

Scott Godwin's
Quick Guide to Nutritional Supplementation ©

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"Let food be thy medicine, and medicine be thy food." -Hippocrates



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Rule #1 For Supplements

There is no replacement for real food.

Vitamin and food supplements are big business in America, raking in over \$6 billion dollars per year, and this number increases every year. Everyone wants a simple solution and everyone wants to be healthy, so it's logical to reach for a supplement, especially if it's cheap. Unfortunately, the primary problem with the supplement business is that it is poorly regulated. The US Federal Government / FDA does not monitor supplement companies in an in-depth way, and there are laws protecting supplement businesses from deeper scrutiny. Supplement companies have lobbyists, and lobbyists work hard to protect the companies they work for.

Besides the fact that you don't know for certain if what you're getting in the supplement bottle actually is what it says it is, there may also be problems with toxicity. A recent study showed that many supplements don't contain what they say they contain and instead even contain toxic compounds. Another showed, as an example, an increased chance of liver failure with Green Tea Extract Supplementation.

Via Negativa, Again

Why would you take a supplement you weren't sure about? If you didn't know if it might hurt you or not, why would you risk it? One of the best ways to stay healthy is to avoid things which are harmful.

This is also called *Via Negativa* - improvement or learning by taking away. Similarly, the first principle of health care, called "The Hippocratic oath" which all doctors swear to uphold, is to do no harm.

Safety comes before everything else, or at least it should. When you think about how to be healthy with food your main concerns should be the basics:

- A diet based on fruits, vegetables, legumes, whole grains, nuts, and moderate amounts of lean meat and dairy.
- Limiting alcohol and caffeine to 1-2 servings per day.
- Avoiding fried food, sugar, and refined carbohydrates.
- Eating less than you burn and moderating your caloric intake.
- Drinking plenty of water, 8 glasses per day.

It's amazing that a billion-dollar supplement and nutrition industry can complicate something that really is that simple. Supplements do have a small place in the big picture, but food should be your primary focus. Over the next few blog posts, we're going to review some things about supplements, but let's start from the beginning.

So here it is:

Rule #1 for Supplements: There is no replacement for real food.

Real food has several things that a supplement doesn't:

- **Fiber** - Fiber makes you feel full, keeps you regular, and helps curb your appetite and as a result helps you lose weight.
- **Phytochemicals** - Plants are made up of various chemicals, called phytochemicals, which help in defense against competitors, pathogens, or predators. Phytochemicals are still being researched but are thought to have health benefits and some researchers even believe that the main benefit of eating vegetables and fruits is the phytochemicals. Some examples of phytochemicals include carotenoids and polyphenols.
- **Calories**- This is the obvious one, but vitamin supplements don't give you any actual calories for energy.
- **Fun**- It's much more fun to try new foods and eat than it is to pop a pill.
- **Taste**- Eating is a great joy.
- **Digestion / Absorption**- Vitamins, minerals, and nutrients (fat, carbohydrates, and proteins) work together to boost absorption so it's necessary to eat real food to get the full effect of these compounds.
- **Less Toxicity** - Again, you never know for sure what you're getting with a supplement. At least with real food, you know what you're eating.

There are a few minor advantages of supplements in some cases:

- **Absorption** - In some cases, vitamins are sold in combinations, like Vitamin D and Calcium, to enhance absorption.
- **Convenience** - If you're traveling, or sick, or in a stressful environment it may be helpful to boost your immunity through supplementation.

We'll dig a little deeper into supplementation next time, but for now, always remember to focus on food, not supplements. No amount of supplementation and expensive health care treatment can overcome a poor diet and unhealthy lifestyle.

Enjoy a fresh salad, a handful of strawberries, sweet potato, or some roasted almonds. Delicious!

PS- We all know vegetables are good for us, but a quick look at some of the basic benefits listed on the USDA site really is amazing. It turns out Grandma was right, we really do need to eat our vegetables:

Nutrients

- Most vegetables are naturally low in fat and calories. None have cholesterol. (Sauces or seasonings may add fat, calories, and/or cholesterol.)
- Vegetables are important sources of many nutrients, including potassium, dietary fiber, folate (folic acid), vitamin A, and vitamin C.
- Diets rich in potassium may help to maintain healthy blood pressure. Vegetable sources of potassium include sweet potatoes, white potatoes, white beans, tomato products (paste, sauce, and juice), beet greens, soybeans, lima beans, spinach, lentils, and kidney beans.
- Dietary fiber from vegetables, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower risk of heart disease. Fiber is important for proper bowel function. It helps reduce constipation and diverticulosis. Fiber-containing foods such as vegetables help provide a feeling of fullness with fewer calories.

- Folate (folic acid) helps the body form red blood cells. Women of childbearing age who may become pregnant should consume adequate folate from foods, and in addition 400 mcg of synthetic folic acid from fortified foods or supplements. This reduces the risk of neural tube defects, spina bifida, and anencephaly during fetal development.
- Vitamin A keeps eyes and skin healthy and helps to protect against infections.
- Vitamin C helps heal cuts and wounds and keeps teeth and gums healthy. Vitamin C aids in iron absorption.

Health benefits

- Eating a diet rich in vegetables and fruits as part of an overall healthy diet may reduce risk for heart disease, including heart attack and stroke.
- Eating a diet rich in some vegetables and fruits as part of an overall healthy diet may protect against certain types of cancers.
- Diets rich in foods containing fiber, such as some vegetables and fruits, may reduce the risk of heart disease, obesity, and type 2 diabetes.
- Eating vegetables and fruits rich in potassium as part of an overall healthy diet may lower blood pressure, and may also reduce the risk of developing kidney stones and help to decrease bone loss.
- Eating foods such as vegetables that are lower in calories per cup instead of some other higher-calorie food may be useful in helping to lower calorie intake.

Rule # 2 for Supplements:

If you're going to take a supplement, make sure it is what it says it is, and more importantly that it's safe.

Back when it was discovered that Omega - 3 Fatty Acids could benefit the heart and brain, as well as have an overall anti-inflammatory effect, use of fish oil supplements, which contain Omega 3 fatty acids, understandably went through the roof. One reason for this is that the amount of research available (the sample size) was pretty small at the time on how effective these supplements were. So what research we did have seemed to indicate that these supplements were close to being miracle drugs. Once the research started piling up, the data started to show that they might not be that effective.

(This small sample size phenomena is quite common and is like a commercial on TV which says '4 out of 5 doctors recommend X product'. The next logical questions would be which 5 doctors? And why not 800 out of 1000 doctors?)

Effectiveness is one thing, and we will cover that in a coming blog post essay, but even more important is safety. The most important thing about the supplements you take, other than remembering that they don't replace healthy eating, which was Rule #1, is that

.....they are what they say they are and that they are safe.

This is no small task. The FDA tests drugs for safety (which brings up a whole other book-worthy discussion for a later time), but they don't test supplements.

We are all busy, and even being in the field, it's not something I paid that close attention to for a long time. The good news is that it takes only a few minutes to figure this out, and I'm cutting out the leg work for you.

According to my research, I would look for these 4 symbols, which I found on Consumer Reports and trust:

There may be other good supplement companies out there, but if you see one of these symbols, you at least know that the companies have paid to have the supplements tested for quality and contamination, which is essential.

What do you think?

Rule # 3 for Supplements:

Test & Proceed with Caution.

Nutrition is an over-the-top business in America. If buying complicated supplements and obsessing about what you eat is something you're at least passingly familiar with, in your life or someone you know, you aren't alone. Billions are spent every year on nutrition media, organic food, "health" food, and nutritional supplements. You can even buy *organic, farm-to-table, vegetarian, gluten-free food and vitamins for your dog too*. Unfortunately, most of this money is wasted, on our dogs and ourselves. Like most things, we tend to take our emphasis on trying to eat healthy and get nutrition to the extreme.

Healthy nutrition is not that complicated.

A little background: Eat mostly fruits and vegetables, especially vegetables. Shoot for 5 – 6 servings per day.

If it has a peeling, don't waste your money on organic, because it doesn't matter. Regardless, wash all your fruit and vegetables well, unless it has a peeling, in which case it doesn't matter.

Eat lean protein once or a few times a day (1-2), but don't overindulge in fatty meats. Try to get organic meat if you can, or buy from a local farmer. Eat some whole grains and slow-digesting carbohydrates and legumes, about 3-6 servings per day. Go minimal on dairy, 1-2 servings per day is plenty. Limit your alcohol and caffeine to 0-2 servings per day.

As far as supplements:

Rule 1: Supplements don't replace a healthy diet.

Rule 2: Don't take something unless you know for certain it won't hurt you, and secondly that it is what it says it is.

Rule 3: Determine what you need to take as a supplement, if anything, and then see Rule 1 & 2 while proceeding with caution.

As far as rule 3, below is how you can determine whether you need specific supplements. First, it is very difficult to test for vitamin deficiencies. It can be done, but it must be done by someone who knows what they're doing. I am personally very skeptical about vitamin and mineral testing, but would trust a reputable physician to test for Iron, Vitamin D, and possibly B Vitamins. Blood tests for vitamin deficiencies are not validated well, and may or may not be accurate. It's much more reasonable in my opinion to look for symptoms or problems, and I believe most people get *too many vitamins, not too few*.

Here are some tests you can use to determine if you may have a Vitamin or Mineral deficiency, and a few tips:

- Getting colds and allergies often? – Consider supplementing with Vitamin C and Vitamin D, and with a probiotic, which might boost your immunity.
- Constipation? - Consider adding fiber to your diet through oatmeal, whole grains, raw veggies, or fiber supplements

- Muscle cramps? – You may be lacking potassium, calcium, or magnesium. Prescription medications can contribute to the problem.
- Brittle hair and nails? –This can be caused by low Biotin.
- Dry Skin? -Vitamin A can help with this. Consider a low dose supplement.
- Mouth sores? – Can be caused by low Vitamin B6.
- Irritability, depression, loss of balance- Vitamin B12 can be a factor.
- Try pressing on your chest. If your skin is swelling and has a crater where you pressed, you may be low on Vitamin D.
- When you get a physical, ask to test for vitamin deficiencies. Your doctor should be able to assess your bloodwork for other factors other than and in addition to vitamin and mineral testing, such as white blood cells and red blood cells, and make suggestions, even if the direct information about specific vitamins is lacking. You may also be able to get a hair test for Iron deficiency.
- Take a reputable and verified multi-vitamin every day to fill in the gaps.
- Check your medications carefully. Most of them have side effects that could contribute to vitamin or mineral loss.

I'd like to write a best-selling book on the "secrets" of nutrition and supplements, if there were any secrets. I've studied the topic of nutrition for years and I can tell you, it's mostly a show. It's an entertainment and a diversion. The last thing the world needs is another fad diet book, or "secrets of nutrition" book. Don't get me wrong, someone will do this and become famous. But trust me, save your money. Use these simple guidelines instead.

Supplements: The Final Word

I've tried to keep this review of Supplements as brief as possible. The bottom line is that you probably don't need much in the way of supplementation, and if you do, you should be careful what you take.

To review:

Rule # 1: There is no replacement for real food.

- This is because real food has phytonutrients, the compounds which help plants and fruits fight off disease, and phytonutrients can't be replaced with supplements.
- Real food also has fiber, protein, fat, energy, and fills us up, which allows us to survive. Supplements can't replace real food.

Rule # 2: If you're going to take a supplement, make sure it is what it says it is, and more importantly that it's safe.

This is a good way to know if your supplement is reputable. Look for one of these accreditation symbols, and you'll know at least that it is what it says it is.



Rule # 3: Determine what you need to take as a supplement, if anything, and then see Rule 1 & 2 while proceeding with caution.

To test for vitamin deficiencies, ask your doctor, or look for these signs and symptoms:

- Getting colds and allergies often? – Consider supplementing with Vitamin C and Vitamin D, and with a probiotic, which might boost your immunity.
- Constipation? - Consider adding fiber to your diet through oatmeal, whole grains, raw veggies, or fiber supplements
- Muscle cramps? – You may be lacking potassium, calcium, or magnesium. Prescription medications can contribute to the problem.
- Brittle hair and nails? –This can be caused by low Biotin.
- Dry Skin? -Vitamin A can help with this. Consider a low dose supplement.
- Mouth sores? – Can be caused by low Vitamin B6.
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- Try pressing on your chest. If your skin is swelling and has a crater where you pressed, you may be low on Vitamin D.
- When you get a physical, ask to test for vitamin deficiencies. Your doctor should be able to assess your bloodwork for other factors other than and in addition to vitamin and mineral testing, such as white blood cells and red blood cells, and make suggestions, even if the direct

information about specific vitamins is lacking. You may also be able to get a hair test for Iron deficiency.

- Check your medications carefully. Most of them have side effects that could contribute to vitamin or mineral loss.

The Final Word

The supplement business is full of quacks who are out to make a buck. Vitamin supplements are overly relied on and usually aren't needed. There is not 100% conclusive proof that they are beneficial in the long run, but this is difficult to prove one way or the other. The most important factor is safety. Don't take it if you don't need it. Here are some things you can do though:

- Omega 3 Fatty Acids, or Fish Oil Capsules, may be good for you and help with inflammation in general. You can also get this is healthy fats like avocados, nuts, olives, and eating fish.
- A multi-vitamin is fine, and can cover the gaps.
- Herbal supplements like Ginger, Turmeric, and Garlic may be good for inflammation.
- Co-Q 10 may have some cardiovascular benefits.
- Supplementing with Vitamin C, as an anti-oxidant, might be helpful in times of stress or if exposed to radiation. An interesting recommendation made by Dr. Andrew Weil was to supplement Vitamin C, or eat something that contains it, when you eat meat. The idea is that it counteracts the negative effects of charred meats.
- Vitamin D is crucial to many different things like cellular metabolism and bone strength. You can be tested for deficiency.
- Eating fermented foods like Kraut or Yogurt, or taking a probiotic may improve your immune system and digestive regularity significantly.
- Fiber supplements can be used for regularity.
- Calcium supplements may be useful for post-menopausal females.
- Protein supplementation is not usually needed, but if you want to add some in, remember that the most your body can process healthily is about 1- 1.5 times your bodyweight in kilograms. Which for a 200 pound man is 91-135 grams per day. Take your bodyweight and divide by 2.2, which is your weight in kilograms, then multiply this number by 1 and 1.5 to find your maximum protein range.

Focus on eating less and eating well, vegetables & fruits, legumes, nuts, whole grains, lean meats that aren't burnt and without a ton of fat on them, and keep your dairy to 1-2 times per day. Most importantly, enjoy cooking, eating, and all the fun and good times that go along with it.

For More Information:

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