

# **THE BEST SUPPLEMENTS FOR YOUR HEALTH**

**Revised and Updated - 2014 Edition**

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## **Part One: How To Choose and Use Supplements: Chapter One**

**(Last Revised: January 2014)**

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*\*The revised and updated version of this book is being provided in digital format. Each Chapter will be*

*presented as a separate PDF file.*

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# PREFACE

As pharmacists, we (Don Goldberg and Arnie Gitomer) have a healthy respect for drugs and their benefits. When we were in pharmacy school, however, there was still a great deal of awareness that a large number of the drugs listed in the pharmacopeia were derived from natural sources. A substantial amount of the curricula back then was devoted to subjects such as pharmacognosy, the study of natural substances, particularly plants, that are used in medicine. Over the years, however, courses of this type have been dropped from most pharmacy schools.

Why? Advances in chemistry enabled the pharmaceutical industry to synthesize ever more powerful drugs. We were less dependent on natural products as sources of lifesaving therapeutic agents. Instead, we looked to the chemist's lab bench.

There were good reasons for this movement away from natural products. Supply problems were alleviated. Greater potency could be achieved. The drugs were more easily standardized, and they could often be made available in a more reproducible, convenient form.

And we cannot ignore the economic incentive. A drug derived from a natural substance cannot be patented. A synthesized chemical drug, on the other hand, can be patented, giving the pharmaceutical company an opportunity to recoup the cost of Food and Drug Administration approval, and earn a handsome profit for seven or more years.

As is usually the case, unfortunately, there is no such thing as a free ride. Along with this increased potency comes increased toxicity and the potential for undesirable side effects. When deciding on the treatment for a health problem, a choice has to be made. We have to evaluate the benefit versus the risk of the various options available to us. Killing a fly with a shotgun blast will work, but using a fly swatter might work equally well, without such extensive collateral damage.

In our opinion, the medical establishment became enamored with high-tech, high-powered solutions to many of the health problems facing us today and lost sight of the fact that more gentle, less toxic alternatives were available. There are times when a fly swatter is actually all that is needed.

And even better, put screens on the windows! In other words, prevention—prevent the fly from entering in the first place. Too often, I will hear a patient complaining that "the doctor gave me this prescription, and now I feel worse than I did before." Or the doctor says, "Your blood pressure is a little high—have this prescription filled!"

According to recently released medical guidelines, almost everybody should be taking a "statin" drug to bring their cholesterol levels down to the recommended levels. Is elevated cholesterol or heart disease caused by a deficiency of "statin" drugs? Is arthritis caused by a deficiency of aspirin?

It has been said that we are experiencing an increase in diabetes of almost epidemic proportions. Heart disease, obesity, and cancer are rampant. Is this because we have not yet developed newer or more powerful drugs? Of course not.

Instead, these serious health problems are related to changes in our lifestyles and environment. We do not eat healthy food, we do not get enough exercise, and we are exposed to pollutants and toxins that did not exist in our grandparents' time. We live longer, but not healthier.

It's easy to respond with an admonition to just eat the right foods, prepared properly, get more exercise, and move out of the city. This would be fine, and it is an appropriate goal to strive for, but it's obviously a goal that cannot be achieved by the average person.

We consider nutritional supplements and herbal medicines to be a valuable compromise, or a bridge, between the two extremes—unrealistic lifestyle changes and reliance on miracle drugs. These agents can provide us with the healthy components of foods in quantities that might be difficult or impossible to get through diet alone. They also provide those natural agents that, when ingested at higher levels, exert therapeutic action with fewer side effects than more powerful, synthetic drugs. They offer a convenient and effective way to augment our diet with agents that have been shown to ward off the onset of aging, cancer, heart disease, Alzheimer's disease, osteoporosis, birth defects—nearly all health problems.

The benefits of nutritional supplementation are now being recognized not only by the general public, but also by the medical community. Interest in these alternative "remedies" is at the highest level ever. Everybody is looking for more information on which supplements to use and how to use them. Factual answers to these questions can

be hard to find. Unfounded and exaggerated claims are easy to find. That is why we are writing this book.

The information we provide is designed to help you distinguish fact from hype. We want to help you choose the best supplements for your health.

# HOW TO USE THIS BOOK

This book is not intended to be used as a replacement for professional medical advice. Instead, it is meant to help you understand the benefits associated with the use of nutritional and herbal supplements and advise you about how best to use these supplements.

The book is divided into two parts. In Part One, we will discuss what nutritional supplements are and the reasons for taking them. First, we will take you through a series of steps that will help you choose the right type of supplement. We will then teach you how to tailor a supplement program to your own unique health needs. And we will review how to best use the supplements you have chosen. We will also teach you how to tell the difference between a good supplement and a bad one, and how to separate unfounded marketing hyperbole from sound nutritional advice. We suggest you read through Part One in its entirety.

In Part Two, we will present information on specific dietary supplements. We have drawn this information from a variety of sources, including those listed in the bibliography. Some of the information is based on recent scientific study and some is based on traditional and historic usage patterns. We have tried to indicate the degree of reliability when appropriate.

In Chapter 5, we provide information on individual nutrients and herbs. Representative products are provided as well, with educational and evaluative annotations when appropriate.

In Chapter 6, we provide a selection of popular combination remedies designed for specific health conditions. Representative products are listed, with ingredient information when possible.

The mention of specific products is for educational purposes only and is not an endorsement. Similar products are available from numerous additional sources. By providing you with examples and pointing out their strengths and deficiencies, we hope to enable you to make better decisions when evaluating which products to purchase on your own. To make it easier for you to find those products and categories that pertain to your personal needs, we have provided a "Therapeutic Cross-Reference." Additional references and Internet links can be found on our website, [www.bestsupplementsforyourhealth.com](http://www.bestsupplementsforyourhealth.com).

## **CHAPTER ONE: Why Take Supplements**

The mention of the term nutritional supplement can evoke strong and contradictory reactions from various groups of health professionals. To some, supplements are akin to snake oil, worthless and a total waste of money. Others promote nutritional supplements as the answer to almost every illness we face.

The truth lies somewhere between these two extremes. There was a time when mainstream medicine refused to acknowledge any role for diet in the prevention and treatment of cancer and heart disease. Now, this is a cornerstone of their official positions. There was a time when conventional physicians dismissed any use of supplements with disdain. Now, doctors are being encouraged to learn more about the therapeutic use of vitamins, herbs, and other complementary remedies. There was a time when it was nearly impossible to find well-controlled, scientific studies on the use of supplements in treating health problems. Now, studies are being published in the most highly respected medical journals in America and ongoing research is being funded by the National Institutes of Health. Even the American Dietetic Association, which historically has been vehemently antisupplement, has moderated its position in recent years.

What exactly is a nutritional supplement? A narrow definition might be a nutrient, or nutrients, in a form other than as it occurs in food—that is, in a capsule, tablet, concentrate, and so forth. Thus, a tablet containing vitamin C would clearly fall under the definition of a nutritional supplement. But what about a tablet that contains brewer's-type yeast? Or a soy protein powder? Or amino acids, such as lysine, glutamine, or carnitine? Or acidophilus? Or digestive enzymes?

Obviously, a broader definition is needed, one that includes a wide variety of food factors, nutrients, and other natural agents that support normal body function and contribute to good health. From a regulatory standpoint, any natural substance intended for oral use but not intended to cure, treat, or mitigate disease might be called a nutritional supplement.

In this book, we will adopt the broadest of definitions. This adheres to the common perception and can include everything from vitamins to herbs, and enzymes to homeopathic remedies.

### **Reasons for Taking Supplements**

Why bother with supplements at all? According to some, all we have to do is eat the right foods, properly prepared and selected according to the latest dietary pyramid guidelines. This will provide us with all the nutrients we need. If we get ill, there are drugs that will heal whatever ailment befalls us.

The fact is that few of us are able or willing to follow the recommended dietary guidelines. While it might be theoretically possible for an otherwise healthy person to get all of the nutrients needed from foods, most people do not even come close to achieving this goal. Numerous studies, many sponsored by the government, have confirmed the presence of various nutrient deficiencies in significant segments of the American population.

Nutritional supplements provide a way of alleviating this nutrient shortfall from foods. In some cases, it is now acknowledged that supplements may even be preferable to food. Those who need to increase their calcium intake, for example, may be better off taking an inexpensive, convenient calcium supplement than consuming a large amount of dairy products with their additional calories and fats.

In addition, many people have found that they feel better—have more energy, are more resistant to disease, etc.—when they take supplements. And others have found that supplements can actually provide drug-like therapeutic benefits.

There are three main reasons for taking supplements. First, supplements can help prevent nutritional deficiency diseases such as scurvy, beriberi, pellagra, and rickets. In developed countries, this is more a theoretical point than a practical one. Second, and more important to most of us, supplements can prevent subclinical deficiencies, promote optimal health and function, prevent disease, and retard the aging process. And third, supplements can actually be used therapeutically, like drugs, to treat and reverse various health problems, often without the toxicity and



side effects associated with stronger pharmaceuticals. Let's examine each of these reasons in more detail.

## **Supplements Can Prevent Nutritional Deficiency Diseases**

Vitamins are called vitamins because they are essential for life and must be obtained from sources outside the body. In other words, these nutrients—vitamins, minerals, water, amino acids (protein), etc.—cannot be synthesized within the body. They must be obtained from the food we eat. Without an ongoing supply of these essential nutrients, we will die.

When the body is deprived of one or more of these nutrients, the effect manifests itself in various and unique ways. Examples of these nutritional deficiency diseases are scurvy, pellagra, beriberi, and rickets.

The story of the discovery of the role of vitamin C in preventing scurvy is perhaps the best known. The symptoms of this disease include bleeding gums, easy and extensive bruising, wounds that do not heal, lethargy and depression, and joint pain. Before the nineteenth century, this was a disease of significant importance, occurring whenever fresh fruits and vegetables were unavailable for extended periods of time, such as during the winter or long sea voyages. It was not uncommon, for example, for one-half of the crew to die from scurvy on a long sea voyage. At one point, the British lost more sailors to scurvy than to warfare.

What seems obvious to us now—that the disease is caused by a nutrient deficiency—was not at all obvious to the people of that time. According to some accounts, it was explorers like Jacques Cartier who associated eating certain foods with curing these diseases. James Lind, a British physician, is usually credited with the first scientific proposal that scurvy was, in fact, caused by a nutrient deficiency. He reported in the mid-1700s that lemon juice would reverse the progression of the disease. It took some time, but eventually the British Navy provided lime juice to its sailors as a means of warding off this disease. It is for this reason that British sailors became known as “Limeys.”

Eventually, the components of food responsible for preventing each of the deficiency diseases were identified and isolated. In the case of vitamin C, it was first identified by Albert Szent-Gyorgyi. In most cases, these essential nutrients can now be synthesized in the laboratory. And they can be provided in supplement form.

In the United States, full-blown nutritional deficiency diseases are now rare. Foods are often fortified with those vitamins and minerals most often lacking in our diets. Fresh foods of all types are available in the neighborhood supermarket throughout the year. And contrary to the way it was a few hundred years ago, we all know about the importance of vitamins and minerals. Taking a daily multivitamin is now an accepted practice, even if only as insurance to make sure we get the necessary levels of these critical nutrients.

But even though we live in a nation of plenty, we also live during a time when most Americans are strongly influenced by outside pressures—marketing, advertising, and the pursuit of pleasure. We know that eating broccoli and fruit is healthy, but we are bombarded with enticing images of meals consisting of a hamburger, fries, and a cola drink. It is difficult for the modern parent to resist the demand by their children for the fast foods and junk foods they see advertised on television. It is also difficult for working people to find the time to properly prepare healthy meals. Eating out is no less of a problem. In many restaurants, it is difficult to find an item on the menu that is not deep fried, full of salt, etc. After all, the more fat in the food, the better it tastes—and taste is what drives us, much more so than health considerations.

## **Supplements Can Ensure Optimal Health, Vitality, and Longevity**

It is naive to think that either you have a deficiency of a particular vitamin or you don't. To exhibit the symptoms of a deficiency disease, you must have experienced a significant lack of intake for an extended period of time. What happens when you get enough of a vitamin to prevent full-blown clinical symptoms of deficiency, but not enough to ensure optimal health?

This lack of optimal intake of essential nutrients is the key problem facing most of us. Sure, we get enough vitamin C even in a poor diet to prevent scurvy. But are we getting enough vitamin C to prevent sub-clinical



scurvy? Might we be less susceptible to periodontal disease, osteoarthritis, heart disease, fatigue, vascular disorders, and a whole range of disorders related directly or indirectly to collagen formation, immune function, metabolism, and oxidative damage if we ingested optimal levels of vitamin C (and other nutrients) rather than minimal levels?

What is the optimal level? Nobody knows for sure. Remember, first, that the levels of essential nutrients recommended by the various governmental agencies and used on food labels are the amounts thought to be necessary to prevent deficiency diseases, not the amounts necessary for optimal health. And they are the amounts estimated necessary for groups, or averages, not for each individual.

This is important because each individual is unique and has different requirements for each nutrient. This concept—biochemical individuality—was emphasized by Dr. Roger Williams and is the reason that, whenever possible, an excess of nutrients should be used, allowing the body to utilize as much of each nutrient as it needs, discarding the excess. For the most part, this is easy to do because most nutrients are relatively nontoxic and inexpensive. The few exceptions—such as vitamin A, vitamin D, and iron—are well known, and responsible supplement manufacturers and health professionals are quick to caution consumers and patients about this.

Again, most of us are interested in optimal health, not the prevention of scurvy, beriberi, and pellagra. We want to increase our lifespan. We want not only to live longer, but also to remain healthy and vital as we age. We want to improve our chances of avoiding degenerative diseases such as cancer, Alzheimer's, heart disease, and osteoporosis. We don't want to catch colds so often. We don't want to struggle with arthritic pain, vision loss, and diabetes.

Even in our younger years, we increasingly struggle with problems such as fatigue, infertility, and stress. We want to enhance performance, whether in the workplace, the athletic field, or in the bedroom.

Using nutritional supplements to ensure optimal levels of the essential nutrients is an easy and logical way to achieve this goal. Equally important, of course, is to strive for a healthy, balanced diet, adequate exercise, and avoidance of detrimental practices such as smoking, excessive exposure to sun, and overeating.

## **Supplements Can Be Used Therapeutically**

What is food? It is a substance consisting of protein, fat, carbohydrates, vitamins, and minerals—that is, nutrients, ingested and assimilated by the body to provide energy and to promote the growth, repair, and maintenance necessary for sustaining life. Supplements provide these same nutrients, but in concentrated or isolated form. The nutrients serve the same purpose, preventing life-threatening deficiencies and ensuring optimal function.

What is a drug? There are various definitions, but all of them boil down to “an agent that treats or prevents a disease or condition.” Going even further, from a regulatory standpoint, the Food, Drug, and Cosmetic Act considers something a drug merely if there is a claim that it treats, cures, or ameliorates a disease associated with it.

Section 201(g) of the Federal Food, Drug, and Cosmetic Act defines drugs as “articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals” and “articles (other than food) intended to affect the structure or any function of the body of man or other animals (for example, articles intended for weight reduction).”

It is the intended use that determines whether an article is a drug. Thus, foods and cosmetics may also be subject to the drug requirements of the law if therapeutic claims are made for them.

A food, or a dietary supplement, when used to cure, mitigate or treat a disease, is no longer functioning as a food. Instead, at least legally, it is being used as a drug. Theoretically, then, if a doctor prescribes chicken soup to treat a cold, the chicken soup is a drug.

Interestingly enough, many nutritional supplements can function as drugs or therapeutic agents. When vitamin B3 (niacin), for example, is taken as a supplement in the usual range of 20 to 50 milligrams, it is functioning as a nutrient. As a vitamin, it will prevent deficiency disease (pellagra), prevent subclinical deficiencies, and promote optimal metabolic function. But what happens when a person takes a dose of 500 milligrams of niacin two or three times a day? At this level, niacin is being used to treat coronary artery disease. It has been shown to be an effective agent in lowering elevated low-density lipoprotein (LDL) cholesterol and triglycerides, and raising high-density

lipoprotein (HDL) cholesterol. At that dosage, it is functioning as a drug, not a nutrient.

Today, the therapeutic use of dietary supplements is both exciting and promising, not because this is something new—to the contrary, this is one of the oldest forms of medicine—but because many of these uses are now being validated by modern medicine.

Ginkgo biloba may delay the onset of Alzheimer's disease. Folic acid may prevent birth defects and, in conjunction with vitamins B6 and B12, lower the risk of heart disease. Saw palmetto has been shown to be an effective treatment for benign prostatic hyperplasia. Niacin is a powerful cholesterol-lowering agent. Alpha-lipoic acid may help in treating diabetic neuropathy. Various antioxidant vitamins and minerals may prevent macular degeneration.

## **Are Supplements Really Necessary?**

Our body is like a machine, a very complex one. Compare it to an automobile engine. We can put high-quality motor oil or cheap oil into the engine. We can change the oil frequently or rarely. Even if we use low-quality oil and change it rarely, the engine will not seize up and fail. It will, on the other hand, wear more rapidly, lose power and efficiency, and most likely require frequent repairs and adjustments. With higher-quality oil, containing additives that enhance its function, changed frequently, the engine will run smoother, more powerfully, and longer.

In this analogy, the seizing up of the engine, or catastrophic failure, is similar to the development of clinical deficiency disease. Low-quality oil and poor maintenance will not cause catastrophic failure in the automobile engine, just as a less than optimal diet will not likely cause a full-blown clinical deficiency disease. But it will cause less than optimal function.

Ensuring that the engine runs well, runs long, and runs efficiently without requiring constant repair is similar to ensuring that our body is not suffering from a subclinical nutritional deficiency. For our body to function as efficiently as possible, for our immune system to function optimally, and for maximum longevity, we have to provide it with optimal levels of essential nutrients, not the minimal levels needed to prevent catastrophic breakdown, or seizing up of the engine.

Nutritional supplementation offers an effective way to provide optimal levels of vitamins, minerals, and all essential food factors that support optimal function. Optimal function, combined with the enhanced protective actions of antioxidant nutrients, leads to prevention.

When disease does strike, the choice of treatment should involve an evaluation of risk versus benefit. If more than one treatment is available, it makes sense to choose the one that is effective yet least toxic. It also makes sense to treat the underlying cause of the disease rather than only the symptoms. The therapeutic use of nutritional and herbal supplements, either alone or as adjuncts to drug treatments, is often more effective and less damaging than drugs alone.

Many of us take greater care of our automobile engine than we do of our own bodies. We are more concerned with what we feed our pets than with what we feed ourselves and our families. We take greater interest in the chemical composition of the fertilizer we spread on our lawns than we do in the composition of the foods we eat.

We are not helpless when it comes to fighting off cancer, Alzheimer's disease, heart disease, diabetes, and other degenerative disorders. A good-quality, balanced multivitamin and multimineral supplement, with adequate amounts of calcium and magnesium and extra antioxidants, is certainly not too difficult a pill to swallow! The potential benefit of even this basic supplement regimen is tremendous. The downside is minimal.

## **Why Not Just Eat Right?**

In the past, we were told that all we had to do was eat the right foods, properly prepared. Easier said than done. Guidelines are provided and repeatedly revised. We have food groups and pyramids, which are well meaning but of little relevance to the average person. For many, breakfast is a donut or muffin and coffee. Lunch may be a hot dog and cola from the corner street vendor. Dinner may be several beers and pizza, or a trip to the fast-food outlet for a burger, fries, and a soft drink. Most of the foods we are enticed to buy are nutrient-poor and laden with fat.





They are heavily processed, which removes vital nutrients, and are loaded with sugar and salt.

In spite of the repeated insistence that diet should serve as our only source of nutrition, surveys repeatedly show that most Americans do not consume a well-balanced diet. About 11 percent of Americans are estimated to be deficient in folic acid, for example. Vitamin-B6 deficiency is estimated to be present in between 10 to 25 percent of the population of the Western world. Mild vitamin-C deficiency is estimated for 6 percent of the general population. Roughly 6 to 14 percent of healthy adult Western European populations have been reported to be vitamin-D deficient. Another study recently reported that 27 percent of the U.S. population had low blood levels of vitamin E. Less than 10 percent of women in America get adequate calcium, and up to 25 percent of adult women are deficient in magnesium.

A report of the U.S. Senate Committee on Education and Labor stated that “85% of the older population has one or more chronic conditions that have been documented to benefit from nutrition interventions.” According to the experts, 55 percent of Americans are overweight. It is said that 49 million Americans are totally sedentary. Diabetes has reached epidemic proportions. We know we have a serious problem and we have to accept the fact that telling people to ignore the advertising promoting unhealthy food and, instead, modify their eating habits to comply with the food pyramid is just not working.

## **Easier Said Than Done**

Convenience and marketing pressures are not the only factors working against eating right. There are more subtle problems as well. What is right? We were told for quite some time, for example, that butter was unhealthy and margarine was the healthy alternative. A small group of nutritionists and complementary medicine proponents voiced concern about the presence of trans fatty acids in margarine. Only recently has it been acknowledged that these partially hydrogenated oils and spreads (margarine) may be dangerous.

Another example is eggs. Should we or shouldn't we? And what about milk? Is it the “perfect food” or something that should be avoided by humans, especially adults?

Just how healthy is much of the food we buy in the supermarket? Some of it is highly processed, and only a portion of the nutrients removed are replaced. Bread is a good example.

## **Is Food Really Best?**

It may be politically correct to assert that it is always best to get the nutrients we need from food, but in fact, that is not always the case. There are times when nutrients in supplement form are actually more efficiently used by the body than nutrients in food form.

Folic acid is a good example. Folic acid has generated a great deal of attention because of its role in preventing certain types of birth defects and in lowering homocysteine levels. Elevated homocysteine is considered to be a risk marker for heart disease and Alzheimer's disease. It turns out that folic acid, when taken in supplement form and on an empty stomach, is twice as effective as folate in food.

Another problem with food involves processing and contaminants. Fish is an excellent example. While considered one of the most healthy foods due to its omega-3 (EPA & DHA) oil content, eating fish is a problem because of potentially high levels of contaminants and environmental toxins such as mercury and PCBs. Women have been warned by the FDA against eating too much fish when pregnant. This is due primarily to concerns over methylmercury levels, which could affect brain development in the developing fetus. To complicate matters, however, and make the situation more confusing, the National Institutes of Health published a study in 2007 that stated that pregnant women “who limit their fish consumption to recommended government levels may be doing their unborn babies more harm than good. Researchers found that women who ate less than 12 ounces of fish or other seafood per week while pregnant were more likely to have children with verbal and other developmental delays than women who ate more than 12 ounces each week.” (Dyerberg, J. M.D., DMSc) & Passwater, PhD. *The Missing Wellness Factors--EPA and DHA.*)

Fish oil supplements offer a perfect solution to this problem. High quality omega-3 oils supplements, these days,

are extracted and purified through a sophisticated distillation process that removes these contaminants. This results in a highly concentrated EPA-DHA rich fish oil supplement that is free of mercury, PCBs and other undesirable compounds--an excellent example of when a supplement is better than the food from which it was derived.

Processing can often result in foods with a nutrient content, that is significantly depleted. The nutrient density is further reduced by the addition of flavoring, processing, and the use of stabilizing agents. Too many foods are no longer what they seem. Instead of drinking fruit juice, we drink concentrate or flavoring in a solution of sugar and coloring. Instead of whole-fruit jam, we use jelly, which is mostly sugar. Instead of cheese, we use cheese spread.

A careful reading of the ingredient listing on food labels reveals an increasing tendency to mislead the consumer about the growing presence of not-so-healthy components. Use of ingredient names such as “dehydrated grape juice” instead of “sugar,” for example, is an attempt to mislead the consumer into thinking there is less sugar in the product.

Concern over the increased contamination of foods with pesticide residues, antibiotics, and hormones has resulted in a rapid growth of so-called organic foods.

Whatever the reason, there seems to be an increasing problem with food allergies. For many people, eating a balanced diet has become very difficult because of their inability to tolerate certain foods. The same can be said for people who are frequently on weight loss diets. When reducing caloric intake, the difficulty of maintaining adequate nutrient levels is magnified.

### **Theoretically Yes, But Practically? No!**

Eating right remains a noble goal. But problems with our food supply, lifestyle, and advertising pressures, as well as with reduced intake due to weight loss diets and allergies, make this more difficult than it might seem at first glance.

It should also be pointed out that we consume fewer calories today than our ancestors did and that our needs for protective nutrients, at the same time, may be greater. We are exposed today to levels of pollution and radiation that place additional burdens on our body's defense systems. We live longer than our ancestors did. Maximizing bone density to prevent osteoporosis may have been less of a concern when the average woman lived only to 50 rather than to 80. To rely only on the myth of a balanced diet to provide us with optimal levels of protective nutrients is impractical given the realities of our environment at this time.

The elderly, as a group, are now considered to be at high nutritional risk. Some have actually gone so far as to propose that what we consider normal signs of aging may actually instead be symptoms of inadequate nutrition.

We have actually reached the point now where even the most conservative nutritionist is acknowledging that there are times when supplements are necessary, even to provide the recommended daily intake of essential nutrients. The National Academy of Sciences, Institute of Medicine, Food and Nutrition Board, has recently increased the recommended daily intake level of vitamin C, for example, to 150 percent of its previous level-90 milligrams daily rather than the previous recommendation of 60 milligrams.

And the recommended intake of calcium has been raised as well, with an admission by the agency that it may be appropriate, or necessary, to use calcium supplements to achieve that level. An acknowledgment of the necessity for using a supplement to satisfy part of the daily nutrient requirement would have been unheard of in years past.