

The Five Pillars of Basic Nutrition

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The FDA says that I must tell you that none of the information presented herein is meant to diagnose or treat any medical condition. (Take that for what it is worth.)

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The Modern Need for Nutrition

Our modern fast-paced, high-stress lifestyle demands more dietary support for good health than ever before. Unfortunately, the mass-produced food supply is not up to the task as much as it used to be. Fast food is infamous for being poor in nutrition. However, even if you consumed only the best foods that you could find at your grocery store, you would still come up short in two health-damaging ways: 1) Low nutrition - fruits, vegetables, meats, fish, and dairy are all less nutritious than they were just 50 years ago; and, 2) Toxic overload - the nightmare of additives, some of which are on product labels and too many of which are hidden from the public's view, is absolutely ruining the health of our nation.

If you take any kind of prescription or over-the-counter medication, if you are overweight, if you already feel stressed or short on good sleep, if you suffer from arthritis or other chronic disorders of any kind, if you get the flu or other infections regularly, if you have nagging injuries that won't fully heal, or if you have just about anything that is not quite right with your health, then you will benefit from improving your nutritional intake.

The Most Important Pillars of Nutritional Supplementation

The old adage that an ounce of prevention is worth a pound of cure is valuable and timeless wisdom. Good nutrition is still the foundation for preventing or alleviating all kinds of health problems. Since food alone is no longer good enough, modern science has provided a dizzying array of supplements to boost your well-being. Thousands of research articles are published every year on the benefits of vitamins, minerals, herbs, and other kinds of supplements. Fortunately, supplementing for good basic nutrition is simple and starts with only five primary kinds of support:

1) Vitamins and Minerals

Just knowing the minimum Daily Values is a key starting point.

2) Probiotics

Replenishing friendly gut bacteria does much, much more than support digestion

3) Enzymes

Your body depends on enzymes for everything, although you don't always make enough of the right ones in the right amounts to stay healthy.

4) Essential Fatty Acids

The most important key to fighting the cause of almost everything that goes wrong in your body: Inflammation.

5) Greens Formulas

All the benefits of several servings of whole foods in a single daily dose.

The challenge that you may have is choosing the best supplements for each of The Five Pillars of Basic Nutrition. This guide is aimed at helping you make these choices.

Philosophy on Product Recommendations

Clients in my nutrition store often asked me about product recommendations from the supplements that we had on the shelf. I was gratified to explain why certain products were my choice, and what was good about the top manufacturing companies that made them.

The best of the best companies, however, are very few. Our store offered products from the best ones that I could find. We still offer some of them through our online nutrition store. Details about them and how to get them are mentioned where appropriate in this report.

Complete nutrition rests on what I call the five pillars approach, each pillar being an overall category that typically requires addressing for a sound approach to supplementation.

Herewith are the Five Pillars that I refer to:

Pillar One -Vitamins and Minerals

Vitamins and minerals are essential for life, so you must take them into your body to be healthy. Depending on your diet and any other supplements that you are already taking, you may be able to meet your minimum requirements with a basic multivitamin and multimineral supplement as long as it absorbs well and doesn't contain harmful additives. On the other hand, when you want to take a more complete multivitamin-multimineral product for optimum wellness, you will want one that offers the full complement of vitamins and minerals in abundance. It is absolutely crucial for your health to get a balance of vitamins and minerals from a combination of diet and supplements.

Vitamins and minerals are an obvious choice for the first of the Five Pillars of Basic Nutrition. However, you have to choose your multivitamin and multimineral supplement

wisely for optimum wellness, meaning the right ingredients in the right amounts, without harmful additives. Not all products fulfill these basic requirements. You can actually get poisoned by some brands.

Multivitamins

I have discovered some surprising ingredients listed on the labels of certain mass produced vitamin products, including sugar, aluminum, antifreeze, artificial coloring, trans fats, and synthetic preservatives. (You will find a list of such nasty surprises in the ingredients of Centrum vitamins, for example. Simply amazing.) As a chemist, I find these to be very puzzling ingredients in products that are supposed to be good for your health. For you, these kinds of ingredients are nothing but bad news.

Furthermore, some products don't dissolve fast enough to do you any good. All you have to do is put a capsule or tablet into a glass of water, maybe with a little vinegar (or swimming pool acid, if you have it) to simulate the acidity of the stomach, and wait until it dissolves. If it takes more than 20 minutes, then it won't fully release all of the ingredients in your stomach fast enough to be effective. Tablets are usually the biggest offenders, because they have to be packed with a heated glaze to hold them together, and sometimes this glaze is too hard. As gross as it may seem, it is true that intact vitamin pills show up in raw sewage. Pills that don't dissolve provide no benefit to you.

The question of how many vitamins you should consume every day has a very simple answer, since there are only 13 vitamins in the first place. Your body must have them all. On the other hand, the question of how much of each vitamin you need is not so simple to answer. Your age, size, diet, metabolism, health status, and many more variables are important for determining your needs. Even your exposure to sunlight can be a factor, since your body makes vitamin D when your skin absorbs UV light.

Federal standards for the daily values of vitamins, meaning the recommended amount you should consume every day, are derived mostly from the minimum levels that prevent diseases due to vitamin deficiency. These include old-time health disorders such as night blindness, beriberi, pellagra, anemia, dermatitis, birth defects, scurvy, rickets, and bleeding disorder. These minimum standards do not lead to optimum wellness. Indeed, recent research on vitamins C, B-3 (niacin), B-6, B-12, D, and E show optimal doses to be many times more than the federally defined daily value.

Multiminerals

Federal standards also define the daily values of minerals. As with daily values of vitamins, those of minerals are generally the minimum for preventing deficiency diseases. Again, these minimum standards do not lead to optimum wellness. And again, recent research shows optimal doses to be higher than the recommended daily values for several minerals. In fact, one mineral, strontium, has no recommended daily value at all. Yet strontium is the most important untapped key mineral for strengthening bones and preventing and reversing osteoporosis.

Here's another surprise for you: Another mineral, iodine, has such a low daily value that, based on clinical studies over the past 10 years, optimal health would require you to take 100-400 times that much. Iodine is almost entirely lacking in every common food that you eat. The consequences for iodine deficiency are enormous and lead to such problems as breast cancer, fibrocystic breast disease, uterine fibroids, prostate cancer, fatigue, impaired immune function, and overweight. In addition, the World Health Organization says that iodine deficiency is the largest single cause of mental retardation worldwide.

What to Do Now

First of all, choose a product that offers you the best overall combination of multivitamins and multiminerals that are available for your needs. Most retail stores do not have the best products, so I have selected two that I think offer the best combination of completeness and cost.

The one that I use myself is from a company, Pure Encapsulations, that manufactures supplements for use by professional health practitioners. It is:

[Nutrient 950](#)

Note that Nutrient 950 also comes with these options: regular; without iron; without iron or copper; without iron, copper, or iodine; with NAC; with extra vitamin A and without iron or copper; and with extra vitamin K. When you click on that link just above, you will be directed to a page that offers all of these formulas.

What About Strontium?

A patented strontium-containing drug is already being prescribed in Europe for treating osteoporosis. It will be in the U.S. soon, in its patented form as strontium ranelate. However, even though the patented drug is very costly, it is no better than the more common, non-patented form that has been used in clinical research for decades: strontium citrate. Doctors will be impressed with the new drug, even though research on strengthening bones with strontium has been public knowledge since about 1930. I have seen a lot of excellent published research on this mineral for preventing and reversing osteoporosis.

The best product that I have found is one made for doctors. It is a high grade strontium citrate from Pure Encapsulations, which is available through our online store at Doctors Nutrition Center. This is the one that I take myself and that I give to my mother. Her doctor found that her osteoporosis was stopped after about 6 months on this product, which is a common result.

[Strontium Citrate by Pure Encapsulations](#)

If you or anyone you know has osteoporosis or osteopenia, strontium is probably your best chance for strengthening your bones. It certainly won't happen if you are taking any

bisphosphonate drugs such as Fosamax or Boniva - these drugs are horrible for bone health. Loose teeth is a common side effect, and incidence of hip fractures goes up over time on these drugs. Enough said for now.

What About Iodine?

This mineral merits its own separate book. Indeed, at least one full book has already been written about iodine. Dr. David Brownstein is America's premier physician on the importance of iodine supplementation. His book is, "Iodine: Why You Need It, Why You Can't Live Without It." Dr. Brownstein's clinical experience reveals how iodine deficiency, which affects about 95% of us, underlies breast cancer, prostate cancer, hypothyroidism, fibrocystic breast disease, uterine fibroids, fatigue, and even overweight.

Dr. Brownstein's research is based on the use of a certain iodine product called Iodoral. It is one of the few iodine products that provides both of the crucial forms of iodine: the elemental form and the iodide form (most other products only contain the iodide form, which is insufficient for all cell types in your body). Because of his recommendation, we have offered it through Doctors Nutrition Center for the past few years, and continue to do so (see link below).

[Iodoral \(Iodine Supplement\)](#)

Pillar Two - Probiotics

Probiotics seem to be the least well-known of the basic components of nutrition. Some people are still surprised to find out how important it is to consume bacteria on purpose. And that is exactly what probiotics are - dietary bacteria that benefit your health. You will be healthier when you eat bacteria with breakfast (and with all other meals, too)! In fact, probiotics are so important to your health that I have written an entire book on the subject. (I would be glad to send you the electronic version at no charge. Just send me a note through my '[Contact Us](#)' page at DoctorsNutritionCenter.com.) I have also posted a more extensive article on this topic here: [Probiotics – Bacteria That Are Crucial for Good Health.](#))

Meanwhile, the most important information for you to know is what probiotics are and what they do for you. The following fills in those gaps for you.

What Are Probiotics and What Do They Do for Your Health?

The simple definition of probiotics is: dietary bacteria that provide health benefits.

The importance of probiotics rests on what they do to replenish and enhance the bacteria that are already in your digestive tract, starting in your mouth and continuing all the way through your stomach, small intestine, large intestine, and out the other end. Keep in mind two facts: 1) When your GI tract is healthy it houses more than 400 kinds of

(mostly) friendly bacteria; 2) When your friendly bacteria are harmed, your digestive system and your immune system will suffer damage. Yes, your immune system: more than 70% of your immune cells come from your small intestine, whose health depends on good bacteria.

I am often asked for advice about natural approaches to helping with GERD, acid reflux, constipation, diarrhea, IBS, Crohn's Disease, and other digestive disorders that seem to afflict every other person I talk with. What I always say is that, if you suffer from any one of these disorders and have used antacids or antibiotics, then you have destroyed your friendly bacteria to the extent that your digestive problem can only get worse. All of the available drugs, prescription or over the counter, are destructive to your bacteria and therefore to your health. This is where probiotics come to the rescue, because they will put your bacterial balance back on track and provide what may seem to be miraculous results.

In addition, more than 100 disorders show positive responses with probiotics. The most common of these are:

- Diarrhea, from infections by rotavirus
- Infections of the urinary tract or female genital tract
- Irritable bowel syndrome
- Bladder cancer recurrence
- The length of time an intestinal infection lasts that is caused by a bacterium called Clostridium difficile ('C-diff')
- Pouchitis (a condition that can follow surgery to remove the colon)
- Atopic dermatitis (eczema) in children
- Infections by bacteria, viruses, and fungi
- Candidiasis – yeast overgrowth (women AND men!)

Are Probiotics Important If You Are Already Healthy?

The earliest scientific explanation linking health and probiotics came from Dr. Elie Metchnikoff in the early 1900s. Dr. Metchnikoff found that many Bulgarians were more than 100 years old and still in good health. By studying these people and their lifestyle, he determined that the live cultures of bacteria in their yogurt were a key factor in their health and longevity. This groundbreaking research more than a century ago has been confirmed many times. The main point is that probiotics are important for health and longevity. (Modern yogurt isn't the same as it was back then, so this food is not the wonderful source of probiotics that it used to be.)

The general actions of probiotics that lead to so many health benefits are very powerful, including the following:

- Fight inflammation
- Promote good digestion, including absorption and elimination
- Prevent both diarrhea and constipation

- Protect the delicate lining of the intestines
- Support healthy immune function
- Provide resistance to infection
- Assist in the production and absorption of vitamins

The Plague of Systemic Yeast Infections

Yeast overgrowth occurs commonly in men AND women, and it may be the single most destructive kind of infection ever discovered, based on the variety of ailments attributed to it and on its widespread occurrence. When your friendly bacteria are not healthy enough to keep yeast in check, you will develop candidiasis that may be accompanied by any of a dizzying array of symptoms that are associated with it. Just a few of the symptoms that are linked to candidiasis include:

- Depression
- Anxiety
- Irritability
- Fatigue
- Heartburn
- Bloating
- Constipation
- Mental fog
- Allergies
- Migraines
- Acne
- Rheumatoid arthritis
- Lupus
- Multiple sclerosis
- Type 1 diabetes
- Cancer
- Cardiovascular disease

Benefits of Eating Bacteria

Just the few comments I've made so far make it crystal clear that daily supplements with probiotics are a foundation for good health. Scientific research continues to discover the health benefits of good bacteria because so many medical conditions are now linked to the poor health of our normal intestinal bacteria. Indeed, we now know that friendly bacteria - our "good bugs" - are not merely good for your health, they are absolutely required for it. Indeed, our bacteria are constantly doing battle on our behalf against infectious bacteria and other, not-so-friendly microbes such as yeasts. You can imagine it as a war zone, where you depend on a strong and vigorous army of microscopic soldiers to keep you healthy. Scientific research is very clear that, without a healthy microbial army, you would probably be chronically sick.

How Are You Destroying Your Friendly Bacteria?

Even if you have a healthy lifestyle, the dangers to your friendly bacteria are all around you. It should come as no surprise that we are surrounded by synthetic chemicals and processed foods that people were not exposed to as little as a century ago. Conservative estimates are that more than 80,000 chemicals have been introduced into our environment since then. We are sensitive to them, in part, because our bacteria are harmed by them. A short list of the kinds of chemicals that are harmful to our normal microflora includes the following:

- Antacids and antibiotics (these are the most harmful of all)
- Food additives (colorings, "natural flavors")
- Preservatives
- Chlorinated and fluoridated water
- Herbicides
- Hormones
- Oral contraceptives
- Pesticides
- Refined carbohydrates, especially sugar
- Steroids
- Artificial sweeteners
- Air pollution
- Household cleaners
- Toxic metals

The health of our normal intestinal bacteria is continually challenged by these and newer chemicals that appear constantly in our foods, new buildings, clothing, cars, and just about everywhere that we live and breathe. It would be nearly impossible to avoid these toxins, so our best strategy is to maintain a healthy population of friendly bacteria by daily supplementation with probiotics.

Choosing Good Probiotics

Only two obvious criteria are important for picking a good product: 1) Potency (number of bacterial colonies per dose); and, Diversity (number of different strains of bacteria per dose). Lots of products on the market fall way short of these criteria. In my search for a top probiotic several years ago, I came across a number of excellent brands. The best of the best are available at Doctors Nutrition Center here:

[Probiotics at DoctorsNutritionCenter.com](http://DoctorsNutritionCenter.com)

Even though this is what I recommend here, if you spend some time perusing your local nutrition store, you can find other excellent products as well.

Pillar Three - Enzymes

The topic of enzymes has led to more confusion than any of the other Five Pillars. It is almost comical to read the wide variety of definitions and properties ascribed to enzymes from supposed experts. So here is my chance to set the record straight, from my perspective as a research biochemist who has worked with enzymes for many years.

What Exactly Are Enzymes?

With rare exception, an enzyme is a protein comprised of a chain of amino acids, whose activity may depend on one or more ionic mineral cofactors (e.g., iron, copper, selenium, sulfur, zinc) and one or more coenzymes (e.g., certain B vitamins, SAMe, NADH) . The role of enzymes is to speed up biochemical reactions to be millions of times faster than they would otherwise occur without enzymes. This means that enzymes are biocatalysts. Without enzymes, biochemical reactions would be too slow for life to exist as we know it.

Enzymes are characterized and classified based on the types of reactions that they catalyze. For example, enzymes called amylases catalyze the breakdown of chemical bonds that hold carbohydrates together in the form of starch, and enzymes called DNA polymerases catalyze the synthesis of DNA. The optimal activity of different enzymes may depend on temperature, pH, concentration of starter materials, concentration of products, and many other factors.

A certain amount of silliness pervades the supplement industry about enzymes. One example is that enzymes are alive in whole foods. They are not. Enzymes have no life at all. They are biochemicals that are active or inactive, that is all.

What Kinds of Enzyme Supplements are Important?

Two categories of enzymes become increasingly important as we age and as we develop health disorders that appear to be due to enzyme deficiencies. One category is digestive enzymes and the other is systemic enzymes. Each of these requires a little explanation to understand their importance as key supplements and their role as one of the Five Pillars of Basic Nutrition.

Digestive Enzymes

Digestive problems are so rampant in modern society that one of the biggest sub-industries in human health is digestive aids, mostly antacids. Unfortunately, this industry fails to address the causes of poor digestion and even makes them worse. Only three easily correctable imbalances are at the core of almost all digestive problems: too little stomach acid, damaged microflora (recall Pillar Two - Probiotics), and digestive enzyme insufficiency.

Low levels of enzymes can lead to poor digestion, occasional acid indigestion or heartburn, deficiencies in essential vitamins and minerals, and low vitality. However, all digestive enzymes are not the same. Most enzyme products work only in the stomach, even though almost all carbohydrate and fat digestion happens in the small intestine.

For this reason, the best product that I have found that completely addresses the digestion of all food groups in the appropriate part of the GI tract is Digestive Enzymes Ultra by Pure Encapsulations. The mixture of enzymes in this complex are pH-stable and help break down food in both the stomach and the small intestine for dual-action digestion and absorption of proteins, fats, and carbohydrates. In addition, this unique formula replaces animal pancreatin with safe, all-vegetarian enzymes.

[Digestive Enzymes Ultra by Pure Encapsulations](#)

This isn't the only excellent digestive enzyme product on the market. You can find other high quality enzyme supplements by taking a look at the ingredients in Digestive Enzymes Ultra and looking for the same ingredients in the same dosages in other products.

Systemic Enzymes

Here is a crucial observation that has been at the foundation of research on systemic enzymes for more than 50 years: When you take certain enzymes in the absence of food, they pass through the walls of your digestive system and into your bloodstream. They are called systemic enzymes because they work throughout your body's systems, not for digestion in the GI tract like digestive enzymes.

Two major consequences of systemic enzymes, which qualify them as a must-have component of the Five Pillars of Nutrition, are:

- They seek and destroy renegade molecules that cause bodily harm, particularly a type of protein called fibrin
- They provide a system-wide anti-inflammatory activity

Problems With Too Much Fibrin

Fibrin is an important protein that plays a role in building the tissues and organs throughout your body, including repairing tissues (e.g., scars). Your body is supposed to build fibrin wherever it is needed, either to replace tissues that die off and recycle or to repair tissues that become damaged. Fibrin, however, often continues to grow beyond what is needed, until it becomes so excessive that it causes a disorder called fibrosis.

Fibrosis occurs when your normal fibrin-control enzymes become deficient, which begins at about age 25. Fibrosis shows up in numerous clinical conditions, including the following short list of examples:

- High blood pressure (fibrosis in kidneys)
- Fibrocystic breast disease
- Uterine fibroids
- Ovarian cysts
- Endometriosis
- Excessive scarring (especially after abdominal surgery)
- Fibromyalgia
- Breast implant encapsulation
- Arterial plaque and blockage (i.e., accelerated cardiovascular disease)
- Post-workout inflexibility and loss of strength
- Sports injury and other physical traumas
- Penile shrinkage
- Hardening and failure of organs (i.e., internal aging)
- ...and many more

One of the early indicators of fibrosis is the size and inflexibility of scars. When you cut yourself before age 25, new scars are soft, flexible, and small. As you age, new scars become larger, harder, and often more inflamed-looking than they used to. Although this and other consequences of aging derive from fibrosis, the excess accumulation of fibrin can be stopped and even reversed by systemic enzyme supplements.

Fibrin Digesting Enzymes

Since fibrin is a protein, enzymes that digest it are classified as proteases, or protein-digesting enzymes. In particular, proteases that destroy fibrin are called fibrinolytic enzymes. So the key characteristic for selecting high quality fibrinolytic enzyme supplements is simply their ability to breakdown fibrin. Biochemists have even come up with a special unit of measure, called Fibrinolytic Units (FU), for evaluating this class of enzymes.

Anti-Aging Bonus

Fibrosis causes organs to shrink, harden, and fail. This just means that organs that get filled with too much fibrin will simply stop working. Fibrinolytic enzymes, however, reverse fibrosis and therefore restore organs to their youthful size and flexibility. In my opinion, all of the anti-aging supplements that I have ever heard of can be put together in one pot and still not equal the anti-aging benefits of systemic enzymes.

Systemic Enzymes vs. Cardiovascular Disease

Clogging of arteries begins only after the inside of an arterial wall becomes damaged and attracts attention from your fibrin repair system. Damage is caused by inflammation, fibrin builds the repair tissue, and then fibrin continues to accumulate in excessive amounts until other components in the bloodstream (primarily fatty substances and calcium) start to stick to it and cause blockage. Cholesterol gets the blame for this process, although the whole problem starts with inflammation and excessive fibrin

buildup.

Fibrin also accumulates on the membranes of blood cells, which leads to cells sticking to one another. This process leads to blood aggregation that eventually forms large enough clumps to be called clots. Systemic enzymes break up clots and prevent others from forming. Indeed, such activity is so powerful that anyone taking Coumadin or other blood thinners has to be extremely careful and work under the guidance of a good physician when taking systemic enzyme supplements.

Inflammation

The bonus from some fibrinolytic enzymes is that they also have a built-in anti-inflammatory action. This means that such fibrinolytic enzymes as nattokinase and serrapeptase not only restore the free flow of the bloodstream, they also reduce the inflammation that caused blockage and clotting in the first place.

Which Supplements Are the Best?

As I mentioned, one of the key features for determining product quality is enzyme activity (FUs). Another is choosing the right enzyme according to backing by scientific research.

At this time, after much personal researching and surveying of the scientific literature, I have found what I believe is the best products available. It is called NSK-SD (nattokinase) by Pure Encapsulations (you can tell by now that this is just about my favorite supplement manufacturer, right?) and Trevinol ES by Landis Revin. These products offer the most powerful daily dose of fibrinolytic activity.

[Systemic Enzymes at DoctorsNutritionCenter.com](http://DoctorsNutritionCenter.com)

Pillar Four - Essential Fatty Acids

Let's clear up a little confusion that permeates the supplement industry: *What is meant by essential?* The correct meaning has become very difficult to find out among all the hot air on the internet, in nutrition stores, and in advertising. However, it is and always has been the following:

If you need it for basic life processes and your body doesn't make it from scratch, you must get it in your diet. That is what is meant by essential.

The most widely known essential nutrient might be vitamin C. Other essential nutrients include eight of the 20 standard amino acids, virtually all minerals, and essential fatty acids (EFAs). The latter include the two main families of EFAs: the omega-3s and the omega-6s. They were originally designated as Vitamin F when they were discovered in 1923 to be essential nutrients.

Please note that EFAs constitute a very complicated topic that has attracted lots of contradictory advice, entailing many experts who offer opposing views and a dizzying array of supplements with all kinds of biochemical notation and abbreviations. As a trained biochemist, even I find the subject of EFAs to be very challenging to sort out for choosing my own supplements. So I'm going to start at the top by telling you what to expect from EFAs. First off, every cell membrane in your body contains fatty acids that enable each cell to control what comes into it and what goes out of it. Fatty acids in cell membranes depend on EFAs in the diet.

Second, many EFAs are very powerful anti-inflammatories. Indeed, they can be compared favorably with Ibuprofen, Tylenol, Motrin, and other non-steroidal anti-inflammatory drugs. The right EFAs in the right amounts are even known to reduce and eliminate the pain of arthritis and lower back pain, which are two of the most difficult and chronic pain problems among people today.

Overall Importance of Essential Fatty Acids

As a general indicator of how important EFAs are, a quick survey lists more than 8,700 research articles on EFAs published since 1976 in our federal medical database, PubMed. There too many to include in one place, so I've chosen a short list below of the main disorders that can be helped with supplemental EFAs.

- Heart disease
- Cancer,
- Type 2 diabetes
- Arthritis
- Obesity
- PMS
- Allergies
- Asthma
- Skin conditions
- Fatigue
- Yeast and fungal infections
- Addictions
- Certain types of mental illness

It goes without saying that you can enjoy optimum benefits from the healing power of EFAs against these and other disorders as a preventive measure rather than as a treatment. That is why I include EFAs as one of the Five Pillars of Basic Nutrition. Plenty has been said about the deficiencies of our modern diet, and one of those deficiencies is in EFAs. The next question is, therefore, which kinds of EFAs are the best as a general supplement? Or, what omega-3 and omega-6 fatty acids should be included in your diet, and in what quantities and proportions?

The modern western diet includes an average ratio of omega-6 to omega-3 fatty acids of about 10 to 1, or even as high as 20 to 1. This is *WAY* too much omega-6, and the result

is that the role of these oils in causing inflammation turns against you. The imbalance is caused by an over abundance of vegetable oils in the diet, which are high in omega-6 fatty acids, and the nearly complete depletion of omega-3 fatty acids in meat from grain-fed animals. (The latter phenomenon began in the 1960s when the diet of domestic animals changed from grass to grains.) This just means that your diet undoubtedly has too much omega-6, and your body suffers too much inflammation because of it. The natural ratio of these two should be closer to the neighborhood of 2 to 1 or less. Some even advocate a 1 to 1 ratio.

The most common omega-6 fatty acid in supplements is linoleic acid. Most dietary recommendations suggest an intake of omega-6 fatty acids to be 1-3% of total calories, increasing to 3-6% during pregnancy and lactation. Your goal is to match this intake with the right amount of omega-3 fatty acids such as linolenic acid from seed oils or from EPA and DHA in fish oils. You may also include GLA, an omega-3 from evening primrose and borage oil.

By the way, omega-9 fatty acids are not essential in humans, because we generally have the right enzymes for their synthesis from other fatty acids. However, dietary omega-9 is important for older people or people with liver problems who do not make omega-9 fast enough. That is why you see some products that contain omega-3-6-9 blends.

Recommendations

Now that you have the basics about the crucial need for EFAs, let me emphasize that the exact ratio and quantity needed among different people will vary, depending on health, age, immune status, and other health factors. For example, the total of 4,000 milligrams per day of EFAs is a maintenance dose. An intake of 10,000 to 15,000 milligrams per day is important for weight loss and major problems with lower back pain.

The first recommendation is to cut out standard vegetable oils. Corn oil, canola oil, cottonseed oil, and soybean oil are the main culprits because they are so common. The challenge is to find processed foods that do not contain these oils.

When cooking, it is much better to use olive oil or coconut oil than any of the above listed ones.

When supplementing, the best essential oils to look for are those that offer a good dose of the two most important dietary omega-3s, EPA and DHA. These are most prevalent in fish oils. When considering a fish oil supplement, the best choices are from sources that are as low as possible in the food chain, to minimize any chance of mercury or PCB contamination. These include such small fish as sardines and anchovies, which are the source of oils for [EPA/DHA Essentials by Pure Encapsulations](#).

Tiny krill are also a great source of these low-on-the-food-chain oils – see [Krill-plex by Pure Encapsulations](#).

Finally, as low as you can go on the food chain for EPA and DHA are vegetarian sources – i.e., the algae that fish eat in the first place. Few companies take the trouble to offer vegetarian EPA/DHA products. Take a look at this one as an excellent example: [EPA/DHA Vegetarian by Pure Encapsulations](#).

These are the best essential fatty acid (EFA) sources that I know of. Indeed, the one that my family takes is the EPA/DHA Essentials.

EFAs Against Pain

Let me reiterate what I said above, which is phenomenal:

...many EFAs are very powerful anti-inflammatories. Indeed, they can be compared favorably with Ibuprofen, Tylenol, Motrin, and other non-steroidal anti-inflammatory drugs. The right EFAs in the right amounts are even known to reduce and eliminate the pain of arthritis and lower back pain, which are two of the most difficult and chronic problems among people today.

The key is dosage. Normal daily intakes of EFAs range between 2000 to 4000 mg. However, research on pain management, arthritis, and general inflammation shows benefits from dosages up to 10,000 to 12,000 mg per day.

Your best strategies for selecting EFAs entail selecting products from good companies that do not sell cheap products. In fact, cheap products are often dangerous because they can be rancid (meaning the EFAs are oxidized and highly inflammatory – exactly the opposite of what you want from them) and they have no quality control checks for contaminants such as mercury and PCBs. You can detect rancidity yourself, because rancid fats smell stale. Do not buy EFA products from discount stores, ever.

Pillar Five - Greens Formulas: Why Are They So Important?

The whole idea of choosing nutrients one, or a few, at a time is quite a challenge just because there are so many to choose from. As explained earlier, you at least must include a multivitamin-multimineral supplement, probiotics, enzymes, and essential fatty acids. What about antioxidants, immune support, minor minerals, and so many other categories that your head swims just sorting them out? This where it would be great if you could have a salad every day, made from vegetables that were grown like they were in the 1950s. It is too challenging to get a daily 1950s salad these days, unless you grow all your own produce. This is where greens formulas are important for daily supplementation.

Fruits and vegetables and other foods are supposed to be your saving grace for daily nutrition and basic health. The first four pillars of basic nutrition fill in gaps in what you eat. After all, the whole notion of vitamin and other supplements is still a relatively new concept in human history. In the good old days the attitude was, as Hippocrates, the

'Father of Medicine', is credited with saying in 432 B.C., "Let thy food be thy medicine and thy medicine be thy food."

The Realities of Modern Day Food

Ideally, nutrient rich foods would be sufficient. However, nutritionists keep upping the ante on what you need. It stands now at eleven servings of fruits and vegetables daily. Eleven! Here's a clue as to why this number is growing: You will never get enough nutrition from mass produced fruits and vegetables, no matter how many servings you eat every day. You simply could not eat enough food! Food simply is not good enough to be your sole source of nutrition. This is especially true when you don't even consume the recommended servings of fruits and veggies. And who does that anyway?

This is where greens formulas come to the rescue. In fact, you can think of greens formulas as perhaps the first and most important pillar of basic nutrition. This is because they are such a great source for hundreds of nutrients that you won't get from any other kind of supplement. The nutrition from any vegetable, in concentrated form, would be a bonus to your food. Now imagine how good the concentrated forms of dozens of foods would be. This is what a good greens formula provides. You can, indeed, have the equivalent of a 1950s salad, and much more, in a good greens formula.

What to Look for in a Good Greens Formula

Think of greens formulas as a great source for thousands of ingredients in several concentrates, usually including special bonus ingredients for boosting one or another components of your health. You can find gazillions of greens formulas, none of which have the same mixture. What they all have in common is concentrates, either in powder form or in tablet form. They all also have a serving size of several grams, either as a scoop of a powder or as a handful of tablets that are equivalent to 8-10 servings of fruits and vegetables. No greens formula is going to be a simple pill a day, unless that pill is the size of a golf ball.

The topic of greens formulas could fill a book, so I am going to just give you a couple of pointers on what to look for. Then I'll simply point you to a short list of formulas that have the most robust list of ingredients that I have found.

The two main things to look for are: 1) Make sure that a greens formula contains only organic whole plant food; and, 2) Make sure that the ingredients are listed individually so you can see exactly what it contains and how much. This at least gives you a better basis for comparison among different products. You can undoubtedly find many formulas that meet these criteria. The ones that I recommend are available here:

[Greens Formulas at DoctorsNutritionCenter.com](http://DoctorsNutritionCenter.com)

Of course, I am sure that price is also an important consideration. Keep in mind, though,

that if you are shopping at a megastore outlet or online discount store for a good greens formula, you will probably find lower prices. And you will get what you pay for.

One More Thing

Consider this: Nothing that you do for your health will work as effectively as it should if you are overweight. This has been the biggest challenge for me and my clients in getting and staying healthy. There is no need for me to repeat the abysmal national statistics on this issue. If you are overweight, it is a personal issue.

Overweight is not due to eating too much. It is from poor metabolism, which comes from an imbalance in multiple kinds hormones. The best way to reset a hormone balance that undermines fat metabolism is a hormone-directed protocol called the HCG Diet. I won't explain a lot about it here, because I have a website dedicated to this topic. I will just encourage you to visit it and find out for yourself how you can get your fat metabolism back on track. Click here for more information: BestHCGWeightLoss.com.

Regardless of whether you are contemplating the HCG Diet, you will ultimately have to choose a lifestyle that incorporates foods that keep you slim and healthy. What that means is the subject of hundreds of diet books. The majority of these provide advice that is ineffective and unsustainable in the long run. You can see my perspective, as a research scientist, on many of the important issues that you should know about in this regard by visiting my blog that is dedicated to this topic: BellyFatScience.com. Once there you can find out about my free belly fat book and how to get a copy of your own if you are inclined to do so.

All the best in natural health,

Dr. D