

Strength & Mobility for Tennis

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Supplement Guide

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Introduction

Over the past couple of years, the incorporation of nutritional supplementation into one's lifestyle has been viewed with more favor. Perhaps you have been thinking of adding some supplements to your diet.

If you are reading this, you most probably take your health and tennis game fairly seriously. If you are like us, you endeavor to eat well, train, and exercise most days. If you are like us, you also know how important a role nutrition plays in performance and recovery from training. In addition to a healthy, anti-inflammatory diet, there are several appropriate supplements that can support this effort. That being stated, yes, we are fans of taking supplements.

Walk into any health food store, or browse any online seller of supplements, and you will quickly realize there are hundreds to choose from. With an overabundance of nutrients available from supplement companies around the world it may seem a bit daunting to figure out where to start. We are oftentimes asked what supplements we take and why we take them. While most supplements may play some sort of role in supporting your body's function, we have chosen to highlight a few key supplements we think most everyone could benefit from taking. Our goal here is to provide a summary of what supplements you may benefit from incorporating into your overall nutritional plan and why they can help you live healthier and perform better on the court.

Protein Powder

Protein is one of our body's primary building blocks for muscle, bone, skin, and other tissues. If there is one macronutrient we most oftentimes see in the athletes we work and consult with, it is protein. Whether you are a recreation-level player, an age-group competitor, or a rising professional, it can be challenging at times to consume enough protein in our diet.

If you are an active individual (we are guessing you are or you probably would not have purchased this product), you should strive to consume a minimum of 1 gram of protein per pound of bodyweight. This means a 180 pound individual should consume at least 180 grams of protein a day. For those with a busy schedule or for those who have to travel a lot, a quality protein supplement can be just the solution to meet this need.

Supplemental protein can also be used in a shake post-workout or post-competition. It has been shown that cellular protein uptake is enhanced immediately following training and competition. Your rate of recovery will be most efficient if the proper amounts of protein and carbohydrate (glucose) are consumed within 15-30 minutes following training. Again, a convenient-to-use protein supplement can meet this need.

Here is the deal. Some protein supplements are better than others. The inferior products - and oftentimes less expensive ones - contain artificial sweeteners and sometimes colors. These are to be avoided. Period. Instead, look for a **whey protein** that is free of artificial additives and comes from grass-fed cows. Most whey protein supplements provide anywhere from 15-25 grams of protein per serving (60-100 calories). More than one serving can be taken following more intense or longer duration training sessions and matches.

Some people should consider a vegan source of protein; that is a protein source not derived from cows such as the whey varieties. A healthy alternative is **pea, hemp, or rice protein**. These varieties can still offer a high level of functionality, bioavailability, and nutritional benefits. The pea and hemp proteins we have tried provide excellent digestibility which may also be helpful for those with digestion sensitivities.

Omega-3 Fatty Acids

It is difficult these days to not hear about the benefits of consuming omega-3 fatty acids. The supplement you choose should be molecularly distilled and filtered to ensure purity and to maximize the removal of heavy metals, pesticides, solvents, PCBs, and other harmful contaminants. Additionally, look for a product that contains lipase, a digestive aid to ensure maximum absorption.

Fish oil provides essential fats because it is made up of omega-3 fatty acids. Essential fats are those which the body can't produce on its own—they must be eaten—and it must have them for optimal function. One commonly asked question we hear is over concern of consuming additional fat. Fish oil won't turn into fat in the body. Instead, the body will favorably use the fat from fish oil to build the outside lipid (fat) layer that protects our cells.

We now know that chronic inflammation functions as the fuel that lights the fire to injury development, more debilitating disease and progression of both. Numerous inflammatory signaling molecules play a role in promoting overuse injury and disease activity. Research has proven that maintaining an anti-inflammatory diet and supplementing our diet with proper nutrition will reduce the activity of these molecules, which suggests these strategies are useful in preventing and treating multiple pain syndromes and diseases.

We all suffer from inflammation issues to varying degrees. The overall goal for each of us should be to create a solid anti-inflammatory foundation with proper diet (lean protein and vegetables) and supplemental support. It is very important to embrace this foundation as the approach to overall health improvement, prevention of illness and disease, obesity, avoidance of chronic musculoskeletal syndromes, and performance enhancement.

Fish oil has powerful anti-inflammatory properties. One study showed that those who took 4 grams/day of fish oil had lower cortisol at the end of the study. Anytime cortisol is unnecessarily elevated it causes inflammation. It almost goes without saying that inflammation is going to increase pain sensitivity – both neural as well as musculo-skeletal. People just don't seem to understand that “inflammation” equals disease, illness, delayed recovery from injury, and obesity. Still further, we can't overstress the importance of decreasing inflammation if you want to improve body composition and be lean.

There is a lot of evidence in the literature showing effective doses to be in the range of 2grams – 5grams / day. We recommend using the table below to determine the proper amount of omega-3s you should consume each day.

.25 grams / 10 lbs. Body Weight	
125 lbs.	3 grams
150 lbs.	3.75 grams
175 lbs.	4.5 grams
200 lbs.	5 grams
225 lbs.	5.5 grams
250 lbs.	6.25 grams

The big takeaway here is this: The omega-3s DHA and EPA are absolutely *essential* in your diet. They will support the health of every cell in the body. They can counter chronic inflammation, support the brain, help with fat loss, and protect the heart among other things.

Vitamin D3

Vitamin D is essential for optimal bone and arterial health and for maintaining the immune system in proper balance. Vitamin D is also critical in:

- Fat metabolism
- Insulin resistance
- Types 1 and 2 diabetes
- Cardiovascular disease
- Anti-inflammatory (Cox2-inhibitor)
- Fertility
- Cancer prevention (breast, prostate, colon, and other forms of cancer)

Supplementation of vitamin D may be beneficial for those who do not get adequate sun exposure and/or dietary sources of these vitamins. It can be tough for many of us to get enough exposure to the sun as we generally live indoors.

Most experts suggest that adults should supplement with 2,000 – 5,000 IU of vitamin D3 per day - especially during winter months which bring less hours of daily sunlight exposure. Other experts suggest that darker-skinned individuals (darker skin makes less vitamin D relative to lighter-skinned populations) supplement with 5,000 – 10,000 IU of vitamin D per day to help ensure they

maintain appropriate blood vitamin D levels. Supplement your diet with vitamin D in the morning hours with a meal containing fat.

If you are interested in having your levels of vitamin D checked, is both easy and inexpensive to have vitamin D levels tested. If you are tracking blood work, optimal ranges are between 50 – 65 ng/dl. These levels are on the higher end, but the benefits far outweigh any potential downsides. Supplementation with vitamin D is also relatively inexpensive. Adding a quality vitamin D supplement to your daily routine may not eliminate your risk of the above diseases altogether, but it is an easy step you can take to do what you can to protect yourself.

Natural Anti-Inflammatories

By means of neutralizing damaging free radicals and fighting inflammation, the antioxidant combination provided by the inclusion of these compounds is very powerful. Inflammation is not just limited to an occasional sore joint. Inflammation has been called “the silent killer” as it is the precursor to a whole host of diseases. Supplementing modestly with some of the compounds listed can give you some insurance against inflammation and cell damage.

Several herb supplements have been proven effective in fighting inflammation. These include: tumeric, boswelvia, rosemary, bromelain, ginger, and proteolytic enzymes.

Plant ingredients such as bromelain, papain, chymotrypsin and trypsin have a long history of being used successfully against the pain of arthritis and inflammation. They have the ability to turn off the switch that produces inflammatory compounds. Therefore, they can be used effectively against arthritic symptoms and for sports injury recuperation. Even if you are not suffering from pain, they can be used to help maintain healthy joints by protecting the cartilage from overuse damage.

Brain Health

Most of us would like to live as long as we can. While this is a meaningful goal, protecting brain health is vital if the pursuit of a longer life is to have any meaning. According to current research, some degree of cognitive decline is

inevitable as we age, unless we take steps to prevent it. The ideal strategy for preserving brain function begins with preventing factors that may contribute to cognitive decline. In addition to a diet rich in protein and healthy amounts of fat and adequate amounts of sleep, supplementation is one such step in avoiding a decline. The brain is a metabolically active organ that produces high levels of free radicals. These free radicals can bombard the cell membranes of neurons causing premature loss of function.

Look for a supplement which contains a number of phytonutrient-based antioxidants and Phospholipids which a class of lipids (fats) and a major component of cell walls. They help repair and maintain cells, so as to keep them fluid and whole. Phospholipids play a major role in maintaining healthy cell communication and healthy cell membranes.

Phosphatidylcholine, the most common phospholipid, is required for many functions of the body, but is most notably a precursor to acetylcholine which is necessary for proper brain function. Often, supplementation is essential in order to increase the body's levels of this brain-supportive nutrient.

Probiotics

With probiotic supplements, it's all about the survival of three major barriers: during the manufacturing process, on the shelf and through stomach acid. You want to find a product that is protected from harsh stomach acid and delivers the highest number of live organisms to the intestinal tract.

A quality probiotic supplement can help one get closer to optimal health. Probiotics consist of live, healthy, beneficial bacteria that help us in many ways, including improving nutrition and protecting against disease. This "friendly" bacteria can help to offset the stresses we are exposed to every day - from nutrient-deficient diets to impure water and chronic dehydration to processed foods, to mental and emotional stress we put on ourselves - all of which disrupt healthy intestinal flora.

If we don't do something to address these different forms of stress, the disruption to our gastrointestinal system can lead to autoimmune and other inflammatory diseases. We have seen probiotics used to successfully address gastrointestinal, immune, and skin issues.

Here is a short list of reasons to supplement with probiotics:

1. Enhanced intestinal health and improved digestive function.
2. Promotes regularity of bowel function.
3. Supports normal inflammation response (addresses chronic inflammation).
4. Fights infectious diseases.
5. Plays a role in normalizing and / or decreasing serum cholesterol and triglyceride levels.
6. Improves nutrient absorption.
7. Helps prevent production and absorption of toxins produced by disease-causing bacteria. This reduces the toxic load placed on the liver.
8. Protects against invasion of pathogenic viruses, yeasts, Candida, parasites, and bacteria.
9. Supports healthy skin.
10. Addresses gastrointestinal syndromes including diarrhea, constipation, unpleasant gas, bloating, IBS, and leaky gut.
11. Produces digestive enzymes and B-vitamins which aid in digestive and nervous system function.
12. Helpful in cases of extreme fatigue, stress, and autoimmune disorders.
13. Protects against cancer development and progression.
14. Restores healthy flora and lessens side effects after a bout of antibiotics.
15. Helps women lose weight after giving birth if taken during the first trimester of pregnancy.

As stated above, most people will benefit from supplementing with probiotics daily. The most common probiotic bacteria in supplements are Lactobacillus and Bifidobacterium. There are over 125 species of Lactobacillus and 35 species of Bifidobacteria making up the majority of gut micro-flora found in your large bowel or colon. Other healthy, probiotic-rich foods include kefir, yogurt, and sauerkraut.

Multivitamin

Due to changed farming habits, lack of organic matter in the soil, genetically altered foods that are over processed and over prepared, and chronic intake of prescribed and over-the-counter medications, most everyone is susceptible to being deficient in one or more nutrients. A quality multi-vitamin will contain

optimal amounts of many nutrients not easily obtained or missing in most diets for reasons listed above. You want to find a company that uses high quality resources, and one which contains chelate minerals as these have been found to improve tolerance and absorption.

Many people often make the critically wrong assumption that certain drugs, herbs or other supplements will negate or make up for the poor dietary habits that almost certainly contributed to the health condition in the first place. We are in no way suggesting supplements can make up for poor dietary choices. No supplement (or medication or herb) can do that. Instead, supplements may play an important role as additions to a healthy lifestyle highlighted by an anti-inflammatory diet. We are suggesting that these supplements, when coupled with an anti-inflammatory diet, may be helpful in bringing your performance, ability to recover, and overall health to another level.

Implementation Plan

As far as implementation plan goes for the supplements suggested, you could follow a program like this:

Breakfast: Omega-3 fatty acid – 1/3 of daily intake (see chart in guide)
 Brain supplement
 Probiotic (best taken 15-30 minutes before meal)
 Multi-vitamin
Lunch: Omega-3 fatty acid – one-third of daily intake
 Vitamin D
Dinner: Omega-3 fatty acid – one-third of daily intake

Post Workout: 20-40g protein, 20g suggested if under 150 lbs

In Between Meals: Natural anti-inflammatories

Where To Get High Quality Supplements

These are many different brands that supply high quality supplements. Please do your own homework and test the supplements that work best for you.

Remember that taking supplements will not replace having a strong nutrition plan, but that can be a wonderful support to the food that you eat on a daily basis. Below is a list of suggestions from two companies: Prograde and Seeking Health. The supplements from these companies are high quality and deliver results. If you do choose to purchase these products, I will receive a commission.

Protein Powder

- [Prograde Whey Protein](#)
- [Vegan Protein Powder](#)

Fish Oil

- [Real Dose Fish Oil](#)

Vitamin D3

- [Vitamin D3 Drops](#)

Natural-Antinflammatories

- [Flow Fx](#)
- [Optimal Turmeric](#)

Brain Health

- [Phosphatidylcholine](#)

Probiotics

- [Probiotics](#)

Multi Vitamin

- Prograde VGF 25+
 - [Women's Formula](#)
 - [Men's Formula](#)