, which as we covered earlier, is not a good thing for soccer players. You can inhibit this by munching on cherries, meditating, and sleeping better.

Antidiuretic Hormone: This hormone maintains blood pressure by retaining water in the kidneys. You can keep this at a healthy level by eating well and keeping hydrated.

Atrial Natriuretic Peptide: This peptide hormone is involved with control over water, sodium, potassium, and fat within the body. Eating foods with sodium will help maintain this hormone.[53]

Calcitonin: This hormone aids in constructing bone and reduces blood calcium. In eating enough dairy or taking in enough calcium, this will be well maintained.

Corticotrophin-Releasing Hormone: This hormone releases cortisol in response to stress. To optimize this for our purposes, increase your micronutrient intake of B vitamins, calcium, magnesium, zinc, and chromium.[54]

Erythropoietin: This hormone stimulates the production of erythrocytes, which are blood cells responsible for delivering oxygen all over your body. You can optimize this by maintaining healthy levels of your micronutrients.

Follicle-Stimulating Hormone: This hormone stimulates follicles within the sex organs of both males and females. For males, this also aids in testosterone production, which is pretty important with regards to building and maintaining muscle. To optimize this hormone, eat more fish and dark greens.[55]

Gastrin: Hormone that secretes gastric acid. This bad boy is really important for maintaining your gut and gut bacteria. To optimize this hormone make sure to eat plenty of fats (the good kind not trans fats!).

Ghrelin: Hormone that stimulates hunger. It also aids in the secretion of the growth hormone. To maintain a healthy amount of ghrelin, eat plenty of protein and omega-3s and it never hurts to have healthy gut bacteria.[56]

Glucagon: This helps to increase the blood glucose level. Your body derives energy from glucose, so promoting a higher blood glucose level will increase the amount of energy your body can draw from. This can be maintained by a healthy intake of protein and carbs.[57]

Growth Hormone-Releasing Hormone: Well, it pretty much does what you'd think it does. It releases the growth hormone. Promote this hormone by taking in more protein and amino acids.[58]

Growth Hormone: This guy helps to stimulate growth and the reproduction of cells. For soccer players, this should be especially important because they need to build muscle and become better athletes. There are ways to supplement and activate this hormone. However, by simply eating plenty of saturated fats and protein you'll be able to activate it just fine.[59]

Insulin: You've probably heard of this one. It's responsible for several anabolic effects, primarily glucose intake. Increasing your intake of carbs can activate this hormone.

Insulin-Like Growth Factor: Interesting name right? Well, it has the same effects as insulin while also regulating the growth and development of cells. Along with insulin increasing your carb intake activates this guy.

Leptin: This hormone slows down the appetite while also speeding up metabolism. Among weight-loss enthusiasts this is a special hormone. For soccer players, the appetite suppression is a bit worrisome because they need to be able to eat a lot to give their bodies what they need to perform. To maintain a healthy level of leptin, eat whole food meals that incorporate all the macronutrients.[60]

Luteinizing Hormone: This aids ovulation in women and testosterone production in men. Male soccer players should be drawn to the T-production in this hormone. To maintain this hormone, work out and take in enough macro and micronutrients.[61]

Orexin: This hormone increases the appetite while also increasing alertness and energy levels. Sounds pretty important for soccer players right? I thought so too. You can supplement it or get it through whole food diets, and even by drinking coffee.[62]

Oxytocin: Hormone that plays a major role in reproduction, orgasm, release of breast milk. In maintaining a healthy body and testosterone production, oxytocin can be activated by taking in saturated fats and omega-3s.

Parathyroid Hormone: This is responsible for activation of vitamin D. You can either supplement vitamin D and calcium or eat foods rich in these micronutrients![63]

Prolactin: Major contributor in sexual satisfaction and production of breast milk. Too much of it can be a bad thing so don't worry about supplementing it. You can optimize this hormone through whole grains, fish, and vitamin B6.[64]

Secretin: This inhibits gastric acid production. For our purposes, anything that affects the gut in a negative way ought to be limited. Secretin can be maintained at a healthy level by gut bacteria management, which we'll get to in the next section.

Aldosterone: Responsible for absorbing sodium in the kidneys to increase the volume of blood within the body. More blood means more oxygen can be carried throughout the body. This can be activated by managing cholesterol and staying hydrated.[65]

Brain Natriuretic Peptide: This hormone aids in reducing blood pressure. Maintain at a healthy level by eating good fats and whole food meals.

Histamine: This guy is based in the stomach and helps in secreting gastric acid. To maintain this at a healthy level make sure to maintain your gut bacteria.

Endothelin: This hormone controls muscle contractions in the stomach. To maintain this simply increase your protein intake.[66]

Enkephalin: This is a pain regulator. Soccer players have to endure a lot of stress on their body and should be able to regulate pain well. To optimize this, increase your fat intake.[67]

Whew, that was a lot of hormones to get through. Let's take a minute and digest all of that information. While many of these hormones can be activated through supplementation, doing so is not always the best option. Instead, focus on creating a healthy diet that activates these hormones and maintains them at healthy levels. Throughout this section, there have been hormones that are maintained by gut bacteria. So let's go over what gut bacteria is and why it is important with a focus on what to avoid and what to add into the diet to promote healthy living.

Why You Should Become Best Friends with the Bacteria Living in You

Gut microbiota or gut flora is the name given to the microbe population living in your intestines.[68] There are tens of trillions of microorganisms in our guts. When you think of bacteria you may think this is a bad thing, but gut bacteria actually help maintain your wellbeing. This bacteria can be found in the intestines and weigh up to 2 kg, or in American terms, about 4 lbs. While we each have special microbiota, they all fulfill the same purpose. They work to help the body digest foods, help in the production of vitamins (B and K), combat aggressions from other microbiota, maintain wholeness of intestinal mucus. Gut bacteria are also important to the immune system, as it is important for the barrier between the gut and the rest of the body. It also helps in proper digestive functioning.[69]

Interesting to note, gut bacteria can change depending on where you live. Where you live determines what your diet is like. What you eat, determines the type of gut bacteria is inside of you. It is important to maintain a healthy balance of your gut bacteria. A loss of this balance in gut bacteria (dysbiosis) can develop a number of nasty symptoms such as inflammatory bowel disease, irritable bowel syndrome, and allergies.

So what should we avoid to promote a healthy gut?

For starters, stay away from antibiotics. These guys attack the bacteria in your gut and hurt your immune system in many different ways. Don't use antibacterial soap. It's in the name! This stuff will kill off all the bacteria that could be hanging out in your gut. Don't overuse harsh cleaning chemicals to clean your house/apartment/living space. That is not to say that you shouldn't be clean but do so with your gut bacteria in mind. Limit your consumption of processed foods! For starters, there is nothing nutritional in processed foods, but also these refined foods wreak havoc on your gut. Finally, manage your stress. We've all been stressed out and feel that heavy feeling in our guts. Well, there are actually things going on in there when we get stressed out. So make sure to manage your stress by meditating, eating well, sleeping right, and generally maintaining a healthy lifestyle.[70]

Now that we've covered all the things we need to avoid, let's look at things we should ingest to make our guts happy. Of course, make sure you are eating vegetables, proteins, fats, and good complex carbs. All that stuff I've been harping on throughout this book! But what else? Well, take a gander at some fermented foods. Fermented foods have a lot of bacteria on them that help out the bacteria in your gut. Some examples of fermented foods are sauerkraut, kimchi, natural yogurt, naturally aged cheese, and kombucha. You can also take probiotic supplements to help out your gut. Both of these will greatly affect your gut, and your gut will thank you![71]

Now that we've gone over the diet, hormone optimization, and gut bacteria, we can now move onto how to eat for specific training aspects. Using what we know about macronutrients and micronutrients, we can eat to produce certain outcomes. Pretty cool right? Let's get started.

Eating to Pack on Lean Muscle

Packing on lean muscle is the goal for most people, but it is especially important for soccer players. As soccer players, we are expected to move quickly with speed reserved for sprinters and long-distance runners, but be able to perform strong explosive movements like olympic weightlifters. Lean muscle allows us to accomplish this. Developing lean muscle is hard enough as it is because muscle gain is usually done at the expense of mobility and the addition of unnecessary fat. However, it is especially difficult for soccer players to pack on lean muscle because of how much we have to run. Running breaks down muscle through a process called catabolism. To avoid catabolism, let's go over 5 tips that should be implemented into an optimal soccer diet.

Protein Intake

When we workout, our muscles experience hypertrophy, the process in which muscles develop micro tears. To repair these micro tears, our bodies need protein. A good rule to follow is to ingest 1.5 grams of protein per 1 pound of body weight.

You can ingest this protein through protein shakes, but it is far better to get your protein through whole-food meals.

Take Advantage of Insulin

To recap, insulin is the hormone that stores extra glucose. For people that don't workout, insulin means packing on unnecessary weight. For those who are working out (soccer players) insulin means more energy. Instead of eating until we are uncomfortable we should instead spread out extra carbs over a couple meals after eating. This works because the body builds muscle for about 24 hours and muscles restore their glycogen storages for around 24 hours.[72]

Eat a Diet with Higher Fat Intake to Boost Testosterone

Boosting testosterone is something every man wants to do. Testosterone allows us to pack on muscle, it gives us the drive to work harder, increases our sex drive, boosts our confidence, stimulates growth hormones in the skeletal muscles, and increases protein synthesis directly.[73]

One of the best ways to boost testosterone is to eat more good fats. Review the section on fat to determine which fats should be implemented into the diet.

Creatine

Creatine is quite the supplement. It increases the body's output of ATP which is the body's fuel for explosive movements such as lifting. Basically, this means with creatine our bodies can work harder and can then pack on more muscle.[74]

Some other interesting effects of creatine is its relation to increases in endurance and cognitive function.[75]

What most people neglect when taking creatine is the importance of a well-balanced diet. Making sure we ingest adequate amounts of macronutrients through whole-food meals and taking creating is a recipe for muscle gain.

Also, don't creatine load. Creatine loading only results in your body ballooning up with water. For soccer players, an increase in body mass through water is what we are trying to avoid through the Optimal Soccer Diet. 5 grams of creatine a day to slowly build into the system is the best way to implement creatine and avoid the negative effects of bloating.

Track Calories

Generally, I don't recommend tracking calories. As soccer players, we don't need to put in this extra effort since we exercise so much. However, it can act as extra insurance for those who are worried they are not getting enough.

The old adage "calories in calories out" is not entirely accurate. Calories come from macronutrients which as we've discussed, act differently on the body.

A good way to start tracking calories to is multiply your bodyweight by 24 to get the daily expenditure of calories. As a soccer player, go over this number in your calorie intake.

Another way to increase calorie and protein intake is to drink a protein shake before bed. When we sleep, our body goes through protein synthesis to help repair itself, so giving it a little extra protein goes a long way to increasing muscle mass. A word of warning though, drinking protein shakes before bed can also lead to unnecessary weight gain and should be used as a last resort.

As a soccer player, it's difficult to build muscle. I remember throughout high school I was pretty small, but in my senior year of high school through my freshman year of college I gained around 20 pounds of muscle, only to lose about 7 pounds of it to meet my playing weight for the next season. My hope with these tips to packing on lean muscle is for developing soccer players to

have the information that I wished I had when I was playing. Remember, eating on training days is going to look a lot different than eating on non-training days because what the body needs when it's working hard is going to be different than what it needs when it is recovering. With these 5 tips in mind, knowing what to eat becomes a bit more clear.

How to Improve Your Endurance Through Your Diet

Next let's take a look at how to eat to improve endurance. Eating for endurance is going to look a lot different than for putting on muscle. Eating for putting on muscle primarily focuses on large amounts of protein and carbs, but eating for endurance is quite different. Like any other balanced diet you need to eat whole-food meals, there's a focus on timing, and hydration is key. In eating for endurance, I am going to address the importance of a meal before intense exercise, the effects of icy drinks on the body, supplements that can help improve endurance, and foods that can help improve endurance.

Eating before Exercise

Eating food gives our bodies the nutrients it needs to perform exercises, but the effect of eating before exercise produces substantial results in endurance. Specifically, a study on soccer players and fatigue found that players who ate a pregame meal fatigued slower than those who didn't.[76]

While it may seem that eating before a soccer game or intense workout will leave you feeling full, the reality is that athletes can benefit from eating something before putting their bodies through an intense workout or game.

Icy Drinks

When you're out in the sun a nice cold beverage leaves you feeling refreshed and energized. The same can be said for when you workout. One study shows the effects of icy drinks and the results showed that drinking an icy beverage while working out improved endurance by 10%.[77]

Think about it, when we workout our body temperature rises and we sweat in order to cool off. By introducing cold liquid into our system, our bodies can cool off more easily. So before your next practice and game, throw some ice into your water so that you can last longer than the other players.

Endurance Supplements

Supplements have some serious effects on the body, especially in terms of endurance. For our purposes, let's take a look at betaine, creatine, sodium citrate, caffeine, sodium bicarbonate.

Betaine

A rather obscure supplement, betaine is one that has some serious effects on endurance. In a study done on cyclists showed that through betaine supplementation they were able to pedal harder for longer.[78]

Simply supplementing betaine for a week produces an anabolic environment where our bodies can use glucose more efficiently. Moreover, it decreases our body's cortisol production.

Creatine

We've already covered how important creatine is for packing on muscle, but studies show it has a profound effect on endurance. In another study done on cyclists, creatine was shown to improve the power with which cyclists pedaled, and they were able to pedal for longer through creatine supplementation.[79]

Simply supplement 5 grams of creatine into your diet, and you'll see a change in both power and endurance!

Sodium Citrate, Caffeine, Sodium Bicarbonate

You're probably wondering why these supplements are grouped together. Essentially, there was a study done that examined the effects of each of these supplements on endurance athletes, and they were all found to improve endurance to varying degrees.[80]

As far as ease of access, caffeine is far easier to purchase than the supplements sodium citrate and sodium bicarbonate. Personally, I enjoy coffee as a source of caffeine. However, black tea is an excellent source of caffeine.

Endurance Superfoods

We've gone over how food can affect hormones, muscle gain, muscle recovery, all in hopes of creating a better athlete. With this section, we'll go over superfoods that do just that, however many of these you probably have not heard of.

Cashew Apple Juice

You probably have not heard of this superfood. Cashews grow on trees and are attached to the fruit, the cashew apple. This fruit can be made into a juice that studies show improve endurance in athletes.[81]

The scientists believe it is due to the presence of BCAAs and vitamin C in the cashew apple juice. The presence of these nutrients in the juice helps the body to burn fat as energy which can affect endurance.

Cordyceps Extracts

The cordyceps sinensis is a parasitic dried fungus that grows on caterpillar larvae native to the high-altitude regions in China, Nepal, and Tibet.[82]

Kind of gross right? Don't knock it just yet. This extract has anti-oxidative, anti-inflammatory, anti-lipid (lowers cholesterol) and improves the stamina of endurance athletes. This is due to the increased aerobic capacity and oxygen utilization that is triggered when this extract is ingested. This stuff does it all!

Turmeric

Turmeric is an antioxidant and anti-inflammatory food. For soccer players, this is great because it reduces inflammation, which improves recovery.

Green Coffee Beans

Green coffee beans are the coffee beans that haven't been roasted and are ready to be made into traditional coffee. Like regular coffee beans, you simply grind them up and make coffee like you normally would. The catch is in the taste, and the properties of these green coffee beans.

The concoction produced from these green coffee beans is bitter and tasteless, however the properties attached to the beans make them important for endurance athletes. They are both anti-inflammatory and antioxidant, so like turmeric they are great because they will reduce inflammation and improve recovery.[83]

Elk Antler Velvet

That's right, the soft stuff that is rubbed off of elk antlers can be beneficial to soccer players. Elk antler velvet has been shown to be a testosterone booster, which will lead to an increase in the body's ability to naturally and rapidly regenerate tissue and bone.[84]

For the average soccer player, this is a rather obscure superfood that will not enter the diet. But for the more adventurous athlete, this could become a big part of your diet.

Moringa

Also known as olefeira, this superfood is an antioxidant that promotes heart health by reducing blood glucose.[85] Found from a tree native to Africa, this antioxidant can be added into the diet for exotic flavor and improved endurance.

Beetroot Juice

Beetroot juice is becoming more and more popular due to its obvious benefits. First, it's great because of its high nitrate content. The body turns this nitrate into nitrite and then into nitric

oxide. The effects of nitric acid are the blood vessels dilate, and the body requires less oxygen to produce energy.[86]

I highly recommend adding beetroot juice to the diet because it increases blood flow and oxygen supply in the body. For soccer players, beetroot juice can have a serious effect on how long they are able to perform at high intensities.

So there we have it. We've gone over the importance of meals and fluids in endurance, and we even went over some supplements and superfoods that can have some serious effects endurance. For soccer players, improving endurance is really important for us. I hope these suggestions help you to improve your endurance and grow as a soccer athlete.

Eating to Lose Fat

In the same vein as endurance, let's break down how to eat to lose weight. We've heard the old adage "burn more calories than you take in" and that is true. However, you should make sure that those calories come from some great macros and stay away from processed foods. Supplement micronutrients and use hormone optimization to promote good health in your body. Also, some things you can implement into your diet to promote weight loss are water, coffee, tea, control your portions, high protein meals, and intermittent fasting.[87]

The Ultimate Pre-Game Meal

It's hard to be 100% on your diet. I know, especially with all sorts of things that come up in life. However, as soccer players, we should AT LEAST be 100% on our diet on game day. In this section, we'll go through a checklist of the things we need of our body to perform well on game day.

The list is as follows:

1. Glycogen storages: these need to be full so our bodies can go through explosive movements and can work all day.
2. Feel light: we want our blood moving throughout our body, not sitting in our bellies.
3. Fully hydrated: intuitive, but we don't want to feel heavy or bloated.
4. Substantial potassium: this will help us avoid muscle cramping.
5. Amino acids: these will help us avoid breaking down muscles in order for our bodies to fuel our movements.
6. High energy and alertness with a calm sense of focus.
7. Come in confident and ready to fight to the death, but maintain composure.

In order to complete this checklist, we must turn to nutrition. Let's go ahead and go through these topics in depth.

Full Glycogen Storages

Glycogen is how our body stores carbs in muscles. This is then used as energy for explosive movements. In order to perform well in a game, these must be full. In order to know whether or not these glycogen storages are full, you must evaluate how you recovered and ate in the days leading up to the big game. Frantically trying to replace glycogen on game day requires a high carb intake which leads to a quick drop in blood sugar.

For a 90 minute game, we need our blood sugar at a solid level. This can be achieved by loading our bodies with glycogen the night before the big game, depending on the past few weeks' activities and our carb intake.

"Carb loading" the night before the game when your muscles are already rested and filled with glycogen and your liver has plenty of carbs for normal body function will simply cause the extra carbs to be stored as fat. Hours before the match, there should be a focus on carbs, but eat simple carbs. Stuff that is flour based is great. Simple carbs are easy to break down and will give your body the quick energy it needs to perform.[88] We don't want to be heavy going into the game.

On the day before the game, most players go through light training, go over tactics, continue muscle recovery from tough practices, all in preparation for the match. Because the body isn't stressed too much by these light activities, there is not a huge glycogen deficiency. To make sure your glycogen stores are filled requires some planning. Muscles store around 300-400 grams of carbs and soccer players can deplete half of this. So look at the intensity of the practices and schedule leading up to the game and plan your meals accordingly.

If your glycogen stores are full by the game, you're golden. All you need to do in this case is digest slow carbs like fruits and vegetables. Fruits are good because they are mostly fructose, sugar that doesn't digest as quickly as carbs. Try eating bananas for their high fiber and potassium content. This will give the body the glucose it needs to run at 100%. Veggies like spinach and kale are full of fiber, are slow to digest, and are dense in nutrients that your body can slowly draw on throughout the match.

Pro tip: Cinnamon will help lower your body's insulin response and help its sugar response to help maintain energy later when the game begins.

Feeling Light

We all want to feel light before the game. Don't be that guy who ate too much and got sick before or even during the match.

When you eat a big meal, the body sends blood to the stomach in order to help with digestion. This does not help soccer players during the game. Instead, we want blood going to our muscles and brain so that we can function well.

How can we feel light? By eating a pregame meal 3-4 hours before game time gives the body plenty of time to digest, get waste out, and have nutrients circulating through the body. The timing depends on what and how much you eat. Personally, I like smoothies because they are easy to digest. If you decide to eat a solid meal, you need to give yourself time to digest. The timing can also differ depending on metabolism. The 3-4 hour window is a good ballpark to begin experimenting.

Also, a banana is good to have after this last meal. If not a banana, a handful of nuts will go a long way to feed you but not make you feel heavy. Essentially, make sure you are not eating anything too big that will divert blood flow to the stomach.

Full Hydration

We all know the importance of hydration, so I will go over the finer points. Being mildly dehydrated (2% of body fluids) has drastic effects on performance decreasing endurance by up to 30%. We perform better when we are fully hydrated. You should be getting plenty of water by drinking as much water as possible the night before the game and maintaining that hydration the morning of the game. Too much can leave you feeling heavy and bloated which can lead to cramps. Taper off heavy fluid intake 45 minutes before the game. This is about how long it takes the water to get through your system.

A good rule of thumb is to drink about a gallon of water per day to stay fully hydrated.

Avoiding Muscle Cramps

It is super embarrassing to cramp up during a game, so don't be that guy who is struggling because of a simple cramp.

A cramp is simply a lack of preparation. It stems from a lack of hydration, a lack of electrolytes (typically potassium and sodium). I recommend eating a banana and drinking plenty of water. In doing this, maintaining glycogen storages, and physically prepare for the game through practice and training will go a long way to help you avoid cramps.

Moreover, having some salt with breakfast will keep you from having an embarrassing cramp during the big game.

Amino Acids

The body uses amino acids for almost all of its functions, so we need to make sure we are getting plenty of these. During the game, we push our bodies very hard, so we need amino acids in order to keep our muscles from breaking down. If the body does not have enough amino acids, then it goes catabolic. Catabolism is a state in which the body breaks down muscles to fuel itself.

Proper nutrition will keep you from going catabolic. This proper nutrition begins with getting amino acids into the body through a pregame meal. If you recall, we went over how animal foods are the best source of amino acids. However, we can't eat a big steak before the game. Well, you can, but you will feel heavy and it won't help your performance. Instead, eat eggs and some ham. Eggs are an awesome source of protein, vitamin D, vitamin A, vitamin B2, iodine, and saturated fat. 2-4 eggs the morning of the game will leave you with the amino acids and nutrients you need to keep your body in high gear for 90 minutes.

BCAAs (Branched Chain Amino Acids) are also a great option for insurance against going catabolic. Purely amino acids, you can take them closer to gametime without worrying about feeling heavy. They are easy to digest due to the branched chain, they help avoid muscle breakdown, and they improve muscle recovery. Again, they are illegal for colleges to provide their athletes, but you can go ahead and purchase them yourself.

Also, dopamine is important! Naturally raising dopamine will keep you alert, motivated, and energized after the meal. Amino acids, specifically the amino acid tyrosine is a dopamine promoter.[89]

High Energy, Alertness, Focus

Food can affect the way you think. Crazy right? Thinking and mood are based on the presence of hormones and neurotransmitters signaled by the nutrients present in our bodies. For this

reason, getting the right foods in there to trigger the right hormones and neurotransmitters can seriously affect the way we play.

The balance between high energy and focus can be applied to tea. Think about it, tea contains caffeine, yet when we drink it we feel relaxed. Some of the best tea out there is green tea. It is rather low in caffeine, but high in L-theanine which is important for its calming effects.[90] L-theanine can be supplemented too, so if you want the alertness which comes from caffeine and the calmness of L-theanine, supplement L-theanine and have it with a cup of coffee.

Another option is Yerba Mate, a traditional South American tea that gives similar effects of energy and alertness as the coffee/L-theanine combination.[91]

These alternatives to coffee are helpful in that they give the alertness of caffeine without the jitters. So experiment a little and find out what works for you!

A Sense of Dominance and Confidence

When you step out onto the pitch you want to have a sense of confidence and swagger. This is developed from extensive training. However, it can also be promoted by nutrition. Namely, through hormone optimization.

Testosterone, the steroid hormone that affects aggression is one that will seriously affect how you act when it's game time. More of it will make you work harder and assert your dominance on the field. However, it is impossible to play well when all you see is red. There needs to be a balance with this aggression. This composure can be reached through promoting serotonin production. Serotonin is the neurotransmitter that promotes calmness. Getting enough sleep (7-8 hours) in complete darkness will go a long way to keep this maintained.

Food that will help is avocado, almonds, kiwis, and bananas. They all have the amino acid tryptophan, the key ingredient to making serotonin in the body.[92]

Pro tip: Eat a tablespoon of honey before bed to improve your quality of sleep.[93]

Example of Game Day

Now that we've gone over the checklist of things that we can affect through nutrition we can apply it to a game day scenario.

Upon Waking

- Drink 2 glasses of water

9 AM

- Omelette and potatoes

11 AM

- Have to be at field in an hour for warm-ups
- Is it cold? Drink Yerba Mate.
- Is it hot? Good thing I made tea the night before and put it in the fridge so that I could have some iced tea before warm-ups. Oh look at that! I have some cinnamon that I can put into it.

12 PM

- Warm-ups
- Eat banana and supplement 10 mg of BCAAs

1 PM

- Game time
- Chew peppermint gum during warm-ups/during game. The chewing stimulates promoter cortex which prepares your brain for movement and reaction. One study shows a participant's reaction time increased on average by 36 milliseconds.[94]A penalty kick takes 50 milliseconds to reach the goal line. The gum makes a difference.
- Iced water to improve endurance.

There you have it, a checklist of things that will improve your game simply by changing your diet. Moreover, we applied it to a game day scenario. If eating this way is new, I'd suggest experimenting on a training day and work out the kinks before applying it to a real game. In going through this checklist, I guarantee you will see a change in the way you play. You will have more energy and confidence. You will be ready to dominate the competition.

How to Optimize Your Recovery After a Match

Muscle recovery is important, especially after a soccer match where you left everything on the field. Gains occur in recovery. Muscle growth, endurance, learning skills and techniques, all of these are rooted in how you recover.

After a big game, focus on muscle recovery.

I came across an interesting analogy where the body was likened to a bank account. School, work, finances, and relationships make us withdraw from this account. Recovery is how we deposit into the account.[95]

Recovery gives us enough so that we don't overtrain and overreach.

Overtrain

- Serious
- Loss of strength and fitness
- Serious mood changes
- Sleep disruption
- Immunity problems (getting sick)
- Poor hormonal balance and production
- Chronic joint and muscle pain

Overreaching

- Milder, but happens more frequently
- Low-energy
- Half-assed workouts
- Constantly feeling sore
- Mild mood swings
- Nagging injuries

The best way to describe overreaching is that burnt out feeling you get after a few months of hard training. I've seen it happen from national team players to high-level coaches. They work themselves to the bone without paying attention to recovery, and they diminish in their abilities.

Taking recovery seriously can address and cure overreaching and overtraining. My hope here is to motivate and scare you into seeing how important recovery is.

The Basics

Sticking to the basics will keep your body and mind from that overreaching/overtraining area. So let's take a look at what it takes to recover.

Eat in the OS Style

There are a number of excellent recipes at the end of this book, so definitely look there to eat in the Optimal Soccer style. The recipes offer meals with carbs that aren't inflammatory to the body. While the body needs acute inflammation to signal the recovery process, unchecked it can lead to chronic inflammation. Chronic inflammation is a major problem for athletes and will prevent you from reaching your full potential.

Also, the OS diet is higher in fats than most diets. This is good because of the presence of fats in maintaining healthy hormone levels.

Sleep

Sleep is very important for recovery and performance. When we sleep, our bodies go through a rigorous recovery process. The problem is, most people neglect sleep. In neglecting sleep we become more stressed and our brains do not function well.

Through sleep, our minds consolidate memories which is integral to the learning process. Without sleep we cannot effectively learn what we practiced throughout the day.

Pro tip: Drink a protein shake before bed. It aids in protein synthesis, gives the body energy to effectively recover, and will help reduce stress.[96]

Reducing Stress

Stress comes in a variety of forms. For our discussion we'll talk about psychological stress and physical stress. Both types of stress manifest themselves in the hormone cortisol. This is bad for the body because of the hyper-alert state it puts us in. This is unsustainable, and has debilitating effects on the body.

In my experience, stress comes from school, work, relationships, family, and financial factors. It takes a toll on us as we worry about getting good grades, making enough money, and maintaining healthy relationships with those close to us.

To best deal with these stressors, turn to activities that are not physically demanding and are mentally gratifying. Personally, meditation is one of my favorites. I discovered it after sophomore year and do it daily.

Meditation, light yoga, stretching, walks, cooking, these are some of the activities you can experiment with as de-stressors. Essentially, you want to do something that takes you out of the nonsense of everyday life.

Beyond the Basics

As we move beyond the basics we'll look at the techniques and supplements that can optimize recovery as opposed to starting it.

Eat Cauliflower and Broccoli

This may remind you of your mom telling you to eat your veggies. Cauliflower, broccoli, and sprouts contain sulforaphane. The significance of this nutrient was tested by molecular scientists at the University of Bonn. They discovered that it deactivates the muscle growth inhibitor myostatin.[97]

This means veggies will help your muscles recover faster and grow bigger. It's a win-win!

I recommend buying frozen, organic broccoli and eat it with garlic, grass-fed butter, or olive oil. This will give you the benefits of a great veggie, while also contributing to your intake of fat.

Foam Roll

Foam rolling is one of the best developments in sport science. It expands on massages and the idea of "working out knots." [98]

Foam rolling is proven to improve muscle recovery. It also reduces the feeling of fatigue while after working out. Moreover, it does wonders for mental stamina when it comes towards the 70th minute of an intense game.[99]

There is a lot of debate on when to foam roll. Before working out? After working out? The data behind such research is inconclusive, but I find rolling after a workout and before bed keeps me limber and free of fatigue. I suggest experimenting with both and seeing which works best for you.

Cold Water Immersion

Ah the classic ice bath. We are all familiar with the love-hate relationship of this post-workout activity. It is the standard for muscle recovery and has been shown to help restore muscle contractile function, reduce soreness, restore force production, maintain athletic performance, and generally help athletes recover faster.[100]

Moreover, Tim Ferriss the author of *The 4-Hour Body* found ice baths/cold showers helped boost testosterone, increase fat loss, and help achieve sleep more easily if done before bed.

If you don't have access to a lot of ice or a tub you can try out the Scottish Shower. This is where you start out with a warm shower and slowly change the temperature from hot to cold. The contrast between hot and cold improves the effects of cold water immersion.[101] Also, this is how James Bond showers, so you know it's legit.

Compression

Compression is getting a lot of attention in recent dates, and for good reason! Studies show that it improves recovery from exercise-induced muscle damage.[102]

One of the hot new items of compression is voodoo floss. This rubber strap is wrapped tightly around a joint, the joint is put through a full range of motion for a short period of time (typically around a minute) and the floss is then released allowing blood to flow to the joint. Personally, I have found that voodoo floss has provided significant relief and now plays a large role in my own recovery.

While it may be excessive for soccer players to purchase full body suits devoted to compression, there are socks on the market that go up to the knee that improve calf recovery, a typical problem spot for soccer players.

Mobility Work

Usually we think stretching is the best way to recover, however mobility focuses on specific areas where athletes are particularly deficient. Since I started mobility work on my hips and ankles I've seen a huge difference in my performance.

Mobility can be applied to all joints, but soccer players should put a focus on hips in order to reduce tightness after a hard workout or game. Doing this mobility work will go a long way to prevent injuries and improve performance.

Sources of mobility workouts can be found on at [MobilityWOD](#). There you can cherry-pick workouts to help mobility on your own problem spots.

Cool Down

Cool downs are important, but many wonder what exactly they should do for a cool down. Explosive movements create waste products in blood (lactic acid). So, we should strive for light cardio as the go-to cool down. Light cardio has been shown to help circulate blood and remove waste products faster.[103] This helps our muscles recover faster.

Cardio After Strength

The order is important! Soccer players have to balance lifting and cardio and many wonder which order to do these. Lifts first, then proceed to cardio. The opposite was shown to lengthen recovery time.[104]

Supplements

Doing the above will take care of recovery, however the icing on the recovery cake is the addition of supplements.

L-tyrosine

This precursor to adrenaline and dopamine is helpful in preventing the body from burning cortisol. Taking L-tyrosine can give the body more supplies to produce adrenaline and dopamine before it resorts to cortisol.[105]

Rhodiola

This adaptogen helps the body adapt to stress.[106] This supplement is interesting in that it can help soccer players' bodies adapt to all kinds of stress.

Curcumin

This is the main component of turmeric which is the main seasoning of curry. A 400-500 mg dose of this supplement helps our bodies deal with inflammation.[107]

So there you have it! A long list of muscle recovery techniques. Remember the basics, and be sure to go beyond the basics to implement additional techniques and supplements to get the most out of your muscle recovery.

Improve Your Thinking Through What You Eat

You can eat to do more than make your body perform better. You can also eat to improve the way your brain works. Some good foods you could ingest are nuts and seeds, foods rich in vitamin E, antioxidants, omega-3s, and alpha linoleic acid.[108] Eating fruits and veggies are great for getting your brain going. Cooking with olive oil is great because of the oleuropein in it. Green tea is a nice relaxing way to eat for your brain too. These are all well and good, but let's look at coffee and L-theanine. Coffee is a stimulant, which means there is more adrenaline running through your system. L-theanine was covered earlier in the book, but let's recap. It's an amino acid that creates a calming effect when used in conjunction with coffee.[109] Mixing the two and adding some butter creates something called bulletproof coffee. This stuff is great. It tastes awesome, gets your metabolism going, and creates a powerful cup of coffee. Simply mix coconut oil, butter, and coffee, and you have a concoction that will get you going.

How to Keep Your Diet Right While Traveling

Eating for soccer trips is something I've given a lot of thought to. It's hard to stay disciplined on a trip because you don't have all the resources you normally do at your disposal. Because of this, I found it necessary to include in this book a section that gives you some ideas about how to eat during a soccer trip and maintain the high performance that you have developed throughout reading this book.

When traveling, it is possible to bring a supply of supplements with you. Just grab a little plastic baggie and you can maintain your supplementation. You should also pack food that will last. Nuts, apples, oranges, turkey slices, protein bars, granola, these things are all great food items that you can easily pack away with you. You can also hit up local stores to get what you need should you need anything in particular. I know it's hard, but it is important to stay away from fast food on trips. It is easy because fast food will provide a quick dinner plus it's inexpensive, but you are doing more harm to your body than good. While traveling, drink beverages with plenty of micronutrients. Kombucha is great, plus it is good for your gut bacteria! Make sure to stay hydrated.

For the long trips where your team is flying around the country, there are some things you can do to prepare for flights. Make sure to pack light. This will help your overall stress. Sleep! I cannot stress enough how important sleep is for helping out with any sort of stress and traveling. When sleeping, build a bat cave that is completely dark, don't have caffeine after 2 pm, and routinize a bedtime. You can also supplement magnesium, melatonin, take cold baths and sleep in a 67-70 degree Fahrenheit room.[110]

How Food Can Improve Your Sleep

Food can improve a bunch of different aspects of life, and the same goes for sleep. For our purposes, we will look at why sleep is important in terms of muscle recovery and memory foundation. From there we will go over ways to optimize sleep and the foods and supplements that play a role in sleep.

Sleep is especially important for muscle recovery because of protein synthesis. Protein synthesis is important in the role it plays in muscle recovery and growth. Neglecting sleep does a lot of harm in building and maintaining muscle, so we must sleep well in order to build stronger bodies. Take a look at Manchester United's defender Gary Pallister who started to recover from a debilitating back injury after sleep expert Nick Littlehale changed his sleeping habits.[111]

Mentally, sleep plays a significant role in memory foundation. Remember, through sleep we store memories which helps learn the activities we practiced throughout the day.

But how do we affect sleep? Here's a list of ways to improve sleep and then we can get into foods and supplements to further help sleep.

Hack Sleep

1. Track sleep: there are apps that can help you do this.
2. Make the room as dark as possible. Light suppresses melatonin production and drastically hurts our sleep.[112]
3. No caffeine after 2pm. This will cycle the caffeine out of your body and help you sleep better.[113]
4. Take supplements that help sleep: magnesium, collagen, krill oil. Omega-3s help the brain go through sleep cycles because they are bound to phospholipids. These are fats that keep energy levels stable for longer.[114]
5. Eat foods that help promote better sleep. 1 Tbsp. of honey before bed has been shown to help sleep.[115]

Foods, Supplements, and Sleep

The relationship between food and sleep warrants more discussion. We briefly went over the importance of honey and sleep, but why is that important to sleep? Well, honey provides the body with glycogen, which the body uses to perform recovery functions throughout its sleep cycles.

Supplements for sleep include GABA, Valerian and Magnesium. GABA has a natural calming and relaxing effect, valerian is a powerful herb that helps sleep, and magnesium has been shown to improve sleep.[116]

Moreover, eating a lot of fat at dinner can improve sleep.[117] Fat is essential for the body to produce energy, which your body uses a lot of during sleep.

Like we touched on previously, protein and carbohydrates are essential for our bodies to function properly. Ensuring that we get enough of these macronutrients through whole-food meals goes a long way to making sure we eat for the sleep we need.

There you have it, sleep can be optimized through food and relaxing practices. A good diet is the foundation for total body optimization. For soccer players, knowing how to sleep well allows the body to recover better and our minds to work at a higher level.

Optimal Soccer Recipe Ideas

It's hard to find meals that are inexpensive and taste good. These meals must be high in macronutrients, filling, and easy to make. Also note, eat more carbs on training days than on rest days to get the most out of your workouts. I'll list ten meals that are not only inexpensive, but they are tasty and full of all the good stuff we've been talking about throughout the book. Here we go:

Stuffed Bell Peppers

These are great because they mix a great veggie with whatever you want to put in it. I usually mix in ground turkey and quinoa and maybe add some cheese. These are super easy to make and they taste awesome.

Meatloaf

Meatloaf is a great source of protein. Just think, it's a big hunk of meat. The beauty of the meatloaf is that you can stuff it with some good stuff. I like to put cheese and onions in mine. Also, a side of broccoli is great.

Smoothie

This is a great way to get a lot of nutrients into a drink you can easily ingest. Smoothies that mix macros and micros can do a lot for an athlete that is pressed for time. You can fiddle around with different recipes, but a personal favorite of mine is to mix greek yogurt, banana, strawberries, chia seeds, and some milk for an exceptionally powerful smoothie.

Shrimp Stir Fry

Stir fries are awesome. Mix in some olive oil or coconut oil, some veggies, and some shrimp and you have a whole-food meal packed with everything you could ever want.

Steak and Sweet Potato

Steak and potatoes are the go to meal that incorporates a great source of all the macros. Add in a sweet potato and you have a powerful meal that is sure to get your metabolism going and keep your body happy.

Spaghetti Squash and Salmon

Spaghetti squash and salmon is a great meal that incorporates awesome fat, protein, and omega-3s from the salmon, with complex carbs from the spaghetti squash. It's a great meal that is sure to keep your body well nourished.

Omelet and Potatoes

This is a great way to start your day! It's tasty, and chalk-full of nutrients to get your metabolism going for the day. You can stuff your omelets with all sorts of goodies too!

Roast Chicken and Potatoes and Butternut Squash

Wow, there's a lot in this meal. Make sure to do this one after you kill a big workout or game. Have to love a good roast chicken. The rest is great for all the macros your body needs.

Chicken and Rice with Mushrooms

You can see the trend here. Chicken is amazing. Great source of protein, it's generally inexpensive, chicken is great. Rice will give you the carbs you need. Mushrooms are always a tasty add-on.

Bean Soup with Kale

This is an excellent soup that combines the legendary superfood kale with beans. To prepare this meal, simply saute the kale with olive oil until it wilts, add chicken broth and 2 cups of beans and simmer for 15 minutes. You may choose to add tomato and chicken (make sure you cook the chicken) to add more macronutrients to the meal. The type of beans may vary, I prefer garbanzo beans.

Creating a diet that is geared towards a specific function is hard work. In breaking down what soccer players do and what their needs are, creating a diet around those needs becomes a bit clearer. In breaking down the diet into macro and micronutrients and going into some detail on hormone optimization, building a diet and lifestyle around a specific goal is difficult, but the results are very worth it.

Thanks for reading through the book! You are well on your way to becoming a better soccer player. Our goal at Optimal Soccer is to give you all the resources you need to take your play to the next level. Leave all the hard research and planning to us, so you can focus on your game.

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