SPECIAL REPORT

THE NUTRITIONAL SUPPLEMENT GUIDE

Understanding the role and value of nutritional supplements in ...
Optimizing Your Health and Vitality!

By John Lustyan

Compliments of

LifeExtension®

For Longer Life®

The Nutritional Supplement Guide

By John Lustyan

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The information is designed to empower you as an advocate for your own health care and help you make informed decisions.

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Dear Health Enthusiast,

More than ever before, people are seeking resources to understand and take control of their own health care. Your interest in this report suggests you are part of this global movement and ... you are to be congratulated for your independent, proactive approach to understanding and optimizing your health.

Whether feeling the burden of medical costs skyrocketing out-of-control, or due to the wealth of information only a click away online ... over 3.3 million searches are made daily on Google alone, looking for information on such topics as:

- How to treat and prevent disease
- How to retain or recapture youthful appearance and vitality ... and
- How to combat the deadliest predator known to humankind ... aging

Conventional medicine is remarkable when it comes to such crisis-oriented areas as trauma, cardiac emergencies and organ transplants. But in an environment seemingly focused more on treating symptoms than prevention, mounting scientific evidence suggests that the remedies of conventional medicine often result in unnecessary side effects — and even, new chronic conditions.

There is no question that the advancement of modern medicine has contributed to life expectancies beyond those of our forefathers. But did you know that for the first time in the history of mankind, the life span of this youngest generation is not expected to exceed that of our own? It would seem the practice of focusing on intervention more than prevention has caught up with us.

This sense that conventional medicine has fallen short of its billing as the first and only answer to health and longevity is reflected by the tens of millions who proactively seek alternative, natural, and holistic health care information and opinions, in addition to spending $25 billion annually on nutritional supplements.[1]

I proudly admit I'm one of you. I work at managing my health — leveraging my lifestyle, nutrition, supplements and doctor's counsel to live with a youthful vitality younger than my years. I'm passionate about my health and demand only the highest quality ingredients and manufacturing practices from my grocers and nutritional supplement provider.

I've read thousands of articles, reports, studies and books on the subject, and I have been fortunate to have worked with, and become friends with, some of the leading figures in the fields of fitness, health care, anti-aging and longevity. My passion for optimal health has resulted in my children referring to me as Dr. Dad when these topics are raised.

Whether you take supplements today, are deciding what to take, or just thinking about it ... you can benefit from the empowering information in this report.

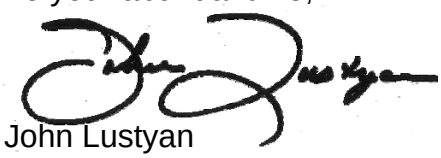
Like most things in life, not all supplements are created equal. And it's no surprise that a marketplace of this financial size attracts some bad apples — profiteers more interested in healthy paychecks than healthy customers. And there are those who emphasize lowest cost rather than the highest quality and absorbability, unfortunately reinforcing the adage, "You get what you pay for."

The information and advice shared with you here are the result of decades of research and my personal experiences. This Special Report will tell you what I learned about supplements — as someone just like you — what researchers have discovered, and how you can use that information to choose the supplements you take and the companies you purchase them from.

Keep in mind that I'm not your personal health care advisor. This information is not intended to substitute the counsel of a health care professional. In the final analysis, your health is in your hands. To get healthy and to stay healthy, you must be informed and proactive ... you must be your own advocate.

My goal here is really very straightforward ... to help you look and feel amazing. To provide you with actionable information on nutrition, supplements and supplement providers that you can discuss with your health care professional to improve the quality and length of your life beyond anything you ever expected, or even hoped.

To your abundant life,



John Lustyan

P.S.
I live by a personal creed: "To make a positive difference in the lives of those I touch."

So, this is free to you. The links provided in this report are included because I believe the information, products or resources you find there are superior to the hordes of others vying for our attention and hard-earned money. I trust them with my most precious gift ... a healthy life.

Reference:
1. http://blogs.bnet.com/business-news/?p=2284. Accessed June 30, 2010.

An Introduction to Nutrition

Eating. In developed countries we take it for granted. Some folks eat because it is time to do so, some in response to hunger or fatigue. For others eating is triggered by emotions like joy, boredom or depression. We also embrace the social role food plays in holidays, celebrations, and even in doing business.

We are encouraged to have it our way — even super-sized — and what restaurant meal doesn't end with a tempting tray of desserts offered to guests?

With all of those drivers behind what, why and when we eat, it is no surprise that the nutritional aspects of our diets have become secondary considerations. Few people invest much effort in expanding their knowledge of nutrition beyond what is learned about the "food pyramid" in elementary school.

Apparently this limited awareness of nutrition applies to doctors as well. I was surprised to hear in a lecture by Dr. Mitra Ray, a biochemist with a Ph.D. in cellular biology from Stanford University, that nutritional instruction represented just a fraction of her formal education. Unable to recall any significant training, she reviewed all the textbooks she amassed during her studies to find only one book, about an inch thick, pertained to nutrition.

So let's pause for a moment and look at nutrition.
Nutrition is about the relationship between food and how our bodies use it for growth, repair, sustaining daily activities and, essentially, supporting life. There are big and small contributing nutrients.

The "big guns" or macronutrients include proteins, carbohydrates, and fats.

Protein in the foods we eat is broken down into amino acids, which are essential to building and repairing our bodies' muscle, skin and hair... as well as, being critical components of our hormones, vital organs, immune, and nervous systems.

We primarily find protein in meats and meat products such as beef and dairy, fish, and poultry. But, it can also be found in high amounts in plant-based products such as soy, beans, nuts, and whole grains. Protein is usually the focal point of a meal … and too often the largest portion on the plate. Two high-quality protein sources finally getting the attention they deserve are quinoa,

surprisingly a grain, and whey protein powder, a by-product of cheese production.

Adults need a minimum of one gram of protein for every 2.2 pounds of body weight. If you don't get that protein, your body begins to slowly break down its own tissue in order to get what it needs.

So, for a 150-pound person, it is necessary to eat about 68 grams of protein every day.

Athletes and women, pregnant or lactating, can require as much as two grams of protein for every 2.2 pounds of body weight, as directed by their professional health advisors.

I understand that an appropriate serving size of a protein is three ounces. If you are like me and don't factor a scale in your restaurant plans, it's generally suggested that three ounces of protein is about the size of a deck of playing cards or no more than would fit in the palm of your hand.

Is there any harm in getting more protein than I need?

Too much protein can cause mild dehydration, which can stress the kidneys. Yet, according the Centers for Disease Control (CDC), "most people eat more protein than they need and do so without harmful effects. However, the human body can store only small amounts of excess protein." Protein is broken down during digestion into amino acids used primarily for energy. What is not used immediately is converted to fat.

Your protein source plays a significant role in your long-term health. According to the CDC, many forms of animal protein can be sources of saturated fat, which has been linked to elevated low-density lipoprotein (LDL) cholesterol, a risk factor for heart disease. Whereas certain seafood delivers quality protein rich in the essential fatty acid omega-3s, another great source, quinoa, is not only devoid of saturated fat, its natural fiber may even reduce LDL in the body.

The CDC points out that protein may also contribute to unnecessary calorie intake. If you eat more protein than you need, your overall calorie intake could be greater than your calorie needs ... contributing to weight gain.

Carbohydrates are easy to digest and the main source of energy for our bodies. We seek them out in sugars and starches for a quick energy boost. Athletes load up on them in the days before strenuous competitions. Found in fruits, vegetables, grains, pastas

and confections, carbohydrates are broken down into glucose, fructose or galactose.

Glucose is the preferred energy source of our bodies. So much so that if you are not taking in an adequate amount, the body will produce glucose from its own protein or fat sources.

Only in recent years have we recognized the “friend or foe” potential of carbohydrates. I just referenced the good side of carbs in the energy they provide ... the bad we see in the epidemic rise of obesity and related diseases like diabetes.

So what makes a good carb go bad? All too often, to increase appeal, nutrients and fiber are simply processed out of the foods we eat! Candies, chips, pastries, sodas, bread and pasta are perfect examples. Healthy nutrients are replaced by bleached, enriched wheat flour and white sugar, artificial flavors, food colorings, preservatives and saturated fat. The result may be an energy boost. But it is short-lived and ultimately leaves us feeling more sluggish than before.

Our bodies can’t process these carbohydrates very effectively. Insulin production is thrown out of whack as the body tries to process huge amounts of starches and simple sugars. That leads to wide fluctuations in blood glucose levels ... the reason you feel sluggish after eating unhealthy meals.

So what differentiates good carbs from bad?

- Unprocessed carbs are easily converted into “good energy.”
- High-fiber carbs help you feel full (so you eat less), provide more sustained energy, lower cholesterol levels, and help to eliminate toxins.
- Carbs with a low glycemic index stabilize blood sugar levels and insulin production.
- Carbs that are high in natural vitamins, minerals & phytonutrients promote optimal health.

The best sources are fruits and leafy green vegetables, beans and legumes, nuts and seeds. To optimize their benefits, good carb foods can be eaten raw.

So what about whole grains? Depending on the form you eat them (e.g., a bowl of oatmeal vs. a bowl of sweetened cereal, or a slice of whole grain bread vs. a cinnamon bun), their value to and impact on your body varies significantly. Again, the less processing involved the higher the health nutritional value.

Nevertheless, some natural carbohydrate sources like rice and fruit juices still have a negative impact on blood sugar levels, and people afflicted with diabetes avoid them.

About 40% of your daily calories should come from carbohydrates. Those carbs should come from fruits, vegetables and 100% whole grain breads and cereals ... not from fast foods, candy, cookies or soft drinks.

FAT. Just typing the word, I can't help but hear the haunting music from the movie *Jaws*. Whether pressing against our waistbands or collecting in our arteries, fat, and the mere thought of it, always elicits a negative response. Studies have shown that people considered fat are often the subject of social prejudice.

Yet, for many of us, fat-based foods are our biggest temptation!

The general rule of thumb is that if fat is in a solid form at room temperature, like butter and cookie fillings, it is classified as saturated fat. It is from animal sources, or worse trans fat. Trans fat is extremely harmful.

Trans fat from partially hydrogenated oil is unsaturated fat. It is the worst of the worst. It can negatively impact your cholesterol levels, raising LDL, bad cholesterol and at the same time lowering HDL or good cholesterol.

Any item that contains "hydrogenated oil" or "partially hydrogenated oil" likely contains trans fat. Hydrogenation is a heating process that changes liquid oils into solids.

The tide is turning against trans fat.

- Since January 2006, all food manufacturers have been required to list trans fat content on food labels.
- In January 2010, a California measure that limits trans fat in restaurant food took effect.
- A similar provision will apply to baked goods in 2011, and restaurants consequently have been replacing trans fat in those products.

From a caloric perspective, fat is the most concentrated source of calories at 9 calories per gram of fat compared with 4 calories per gram for protein and carbohydrates.

Having just reinforced the bad name of fat, let me share a redeeming quality of fat's contribution to healthy bodies: The membranes surrounding all of our cells contain fat, our brains have fatty acids, and fat is needed to signal hormones.

Unsaturated fats, both *polyunsaturated* and *monounsaturated*, are healthier forms of dietary fat. Unsaturated fats have been shown to lower LDL (bad cholesterol) without adversely affecting HDL (good cholesterol).

Monounsaturated fat is liquid at room temperature. Here's my Top 10. The most common are olive and canola oils used in salad dressings and cooking. But don't forget the rest of the list like almond, avocado, flax seed, grape seed, peanut, safflower, sunflower and walnut oils.

Polyunsaturated fat is an exception to the liquid vs. solid rule. Some high-quality unsaturated fat in solid form is found naturally in avocados, bananas, fish, whole grain bread, peanut butter, and sunflower seeds. On the other side of the coin, two liquid-based fats are highly saturated: coconut and palm oil.

Any conversation about fat must include *fatty acids* ...
Central to that discussion are two essential fatty acids, *omega-3* and *omega-6*. Because our bodies can't create these fatty acids, we must include them in our diet.

Omega-3 is found in seafood like salmon, mussels and krill, and botanicals like flax and kiwis. Omega-3 can also be found in lower levels in meat and poultry if the animal was fed foods rich in omega-3.

Omega-6 fatty acids are in most oils used for cooking, in cereals, baked goods, nuts, eggs, and poultry. Availability makes it easy for someone to consume more than is needed.

These omegas are essential to our good health.

But ... balancing them in our bodies could be the difference between life and death.

The American Institute for Cancer Research reports that the current ratio of omega-6 fatty acids to omega-3 fatty acids in the average American diet is about 15-to-1. Life Extension recommends an ideal ratio of 4-to-1. Simply stated, we consume far too many omega-6 and not enough omega-3 fatty acids.

This dietary imbalance in fatty acids is an underlying cause of many chronic diseases including cardiovascular disease, certain cancers, most inflammatory diseases, and some psychological disorders.[1]

Two big fat tips ...

1. For those who tend to eat just one bigger meal a day, your body thinks it is starving for about 18 hours a day. It reacts by converting more food into fat to create a surplus source of energy and then slowing your metabolism down to protect that fat reserve.

Both of these functions promote weight gain. Spread your calories out over 5–6 small meals a day. It is a proven weight loss tactic.

2. The artificial sweeteners found in most “diet” drinks and foods slow down the body’s metabolism. The net result may be consuming fewer calories ... but you burn off fewer calories too.

   If you have a sweet tooth like me and want to watch the calories, consider Stevia, a safe, 100% natural sweeter. Stevia leaf extract has more than 30 times the sweetness of ordinary table sugar. Coca-Cola® has been using it in soda in Japan for years.

The broader issues of weight management for optimal health are bigger than the scope of this report. If they are important to you or someone you care about, I strongly recommend the Weight Loss Guide *by William Faloon and Dr. Steven Joyal. This no-nonsense, no-fad book addresses the scientific and biological factors of gaining and losing weight ... finally, empowering people to eliminate unwanted pounds and inches for good. Get your copy at www.lef.org.*

Vitamins and minerals are micronutrients, the small nutrients I referred to earlier. They are the focus of this report and are essential to both attaining and retaining a healthy body. Although we need fewer micronutrients than proteins, carbohydrates and fats, they are just as important.

I consider them the X-Factor because their presence has a powerful, positive impact on our health. They are my insurance policy. For example, vitamin B1 enhances brain function and energy. Vitamin A is needed for eye and skin health. Zinc is important in immune and reproductive health while vitamin C helps keep connective tissue strong and as an antioxidant bolsters the immune system.

Certain nutrients are classified as *fat-soluble* while others are *water-soluble.* The two types refer to the materials in which they will dissolve.

Fat-soluble vitamins — such as vitamins A, D, E and K are absorbed into the bloodstream to be used by the body. Excess amounts are stored in the liver and thus don’t need to be ingested every day.

On the other hand, water-soluble vitamins cannot be stored by the body. Excess amounts are eliminated through urination, and thus we need to obtain them regularly through our diets.

According to the Nutritional Security Institute, research reveals the critical interrelationship between minerals and optimal health. There are 17

known essential minerals and many other trace minerals your body needs. These minerals interact with each other, impacting many of your body's metabolic functions. Like vitamins, they are all essential to maintaining optimal physical and mental health.

For example, calcium is used for the formation of blood clots, the transmission of nerve impulses, as a metabolic co-factor to release energy from macronutrients, for maintaining a rhythmic heart rate, and controlling concentrations of substances on differing sides of cell membranes throughout the body. Mild calcium deficiencies can cause heart palpitations, insomnia, irritability, nerve sensitivity, muscle twitching, mental confusion and a feeling of depression. Serious calcium deficiencies can lead to bone loss, a common health problem.[2]

What's the risk of mismanaging our intake of Vitamins and Minerals?

Work by Dr. Bruce N. Ames of the University of California, Berkeley, shows that deficiencies in many micronutrients can damage DNA, the essential "blueprint" of each cell.

Along with prolonged cellular inflammation, DNA damage can cause or accelerate aging-related conditions such as cancer, heart disease, vision loss and a host of others like respiratory diseases and infectious diseases. Therefore, boosting our immunity, eye and skin function with vitamins and minerals is vital.

So don't take a chance with your health. Take preventive measures. Learn about your options. Become your own advocate ... and create the nutritional program that best suits your needs. But keep in mind that each person is unique in their needs, depending on their own health situation, diet, and other factors. So always consult your health care professional about dosage and use.

If you have any questions regarding the content of this report, please call a **Life Extension Health Advisor** toll-free at **1-800-226-2370**, or at **954-766-8433**.

Reference:
1. http://www.makemeheal.com/mmh/product/anti_aging_supplements/fatty_acids/index.vm?procid=15&catid=818. Accessed June 30, 2010.
2. www.nutritionsecurity.org/PDF/NSI_White%20Paper_Web.pdf. Accessed June 30, 2010.

Why Take Nutritional Supplements?

- We live in a time of the most advanced agricultural technology and practices.
- We produce more food than ever before in the history of the world.
- Our storage and transportation capabilities put fresh foods in our supermarkets in hours.
- We are more educated on health-related issues than any generation before us.
- Online, we're but a click away from more information than we could digest in a lifetime.
- We have the food, we have the knowledge, and we have the choice ...
- **So why take nutritional supplements?**

There are a number of reasons and they all point back to you and me, to our parents and grandparents ... our evolving needs and the lifestyle choices made along the way.

No, I'm not forgetting big business and their drive for profits. But frankly, our choices and our demand fund their business path. And yes ... they feed us billions of dollars in advertisements to keep us at their tables.

Nor can I turn a blind eye to the impact of pharmaceutical marketing and the physicians who sometimes, too easily, reach for their prescription pads. I'll reserve my comments on these for later in this report.

Looking back a few generations, the available food sources were primarily from local farms and backyards. It was a time, by the way, when obesity, cardiovascular disease and Alzheimer's were the exception.

Farming practices led to declining nutrient composition in our soil and ultimately to our food supply.

As our population increased, so had the demand for increased food production. It was rough going for the farmers who bore great physical and often economic burdens. Soon technology and practices evolved ... pesticides and fertilizers became commonplace.

Today, many fruits and vegetables are genetically bred and grown to look more appealing and to increase production yields to maximize grower earnings. Unfortunately, it often results in fewer nutrients unlike those found in food supplies just decades prior to these "advanced practices."

Farming has become easier and more profitable for growers, but it has taken a toll on the soil that provided the rich and plentiful bounty.

Nutrient-rich topsoil has been lost due to erosion, the overuse of inorganic nitrogen fertilizers, and other farming practices that leave the soil depleted. Today in the United States, soil is eroding at a rate approximately ten times faster than the rate at which it is being replenished.[1]

Food grown in nutrient deficient soil lacks the nutrients needed to keep people healthy. Studies reveal that the nutritional values in food have declined significantly over the past 75 years. The declines in the nutritional values in food have been attributed to mineral depletion of the soil, loss of soil micro-organisms along with changes in plant varieties.[1]

> *"The alarming fact is that foods – fruits, vegetables and grains – now being raised on millions of acres of land that no longer contains enough of certain needed nutrients, are starving us — no matter how much we eat of them."*
>
> *U. S. Senate Document 74-264 (1936)*

To be fair, the U.S. Senate document quoted above was produced in 1936. But the concern continues to exist today.

According to Donald R. Davis, former researcher with the Biochemical Institute at the University of Texas at Austin, vegetables you find in today's supermarket are 5%-40% lower in minerals (like magnesium, iron, calcium and zinc) than those that were harvested 50 years ago.[2]

And that doesn't just apply to fruits and vegetables. The nutritional value of the fish, meats and poultry we eat is directly impacted by the purity and nutritional value of what they eat. Since they're fed from the same fields we are, one can only assume that the nutritional value of their feed is lower too.

Lifestyles. In my opening comments on Nutrition, I touched on our eating habits today:

- Some folks eat because it is time to do so.
- Some eat in response to their hunger or fatigue.
- For others, eating is triggered by emotions like boredom, depression or joy.
- Eating on holidays, in celebration, and even in business is a social event.

But even for those who try diligently to manage nutrition, for themselves and their families, day-to-day life presents huge challenges.

- Schedules are fast-paced and subject to instant change
- Meals are missed
- Time for meals is subject to multiple schedules ... at home and work
- Little time to eat means quick meals and insufficient chewing
- Quick meals mean processed foods
- Food costs are up and personal cash flow is stretched

- Reducing food costs means cheaper processed meals
- We sometimes indulge in unhealthy foods as comfort or reward
- It's hard to keep track of required vitamin and intake levels during the day
- Menus now address calories, carbs, and fats but we are far from knowing how much vitamin A was in the fish and veggies brought to our table
- And try as I do, there are very few days in a week that I can eat the suggested number of servings of fruits and vegetables each day

These erratic eating habits and stress contribute to poor digestion, making it difficult for our bodies to extract all the nutrients it needs from food.

Pharmaceutical drug use is more prevalent today. Most medications deplete essential nutrients, making people more vulnerable to deficiencies.

Our global lifestyles and industrialization have led to increased levels of environmental pollution affecting our air, water and food. As a result, our bodies may require additional nutrients (like vitamins A, C, and E) to detoxify and eliminate those harmful substances.

If any of these apply to you, there is a high probability that you are not even reaching the minimum Reference Daily Intake (RDI) established by the Food and Drug Administration for the amounts of selected nutrients considered adequate to meet the known needs of healthy people, let alone the optimal dosages needed to maintain optimal health.

Nutritional depletion in food preparation
I've used the word "preparation" in a broad context, referring to what is done commercially to food before we buy it and what we do preparing to eat it. Because the fact is that almost any kind of food processing reduces the nutrients in food. And processes that expose foods to high levels of heat, light, and/or oxygen are responsible for the greatest nutrient loss.

You've gotten a glimpse of what has happened in the fields of America's heartland. Let's take a look at the foods we don't find in the fresh produce aisles and meat counters.

We've gone from home-cooked meals to TV dinners to 24/7 grocers to golden-arches to delivered pizza and to meals in minutes from the microwave. We've been locked in step with the companies anxious to provide the "next" faster, cheaper and/or tastier meal.

Food Processors have played a very important role, allowing us to enjoy a steady supply and large variety of foods on our tables all year long. And let's face it, for many people, processed foods offer a lot more variety than time or experience allows in their culinary repertoire.

They've also improved the safety of our foods by decreasing the risk of contracting food-borne diseases. Unfortunately, many of these upsides come at a great cost to nutrition and long-term health. We've literally had too much of (what started as) a good thing.

Although it varies by food type and nutrient, whether processors freeze it, dry it, blanch it, cook it or cook and drain it, you can expect some degree of nutrient loss. The most detrimental preparation method is cooking, especially at high heat.

Yet even before processors see them, many foods are shipped long distances and are stored for long periods of time, both of which cause the depletion of vitamins, including the important B-complex and C vitamins.

We quickly recognize words like *fortified* and *enriched*. Processors know the impact these practices have on nutrients. They make an effort to revitalize a product by adding vitamins and minerals. How aggressively do they have to process wheat, *"the staff of life"*, so that a cereal must be fortified or a loaf of bread enriched?

The other day I spent 75 cents on a delicious, organic Fuji apple. Munching away, with the radio on in my car, I heard a commercial for a 99-cent meal.

There was a time I'd have thought: *I could've gotten a full meal for 24 cents more.*

Knowing what I do today, I thought: *We've all bought the ingredients and made a taco or burger using real meat, lettuce, and cheese. This company pays for its restaurant, their utilities, their cooks and servers, the food itself, and tons of advertising like I'd just heard.*

What in the world are they doing with — and adding to — naturally wholesome food that makes it worth so little … that they still make a profit by selling it at 99 cents?

As a nation, we produce and consume more processed food than any other. The alarming connection is ... the epidemic rise of obesity.

Consider these stats from the Centers for Disease Control and Prevention, the CDC, specific to obesity in America:

- 10.4% of 2–5 year olds
- 19.6% of 6–11 year olds
- 18.1% of 12–19 year olds
- 34.3% of adults, 20-plus years old

It is so prevalent that a new category has been added: “Extreme Obesity.” How many people are crammed into this category? 5.9% of American adults.

It’s not just about what is sacrificed in the commercial processing of foods ... it is also about what is added to them that compromises their nutritional value.

Certain substances are added (whether intentionally or unintentionally) during the processing or production of food. This includes everything from antibiotics and hormones in cows, pigs, and chickens to the red coloring and wax that makes apples glisten.

When I hear the rumblings of big business and medicine wanting nutritional supplements completely regulated by the FDA, or read of a politician sneaking in proposed legislation to do the same, I ask myself why this “gate keeper/guardian of our food supply” should get any closer to nutritional supplements when the FDA allows for, what I consider, these most offensive and potentially dangerous additives:

Warning: Content May Disgust You!

Acesulfame K

Sold under the names Sunett® or Sweet One® acesulfame is a sugar substitute sold in packets or tablets. It is added to chewing gum, diet beverages like soda, and tea ... and desserts like puddings.

The Center for Science in the Public Interest (CSPI) reported it urged the FDA in 1987 not to approve acesulfame K, but they were ignored. After the FDA gave the chemical its blessing, the CSPI asked that it be banned. The FDA has yet to rule on that request.

FYI: The tests on which the FDA based its approval show that this additive causes cancer in animals. It may also increase the cancer risk to humans.

Artificial Colorings

Don’t color my world — or my food — yellow or orange. Tartrazine, also known as Yellow #5, is a waste derivative of coal tar. It is used to color foods, cosmetics, and other products.

It is connected to flare-ups of allergies, sensitivity reactions, and other nasty side effects. You’ll find it in some favorite kids’ foods … like candy, mac and cheese, ice cream, and some sodas.

It’s also been linked to ADD, asthma, migraines, thyroid cancer, even lupus!

Aspartame

Sold as Equal® and NutraSweet® Benevia® and Spoonful®. You may have seen this warning on packaged consumer goods — Phenylketonurics: Contains Phenylalanine.

It can be found in over 5,000 consumer foods and beverages sold worldwide and in 1999 the FDA reasserted its position as to its safety.

Consider this:

1. Formaldehyde Exposure.
Exposure to formaldehyde from aspartame is significant. Aspartame breaks down into methanol. Methanol is then converted into formaldehyde. The methanol found in foods and alcoholic beverages is absorbed, but there are "protective chemicals [e.g., ethanol] in certain foods and beverages that prevent the conversion of methanol to formaldehyde.

Formaldehyde is known to cause gradual damage to the nervous system, the immune system and has recently been shown to cause irreversible genetic damage at long-term, low-level exposure.

The most recent independent research shows that the situation related to aspartame may be more serious than simply regular formaldehyde exposure. This research on animals demonstrates that the formaldehyde appears to accumulate as adducts (bound to protein molecules) in the organs and tissues of the animals when aspartame is ingested at relatively low doses:

> "These are indeed extremely high levels for adducts of formaldehyde, a substance responsible for chronic deleterious effects that has also been considered carcinogenic.
>
> "It is concluded that aspartame consumption may constitute a hazard because of its contribution to the formation of formaldehyde adducts."[3]

2. Significant number of reported toxicity reactions to aspartame.
As of 1995 when the U.S. Food and Drug Administration (FDA) was quoted as saying they stopped accepting adverse reaction reports on aspartame, over 75% of the adverse reactions reported to the FDA Adverse Reaction Monitoring System (ARMS) were due to aspartame. After considering the fact that an extremely low percentage of adverse reactions are reported to the FDA, it becomes clear that there are millions of known cases of aspartame toxicity reactions.[4] Possibly, there are many other cases where the person ingesting aspartame is either:

A.) unaware that their symptoms are caused or contributed to by aspartame, or

B.) not yet experiencing clinically obvious symptoms from the breakdown products of aspartame, but may eventually experience chronic health problems from the regular exposure to significant doses of formaldehyde.

Some of the many aspartame toxicity symptoms reported include seizures, headaches, memory loss, tremors, convulsions, vision loss, nausea, dizziness, confusion, depression, irritability, anxiety attacks, personality changes, heart palpitations, chest pains, skin diseases, loss of blood sugar control, arthritic symptoms, weight gain (in some cases), fluid retention, excessive thirst or urination. Clearly, regular exposure to a toxic substance such as formaldehyde may worsen or, in some cases, contribute to the development of chronic diseases.[4]

Some scientists are now concerned about a potentially broader problem ... that aspartame might cause altered brain function and behavioral changes.[5]

There are a number of Aspartame Detox Centers in America and the United Kingdom, where hundreds of people have reported suffering dizziness, headaches, epileptic-like seizures, and menstrual problems after using the sweetener.

I've ardently avoided it for over 10 years. If you think aspartame affects you adversely, stop ingesting it for 60 days and discover the difference for yourself.

Benzoic acid

This is associated with hyperactive reactions in susceptible children and teenagers, skin rashes, and makes asthma bouts worse. It is in such things as soft drinks, juices, cordials, and chili pastes.[6]

It is also found in dried fruits and pickled products. Excess amounts of benzoic acid can have negative effects on the liver and kidneys.

BHA & BHT

If you've ever begun your day with a bowl of cereal, you probably recognize these two closely related chemicals. They're preservatives that prevent oxidation and retard rancidity in oil-containing foods.

The International Agency for Research on Cancer, part of the World Health Organization, considers BHA 320 possibly carcinogenic to humans, and the State of California has listed it as a carcinogen. Some studies show the same cancer causing possibilities for BHT.[7]

MSG, Monosodium Glutamate

Many of us are familiar with this additive used in Chinese Food. But, MSG is more prevalent than we think … It is often added to food under many other

names (glutamate, glutamic acid, calcium or sodium caseinate, hydrolyzed vegetable protein), and is some cases, need not be listed on the label.

Reactions to MSG can include: headaches, migraines, stomach upset, nausea, vomiting, diarrhea, irritable bowel syndrome, asthma attacks, shortness of breath, anxiety or panic attacks, heart palpitations, partial paralysis, "heart attack-like symptoms," balance difficulties, mental confusion, mood swings, neurological disorders (Parkinson's, MS, ALS, Alzheimer's), behavioral disorders (especially in children and teens), allergy-type symptoms, skin rashes, runny nose, bags under the eyes, flushing, mouth lesions, depression, and more. According to the Truth in Labeling Campaign, MSG reactions can be immediate or occur as late as 48 hours after ingestion.[6]

Nitrite and Nitrate

Sodium nitrite and sodium nitrate are chemicals used to preserve the red color of meat and inhibit the growth of harmful bacteria. Nitrate itself is harmless … but it converts to nitrite in our bodies. Reacting with other substances, it forms nitrosamines... the majority of which have been tested and found to be cancer causing. The chemical reaction occurs most readily at the high temperatures, like in frying bacon. Nitrite has long been suspected as being a cause of stomach cancer.[6]

Olestra

Bad enough that we consume far too much saturated and trans fat. Some greedy genius decided we needed a fake fat, Olestra. Okay, I get it. Similar to using a sugar substitute, people can reduce their calorie intake on foods they probably shouldn't be eating anyway.

But like a few of the sugar substitutes — also, on this list — a fake fat generates profits for the consumer goods companies and unnecessary risks for the consumer.

The Harvard School of Public Health states: "The long-term consumption of Olestra snack foods might therefore result in several thousand unnecessary deaths each year from lung and prostate cancers and heart disease, and hundreds of additional cases of blindness in the elderly due to macular degeneration. Besides contributing to disease, Olestra causes diarrhea and other serious gastrointestinal problems, even at low doses.

The FDA certified Olestra despite the fact that there are plenty of safe, low-fat snacks already on the market. There is no evidence to show that Olestra will have any significant effect on reducing obesity.

Procter & Gamble has a Web site highlighting one of their products Olean®. It surprised me to see them proudly display, on a progressive counter, over 6 billion servings of Olean® consumed.

Despite being approved as safe by the U.S. FDA, snacks containing Olestra had to carry a warning label (similar to one found on cigarettes) up until 2003 that stated:

> ***This product contains olestra. Olestra may cause abdominal cramping and loose stools. Olestra inhibits the absorption of some vitamins and other nutrients. Vitamins A, D, E, and K have been added.***

Saccharin

Several studies in the 70's linked saccharin with cancer in laboratory animals. After further studies, the FDA banned saccharin in 1977 BUT it is back on the market.

Whether under pressure from consumers or lobbyists, Congress overrode the FDA's decision and exempted saccharin from regular food-safety laws.

However, from 1977 until 2000, sweetener packets and cans of saccharin-containing diet drinks had to feature this warning label:

> ***Use of this product may be hazardous to your health. This product contains saccharin, which has been determined to cause cancer in laboratory animals.***

Sulfites

Sulfites are chemicals that can keep cut fruits and vegetables looking fresh. They also prevent discoloration in dried fruits; control “black spot” in freshly caught shrimp, and prevent discoloration, bacterial growth, and fermentation in wine.

Until the early 1980's they were considered safe, but the Center for Science in the Public Interest (CSPI) found scientific studies proving that sulfites could provoke sometimes severe allergic reactions.

CSPI and the U.S. Food and Drug Administration (FDA) identified at least a dozen fatalities linked to sulfites. All of the deaths occurred among asthmatics.

In 1985, the U.S. Congress finally forced the U.S. FDA to ban sulfites from most fruits and vegetables. Asthma sufferers, be sure to consider whether your attacks might be related to sulfites because the ban does not cover fresh-cut potatoes, dried fruits, and wine.[7]

Parabens

Parabens are a group of preservatives that contain the ”ben” from benzoic acid and prefixes like methyl-, propyl- and butyl-. They are commonly used in baked goods, candies, frozen dairy products, fruit juices, jellies, processed vegetables, salad dressings, soft drinks, and syrups. Reactions can include severe contact

dermatitis or redness, swelling, itching, skin pain, asthma attacks, and anaphylactic shock in susceptible persons.[6]

Home, home on the range. Nutrients can be "washed out" of foods during cooking. For example, much of the B and C vitamins in broccoli can be boiled out. The only way to still benefit from those nutrients is to also use the liquid they were cooked in, say in making soup.

Unfortunately, the remaining vitamin B and C levels present in the soup are as much as 50% less because of the cooking temperatures. If you look forward to leftovers, re-heating will again reduce the vitamin potency.

A hot tip: *Steaming vegetables is a good alternative to boiling as nutrients don't leach into the water.*

The loss of nutrients in cooking has created an increase in health enthusiasts building their diets around raw foods. In a similar vein, concerns about farming practices and additives have elevated the consumption of organic foods.

I support and enjoy both. To remain accurate, I should point out that only about 35% of my diet is raw, consisting of salads, fruits and vegetables. When we cook at our house, our first choice is fresh and organic; our second is frozen organic. I won't tell you bottled, canned, and pre-prepared items never touch our lips ... but as choices go, they all tie for last.

No matter which path you choose, properly clean your foods as reports of bacterial contamination in our food supply chain seem to be on the rise.

Your unique needs. Specific activities, times in life, and health conditions may result in higher needs for certain nutrients. For example, protein and carb needs are greater for athletic competition; folic acid needs tend to be higher during pregnancy, while menopausal women may be vulnerable to calcium deficiencies.

Many nutrients have been shown to prevent or aid in the treatment of certain health conditions (high cholesterol, arthritis, birth defects, cancer). But our bodies all have different requirements ... higher needs for certain nutrients, less for others, the possibility of illness if we don't get enough of a certain vitamin or mineral.

So consult a qualified health professional to customize your nutritional regimen and avoid drug-nutrient interactions. And avoid supplements with sweeteners, colors, artificial flavors, preservatives or fillers.

So, Again ... Why Take Nutritional Supplements?

Farming Practices

Nutrient Depleted Topsoils, Pesticides, Genetically Modified Plants and Antibiotics & Hormones

Food Processing

Shipping, Cold Storage, High Heat, Grinding and Fillers: All reduce the nutrient value of the foods produced, and the added chemicals can interfere with our bodies' ability to use the nutrients efficiently.

Lifestyle

It is extremely difficult to identify, track, and consume the daily nutrients required to develop and maintain healthy bodies.

Personal Needs

Your Activities, Age, Sex and Health Conditions are unique to you, so your needs are not the same and will vary over time.

I'd like to hear your thoughts, questions, and the impact of nutritional supplements in your life. Please, share them with me at www.FaceBook.com/LifeExtension.

If you have any questions regarding the content of this report, please call a **Life Extension Health Advisor** toll-free at **1-800-226-2370**, or at **954-766-8433**.

References:
1. http://www.nutritionsecurity.org/PDF/NSI_White%20Paper_Web.pdf. Accessed June 30, 2010.
2. www.avianweb.com/benefitsoforganicfoods.html. Accessed June 30, 2010.
3. http://www.holisticmed.com/aspartame/summary.html. Accessed June 30, 2010.
4. http://www.apcpage.com/food/worst_additives.htm. Accessed June 30, 2010.
5. *Nutrition Action Healthletter*. 1991 June.
6. www.mbm.net.au/health/worst_additives.htm. Accessed June 30, 2010.
7. www.sweetpoison.com/food-additives-to-avoid.html Accessed June 30, 2010.

Understanding Nutritional Supplements

This section is intended to answer some questions regarding nutritional supplements. These questions are frequently asked by people considering supplements as a new or greater part of their quest for optimal health.
The most common of which are:

- Which supplements should I take?
- What company should I buy them from?

What is a nutritional supplement?
A nutritional supplement (or dietary supplement) is a product intended to supplement the diet and provide vital nutrients, such as vitamins and minerals, or other nutrients that may be absent from or difficult to consume in sufficient quantities in someone's diet.

Consumed orally, usually in tablet, capsule, liquid or powder forms, they are available without a prescription at such places as health food markets, grocery, stores, by catalog, and online.

Are dietary supplements different from foods and drugs?
It depends on where you live. In the U.S., nutritional supplements are classified as foods …. while in certain countries some of them are considered either drugs or natural health products.

Nutritional supplements are not intended to replace food or meals. As implied by the definition of the word "supplement" itself, nutritional supplements are a way to add to, enhance, and complement a nutritional program lacking in the quantity and/or quality of nutrients consumed in your daily eating.

The science behind them has found its way into the daily lives of health-conscious individuals, parents, professionals, and competitive athletes.

Are nutritional supplements safe?
Yes. As a matter of fact, the FDA oversees nutritional supplements in many ways:

- They regulate label claims made for supplements and their ingredients.
- For new dietary ingredients, not sold as supplements prior to 1994, manufacturers must notify the FDA of its intent to market a dietary supplement containing the new dietary ingredient and provide information on how it determined that reasonable evidence exists for safe human use of the product.
- The FDA conducts field tests to examine ingredients of supplements and reviews label claims.
- The FDA can refuse to allow new ingredients or remove existing ingredients from the marketplace for safety reasons.

- Although a product can go to market without the same testing requirements as prescription drugs, if the FDA demonstrates a product to be unsafe or ineffective, they can restrict its use or remove it from the market.

What claims can manufacturers make for dietary supplements and drugs?
The types of claims that can be made on the labels of dietary supplements and drugs differ. Drug manufacturers may claim that their product will diagnose, cure, mitigate, treat, or prevent a disease. Such claims may not legally be made for dietary supplements.

The label of a dietary supplement or food product may contain one of three types of claims:

1. A health claim, describing a relationship between a food, food component, or dietary supplement ingredient and reducing risk of a disease or health-related condition.
2. A nutrient content claim, describing the relative amount of a nutrient or dietary substance in a product.
3. A structure/function claim is a statement describing how a product may affect the organs or systems of the body.

The bottom line is …
The label of a dietary supplement product is required to be truthful and not misleading. If the label does not meet this requirement, the FDA may remove the product from the marketplace or take other appropriate actions.

More info on claim guidelines can be found at www.cfsan.fda.gov/~dms/hclaims.html

Does a label guarantee the quality of a dietary supplement product?
No, and it is a prudent reminder that you can't judge a book by its cover. But, as in the case of other foods we purchase, the FDA has established specific guidelines for dietary supplements.

In 2007, the FDA issued current Good Manufacturing Practices (cGMPs) for dietary supplements, a set of requirements and expectations by which dietary supplements must be manufactured, prepared, and stored to ensure quality.

Manufacturers are expected to guarantee the identity, purity, strength, and composition of their dietary supplements to:

- Prevent the inclusion of the wrong ingredients
- The addition of too much or too little of a dietary ingredient
- Reduce risks of contamination, e.g., pesticides, lead, bacteria, etc., and ...
- To ensure accurate packaging and labeling of a product

What supplements should you take?
The reality is that your nutritional needs are unique to:

- The demands of your life
- Your sex
- Your age
- Your health
- Your diet
- Your lifestyle habits
- Perhaps, where you live

Life Extension identifies their Top Ten Steps for Achieving Ultimate Health with Dietary Supplements. And their Top Ten Nutritional Supplements mirrors my Top Ten.

Take a look for yourself:

Top Ten Steps for Achieving Ultimate Health with Dietary Supplements

Here is a FREE resource that provides more *personalized feedback.*
You can use it in conjunction with your professional health care provider to create the nutritional plan best suited to your situation and the achievement of your goals of optimal health, performance, and vitality.

Life Extension Health Advisors are just a phone call away toll-free at 1-800-226-2370.

This group of savvy individuals with diverse backgrounds and credentials — including naturopathic doctors, certified nutritionists, personal trainers, and other health professionals — is dedicated to assisting you in the creation of an optimal nutritional program while taking into consideration specific health concerns, risk factors, and goals.

As I stated earlier, the information in this report is not, nor does it replace, medical advice. In the same way it is prudent to discuss any new or strenuous exercise routines with your health care professional before starting, as well as before taking a dietary supplement — especially if you have a disease or medical condition, take any medications, are pregnant or nursing, or are planning to have an operation.

What makes one supplement provider superior to another?
For me, a superior manufacturer must meet or exceed without compromise the highest standards for:

- Manufacturing: cGMP Compliance
- Suppliers: only well-established vendors with impeccable credentials
- Raw Materials: transparency to testing of all materials to quality standards
- Research: a history of scientific research and truly "independent" studies
- Applied Science: does the science support the product or the marketing
- Formulation: are products formulated for optimal absorption and effects
- Quality Control: testing and tracking for quality, purity and potency
- Labeling: accurate, easy to read and understand
- Customer Resources: information, support and advocacy

Additionally, I look for a company with:

- A performance-based track record, not a multi-level marketing agenda.
- Multiple products. I support multiple vitamins but not as a single solution.
- Personal service. Questions deserve qualified people not auto-recordings.

What nutritional supplement provider do I use?
In the beginning, I was so overwhelmed with information about all the issues surrounding our food supply that I got frustrated feeling nothing was safe to eat. At the same time, doctors and pharmaceutical companies were screaming "Buyer beware!"

During the last 30 years, I've taken supplements I've purchased from numerous companies for various reasons.

While I was learning about supplements and new discoveries … I'd find new businesses wanting to capitalize on that opportunity by advertising to get my attention and money. Sometimes, I'd be pleased with the results; other times disappointed.

Through that hands-on experience, I learned the differentiators I shared with you in the paragraphs above.

> Here is an example on the importance of Formulation: There are hundreds of companies selling fish oil. While published medical literature indicates that the combination of fish and olive oils provides crucially added benefits, fish oil can easily break down in the body before it can accomplish its optimal effects.
>
> Scientific studies prove that sesame lignans naturally protect against oil rancidity and optimize the benefits of the fish and olive oil in the body.
>
> In addition, many commercial fish oil supplements may contain contaminants, such as mercury, PCBs, and dioxin. Those wishing to take

a fish oil daily for its health benefits should purchase a product that is highly refined and free of such contaminants.

This is just one example why many commercially sold supplements fail to deliver optimal results to consumers.

Once applying all the *criteria of superiority* I listed above, there was one company that stood head and shoulders above the rest ... **Life Extension**®.

Driven by Life Extension Foundation®, its non-profit advocacy for health and longevity, they donate and spend tens of millions of dollars each year to fund scientific research to fight the diseases that rob us of our youth, health and vitality.

Life Extension has a 30-year history of pioneering medical breakthroughs and innovative solutions that are oftentimes years ahead of acceptance by the medical establishment.

The volumes of consumer information and scientific research they make available and the personalized service are unequaled by any supplement provider I've investigated.

You can sign-up for their free newsletter and receive valuable information on health concerns, products, and events, as well as "Life Extension Update Exclusive," an in-depth article describing breaking news from just-released medical journals or conferences. It is one of the few e-mails I look forward to receiving. Grab your free subscription now.

Please note: It took me years of personal research and experience to navigate the volumes of information and options you and I have regarding the use and critical value of nutritional supplements in living longer and healthier lives.

Having access to the information shared in this Special Report would have helped me build a solid base and served as a go-to reference for stimulating ongoing learning and discussions.

The intent of this recommendation is to enrich your health. But I do encourage anyone searching for a reputable supplement provider to do their own research. I think you'll come to the conclusion I did.

If you have any questions regarding the content of this report, please call a **Life Extension Health Advisor** toll-free at **1-800-226-2370**, or at **954-766-8433**.

Nutrients, Actions, and Sources

Nutrients ... Most are present in foods or supplements; some are produced within the body.

This section allows you at a glance to associate key nutrients to their role in our bodies and the primary food sources in which they can be found.

Fat – Soluble Nutrients

Nutrient	Action	Food Source
Vitamin A	Antioxidant needed for eye and skin health, immunity, and fighting cancer	Eggs, dark green & yellow fruits and vegetables, dairy products, liver
Beta Carotene	Converts to Vitamin A supports the immune system and may fight cancer	Carrots, sweet potato, squash, leafy greens, and cabbage
Astaxanthin	A powerful antioxidant-fighting free radical	Salmon, shrimp, and krill
Lutein	Protects against eye disorders, e.g., macular degeneration	Eggs and at insignificant levels in pigment of yellow and orange fruits and vegetables
Lycopene	Reduces risk of cancer, diabetes, and heart disease	Highest levels in cooked tomato products, also in watermelon and papaya
Zeaxanthin	Antioxidant supporting eye health	Yellow corn, mangoes, and egg yolks
Vitamin D	Calcium & phosphorus metabolism (bone & teeth formation)	Egg yolk, fatty fish, milk; also made in skin when exposed to sunlight
Vitamin E	Free radical scavenger, possible role in immune function	Avocados, egg, unheated vegetable oil, wheat germ, nuts, dark green vegetables, whole grains.
Vitamin K	Blood clotting functions & bone metabolism	Green leafy vegetables, beef liver, and cauliflower

Water – Soluble Nutrients

Nutrient	Action	Food Source
Vitamin B1 - Thiamine	Maintains energy, supports nerve, muscle, and heart function	Sunflower seeds, tuna, pork, beans, leafy greens, whole & enriched grains
Vitamin B2 - Riboflavin	Essential to energy, supports immune system	Milk, cheese, leafy greens, and almonds
Vitamin B3 - Niacin	Aids circulation and nerves, helps lower cholesterol, aids appetite regulation	Brewer's yeast, broccoli, crimini mushrooms, tuna, salmon, asparagus, and chicken breast
Vitamin B5 - Pantothenic Acid	Converts carbohydrates into energy, aids stamina, and fights stress	Lean meats, calf's liver, whole grains, sunflower seeds, yogurt and broccoli
Vitamin B6	Promotes a healthy nervous system, supports the proper breakdown of carbohydrates, and helps prevent homocysteine build up in blood. Smoking and many prescription medications can lead to a B6 deficiency	Found in yellowfin tuna, turkey, salmon, bananas, bell peppers and spinach Unfortunately, large quantities of B6 are lost in both home cooking and commercial processing
Vitamin B9 - Folic Acid	Red blood cell formation, protein metabolism, cell division & growth	Green leafy vegetables, dried beans, poultry, fortified cereals, oranges, nuts
Vitamin B12	Carbohydrate, fat & protein metabolism, nervous system maintenance, blood cell formation	Beef tenderloin, calf's liver, lamb, snapper, salmon, sardines, and halibut
Biotin	Promotes healthy hair, skin, and nails. Makes efficient use of sugar. Impacts muscle tone and coordination	Brewer's yeast, meat, dairy, dark green vegetables, e.g., swiss chard
Choline	Helps transmission of nerve impulses, supports brain function, fights fatigue and insomnia	Lecithin, soybeans, egg yolk, potatoes, peanuts, oats, and flaxseeds
Inositol	Fights hardening of the arteries, promotes the body's production of lecithin	Brewer's yeast, fruits, vegetables, legumes, and meats
Vitamin C	Antioxidant for immune and eye health, improving iron absorption	Papaya, bell peppers, broccoli, citrus fruits, and berries

Minerals

Nutrient	Action	Food Source
Calcium	Essential for strong bones and teeth	Dairy, leafy greens, and sardines
Chromium	Aids glucose metabolism, enhances energy	Brewer's yeast, brown rice, meats, and whole grains
Copper	Builds blood cells, bones and collagen. Lowers risks of heart disease, heart arrhythmia, high blood pressure, high cholesterol, and stroke	Green vegetables, prunes, legumes, sweet potatoes, beef liver, fish, mackerel, walnuts, peanuts, Brazil nuts and cashews, pumpkin and sunflower seeds
Iron	Produces blood cells, growth, immune system and health	Eggs, liver, fish, leafy greens, and kidney beans
Magnesium	Necessary for a healthy skeletal system, reduces blood pressure, metabolism of carbs, and may be involved in the way insulin is released	Spinach, kale, broccoli and avocado, whole grains, black beans, brown rice, lentils, nuts, bananas, soybeans, dried figs, and sardines
Manganese	Antioxidant linked to healthy mitochondrial functions, needed for fat and carbohydrate metabolism	Leafy greens, nuts, beans, sweet potatoes, avocados, eggs, and pineapple
Molybdenum	Breaks apart the sulfite toxins, activates enzyme production	Beans, dark green leafy vegetables, legumes, peas, cereals, rice, whole grains, liver, low-fat milk
Phosphorus	Collagen for joints, tendons, ligaments, cartilage, eyes and skin. Supports vitamins A, D, E and K	Milk, hard cheese, yogurt, eggs, canned fish, chicken, red meat, walnuts, almonds, and wheat germ
Potassium	Protects against high blood pressure, supports healthy bones and joints	Bananas, oranges, prunes, grapefruit, kiwi, dates, apricots, potatoes, tomatoes, avocados, meat, and fish
Selenium	Anticancer antioxidant, works best with E, supports healthy pancreas and thyroid	Meats, poultry, leafy greens, onions, Brazil nuts, walnuts, cheese, garlic, and eggs

	Nutrient	Action	Food Source
Minerals	Silicon	Supports formation of bone and connective tissue	Alfalfa, bell peppers, brown rice, root vegetables, and soy
	Vanadium	Supports healthy bones and teeth, improves insulin use	Dill, fish, olives, and whole grains.
	Zinc	Important to immune and reproductive health	Oysters, whole grains, eggs, beans, and nuts
Vitamin Enhancers	Bioflavonoids	Aids absorption of vitamin C, protects capillaries and circulation	Black currants, cranberries, and peppers
	L-Carnitine	Supports energy production, may reduce fat mass and increase muscle mass	Meats, poultry, cod, and dairy products
	Coenzyme Q10	Antioxidant essential for energy, linked to healthy heart and mitochondrial functions	Beef, peanuts, sardines spinach, soybean and olive oils
	Other Enzymes	Catalysts for important chemical reactions in the body	Typically, raw fruits and vegetables

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