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GROCERY WARNING

How to recognize and avoid the groceries that cause cancer, diabetes, heart disease, high cholesterol, high blood pressure, and other common diseases

BY MIKE ADAMS

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The Health Ranger

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GROCERY WARNING - PART 2

INTRODUCTION

Get ready to transform your diet into something that's healthier and more powerful

This guide is for people who want to avoid chronic disease: cancer, leukemia, diabetes, osteoporosis, Alzheimer's disease, depression, heart disease, arthritis, CFS, and many more. In this book, you'll learn how these diseases are actually promoted by toxic ingredients in everyday foods and groceries. You'll also learn how to identify those ingredients and avoid them for life.

Once you start putting this information into practice, you'll start noticing positive results in as little as five days. Your health progress will accelerate in the subsequent weeks and months, and you will continue to notice significant progress in your health year after year.

In the sections that follow, I'll present:

- **All of the major "metabolic disruptors**" -- ingredients that cause serious disease in the human body. I'll name each one, offer evidence to prove their dangers, and show you what to look for on food labels.

- **Easy shopping lists**: I'll present two shopping lists: foods to avoid and foods to buy. For each food, I'll discuss why it should be avoided or purchased, and I'll provide my best recommendations for keeping it all as simple as possible.

- **Questions & Answers**: Here, I'll answer the most common questions about the dangers of certain foods and ingredients. There's a wealth of wisdom here.

It's a lot to cover, so let's get started.

GROCERY WARNING - PART 1

Refined carbohydrates, white flour, and added sugars

Let's get started with the most common group of unhealthy ingredients in everyday groceries: refined carbohydrates. These include:

white sugar	sucrose
white flour	instant rolled oats
high-fructose corn syrup	instant rice
corn syrup	any "instant" grains

... and so on.

Pioneering authors and researchers

Pioneering doctors, authors, and researchers have been writing about the health dangers of refined carbohydrates for years. Dr. Atkins is probably the best known doctor when it comes to pointing out the health dangers of consuming carbohydrates, but he was by no means the first. One of the earliest books that dared to explore the link between the consumption of refined foods and subsequent disease is called **Nutrition and Physical Degeneration**, published decades ago and authored by a dentist (Weston Price) who traveled around the world and examined indigenous populations both before and after they were exposed to the diet of refined foods now considered standard in the developed world.

He discovered that these populations, when they followed their native diets that were high in fiber, high in the consumption of fruits and vegetables, and based on foods from nature in their natural state, demonstrated virtually no modern diseases like obesity, heart disease, diabetes, and cancer. They had healthy teeth with virtually no cavities, and they suffered almost no mental disorders such as depression and aggression. But once these populations were exposed to the Western diet through the importation of refined foods, soft drinks, and the proliferation of fast food restaurant chains, things changed significantly. In just one generation, rates of obesity, heart disease, diabetes and cancer skyrocketed. Mental states were radically altered, and people began to experience depression, violence, aggression and mood swings. The social calm that had been the norm in these cultures for literally thousands of years was suddenly and violently disrupted by nothing more than changes in diet.

Avoiding refined carbohydrates is essential for optimum health

In fact, diet was the only thing that changed. Their genes did not change, their local environment was not modified, and they were not suddenly exposed to environmental toxins. The only thing that changed was the diet: now they were eating refined foods high in carbohydrates rather than their native foods, and virtually every popular modern disease quickly followed.

On this subject, a book worth reading is called **Life Without Bread** by Dr. Wolfgang Lutz. It's a book that presents a vast assortment of scientific evidence and analysis discussing the reasons why a

carbohydrate-controlled diet is essential for a healthy heart, healthy gastrointestinal system, and a healthy balance of hormones. The focus of this book is not weight loss, but rather overall health of the body's systems.

Both of these books (*Nutrition* and *Physical Degeneration and Life Without Bread*) offer important information to the public about the negative health consequences of eating refined carbohydrates. Taken together, they show that refined carbohydrates promote the most serious diseases we are experiencing in society today.

Dr. Elson Haas, M.D., author of **Staying Healthy with Nutrition** explains,

> *There has been a shift in this century away from the healthful consumption of fresh fruits and vegetables and complex carbohydrates -- the starches and fiber foods -- toward a diet of more refined carbohydrates and simple sugars that are implicated in a variety of diseases, among them obesity, diabetes, cardiovascular problems, and tooth decay. It is possible that this type of diet (high in simple and refined sugars, high in fats, and low in complex carbohydrates) may be influencing the incidence of diabetes, high blood pressure, heart disease, anemia, skin problems, kidney disease, and cancer.*

That's quite a list, but as you will see in the evidence that follows, it is well justified. The consumption of refined carbohydrates absolutely and inarguably promotes diabetes, cancer, heart disease, mental disorders and other problems. The evidence is quite simply overwhelming.

Refined carbohydrates contribute to an alarming number of diseases

The more you read about the negative health consequences of consuming carbohydrates, the higher the mountain of evidence gets. In **Healing with Whole Foods**, author Paul Pitchford offers an expanded list of diseases caused by eating refined carbs:

> *"Refined sugar delivers high energy and enables one to keep working, but unfortunately, it is addicting and contributes greatly to disease and unhappiness. While in very small amounts it can be used as medicine, in large amounts sugar leads instead to obesity, hypoglycemia, diabetes, high blood pressure, heart disease, anemia, immune deficiency, tooth decay, and bone loss; it contributes to herpes, yeast infections, cancer, pre-menstrual syndrome, menstrual problems, and male impotence; it weakens the mind, causing: loss of memory and concentration, nervousness, shyness, violence, excessive or no talking, negative thought, paranoia, and emotional upsets such as self-pity, arguments, irritability, and the desire for only sweet things in life."*

I'm not going to cover all of these diseases in this section, but let's explore the major ones and take a closer look at the relationship between dietary carbohydrates and the onset of these diseases.

Carbohydrate consumption and diabetes

The most obvious place to start is with diabetes. The consumption of refined carbohydrates like sugar and corn syrup is quite obviously linked to the onset of type-II diabetes. *"...if consumed in excess, carbohydrates overwork the pancreas and are an invitation to obesity, diabetes, hypertension, hyperlipidemia, and some types of arrhythmias,"* says the Life Extension Foundation in the book **Disease Prevention and Treatment**.

Why this happens is actually rather easy to understand: high carbohydrate foods are like rocket fuel in the human digestive system: they burn too hot, and too fast, resulting in an excessive increase of insulin and undue stress on the pancreas. Over time, this results in stress-related depletion of the pancreas, and, more frequently, insulin resistance at the cellular level, where cells in the body are no longer able to open the doors and accept glucose from the bloodstream. The result is high blood sugar circulating in the blood, which causes all sorts of serious problems over time, most notably nerve damage.

Earl Mindell's Vitamin Bible explains it in much the same way:

> *"The more high-glycemic foods you eat, the harder your pancreas has to work. And if it has to work too hard too often, it can wear down and diabetes can result. Additionally, high-glycemic refined carbohydrates cause a surge in blood sugar and, consequently, insulin; insulin then turns all the extra glucose into fat. This is why so many low-fat and no-fat foods are still making so many Americans fat."*

The consumption of refined carbohydrates is the most frequent cause of type-II diabetes. It is not a genetic disorder, but one brought on by lifestyle: namely, the consumption of carbohydrates combined with lack of physical exercise. Diabetics benefit greatly from a low carbohydrate diet, and many have reversed their diseases and eliminated their need for insulin altogether. This degree of transformation takes time and dedication, of course, because diabetics certainly didn't create their condition overnight, and reversing it overnight isn't possible either.

"It is widely accepted that refined carbohydrates are among the most important contributing factors to diabetes and reactive hypoglycemia (as well as obesity)," writes Michael T. Murray in **The Encyclopedia of Natural Medicine**. He goes on to state that, *"A diet high in refined, fiber-depleted carbohydrates is believed to induce diabetes, [and] the frequency of diabetes is highly correlated with the fiber-depleted, high-refined-carbohydrate diet of 'civilization.'"*

In **Life Without Bread**, Dr. Wolfgang Lutz states,

> *"Type 2 diabetes is a disease of carbohydrate overload. By eating carbohydrates in quantities that humans, as hunters and gatherers, did not evolve to eat, people simply have overwhelmed their bodies' natural ability to process these sugars. The bad news is that diabetes is clearly a disease of poor sugar metabolism, and sugar (i.e. carbohydrate) is the dietary source of this imbalance. The good news is that diabetes can be reversed by the reduction of carbohydrates in the diet."*

People who follow a carbohydrate-controlled diet can actually reverse their diabetes. As Paul Pitchford states in the book **Healing with Whole Foods**:

> *Eating refined white sugar and other simple sugars contributes to diabetes because in excess, these sugars convert to fat in the body. When a low-fat diet based on complex carbohydrates such as unrefined grains, vegetables, and legumes is followed for several weeks, approximately 80 percent of diabetics can stop taking insulin and diabetic pills altogether, and the remaining 20 percent can reduce their intake.*

The ugly politics of sugar, medicine, junk food and diabetes

In **The Protein Power Lifeplan**, authors Michael Eades, M.D., and Mary Dan Eades, M.D., describe the amazing story of how Western medicine has, for many years, actually been treating diabetes by recommending high-carb diets! Even the American Diabetes Association used to recommend a 60 percent carbohydrate diet! (Which I'm sure was very effective at keep people on the membership roster, since they could hardly be free of diabetes with that kind of diet.)

As Eades relates:

> *"Excess insulin -- largely the consequence of eating a diet that contains much more sugar and starch than a stone-aged metabolism, unfit to the task, can contend with -- sets the stage for down-regulation of the insulin receptors and the development of insulin resistance and finally, if left unchecked, potentially diabetes. Given our modern predilection for subsisting largely on carbo junk -- cookies, candies, cakes, ice cream, pies, muffins, doughnuts, bagels, breads, pasta, rolls, sugar-sweetened cereals, french fries -- and the insulin rise such foods occasion, it should come as no surprise that the incidence of diabetes has risen tenfold in the last thirty years. Amazingly, the standard treatment for diabetes in the last several decades has been the high-carbohydrate, low-fat diet. Fat was seen as the enemy of diabetics, and a high-carbohydrate diet (which as you now know really means a diet high in sugar) as the remedy."*

> *"If diabetes is a disease of too much sugar in the blood, how can you treat it by putting more in? Clearly, you can't. And thankfully, for the sake of diabetic sufferers everywhere, the tide has begun to take a sensible turn toward a diet of higher protein, higher fat, and less carbohydrate. It's simply a matter of applied biochemistry -- if excess insulin is causing the problem, reduce the insulin levels, and lo and behold, people get better.*

This hints at the politics and truly bad science that has been strongly influencing the American Diabetes Association (ADA) for decades. Personally, I'm always skeptical of any association that has a disease as part of its name. It almost seems like the organization "stands" for the disease, as if it wants to promote the disease in order to make itself more important. If a miracle cure for diabetes were discovered and made available tomorrow, all the people working at the ADA would be out of work. They would receive no more research money, no more media attention, and they would lose not only their salaries, but their positions of power and influence as well.

The American Diabetic Association offers questionable nutritional advice

At some level, every organization that exists for a specific disease depends on that disease for its own survival. And the more people are afflicted with that disease, the more power and influence the organization accumulates. This may be one reason why, if you examine the historical record, it almost appears as if the ADA wanted to keep diabetics ill. As explained by William Duffy in the book **Sugar Blues**:

> *Early in 1971, a team of scientists headed by Dr. Edwin L. Bireman reported in the New England Journal of Medicine that high carbohydrate diets actually lower blood glucose levels in mild diabetics and normal humans. The American Diabetes Association then urged the U.S. medical profession to make a complete turnabout and recommend that sufferers from diabetes be put on diets with carbohydrate levels equal to or surpassing those in the diet of healthy people.*

Today, much of that thinking is once again swinging in the opposite direction -- toward a controlled carbohydrate diet. But there are still an untold number of doctors out there recommending high-carbohydrate diets to people suffering from diabetes, and the ADA sure doesn't seem very motivated to tell people to stop eating refined sugars. In fact, the new national dietary guidelines issued by the U.S. government in early 2005 neglected to even mention that people should consume less added sugar. The sugar industry, it seems, managed to get any such recommendations removed from the guidelines.

Without question, there's a tremendous amount of political pressure at work here. The ADA, like any other national group, is heavily influenced by food companies. As a quick example of what I'm talking about, in Tucson, Arizona, an annual "Run for the Cure for Diabetes" event was sponsored by both the ADA and, believe it or not, Coca-Cola! The funny part is that if more people would just run -- and stop drinking carbonated soft drinks -- they'd be healthier in the first place and probably wouldn't have diabetes.

The result of all this is that neither the ADA, nor doctors, nor any government department is telling people that they should avoid refined sugars and carbohydrates. As Duffy says in **Sugar Blues**, *"Appeals for self-regulation to control sugar diseases are drowned out by the clamor for more millions of federal funds to find a potion, a pill, a shot, perhaps a magical Medicare atomic pancreas pacemaker -- which can one day magically conquer disease."*

To hear it from a different perspective, author Earl Mindell of **Prescription Alternatives** says it mildly with, *"The high-carbohydrate diet traditionally recommended by the American Diabetes Association is proving not to be the answer for many diabetics. If you are a Type 2 diabetic who is overweight and insulin resistant, it may be important for you to cut way back on carbohydrates."*

What's really interesting is the skyrocketing rates of diabetes that occur following the introduction of refined carbohydrates to isolated populations who previously subsisted on traditional foods found in their immediate environment. In every documented case, diseases like diabetes soon follow the introduction of carbohydrates to the local populations:

> *"In the Pacific Islands, diabetes is unheard of among those people who eat traditional diets. But when they abandon their native foods and adopt Western ways, diseases of all types surface. One of these new diseases is diabetes. An interesting example of this has occurred on the island of Nauru in the South Pacific. For centuries the people, subsisting on a diet composed primarily of bananas, yams, and coconuts, lived totally free from diabetes. Phosphate deposits discovered on the island brought an influx of wealth and a change in lifestyle. The islanders replaced the coconut and yams they had eaten for centuries with foods made from refined flour, sugar, and processed vegetable oils. The result was the emergence of a never before seen disease -- diabetes. According to the World Health Organization up to one-half of the urbanized Nauru population age 30-64 are now diabetic."*
>
> - Bruce Fife, N.D., **The Healing Miracles of Coconut Oil**

Syndrome X

There's another term for the diabetes-like "disease" that results from eating too many refined carbohydrates: **Syndrome X**. Syndrome X is characterized by elevated levels of insulin in the blood. Here's the link between dietary carbohydrates and Syndrome X, as explained in **The Encyclopedia of Natural Medicine**:

> *Syndrome X is a term used to describe a set of cardiovascular risk factors, including glucose or insulin disturbances, high blood cholesterol and triglyceride levels, elevated blood pressure, and android obesity. The underlying metabolic denominator in Syndrome X is elevated insulin levels. There is little doubt about what contributes to these elevations: an elevated intake of refined carbohydrates. An increased intake of simple sugars leads first to hypoglycemia and later to diabetes. The results from a recent twenty-five-year study add support to the contention that prolonged consumption of refined sugars, and the resulting elevations in insulin, eventually leads to Type II diabetes. ...Both obesity and diabetes are strongly linked to the Western diet, presumably due to the negative effects that saturated fats and refined carbohydrates have on internal mechanisms that control blood sugar levels.*

Carbohydrates and obesity

> *"Some scientific studies suggest that part of today's obesity epidemic is being fueled by over-consumption of high-glycemic carbohydrates that induce chronic insulin overload."*
>
> - ***Disease Prevention and Treatment*** *by the Life Extension Foundation*

Obesity is another disease that's caused by the excessive consumption of carbohydrates. Obesity and diabetes go hand in hand, and the mechanism of how carbohydrates promote obesity is very similar to the diabetes mechanism discussed above. The secretion of insulin by the pancreas causes

not only the storage of fat in fat cells, but it also increases appetite so that the person both gains weight and feels unnaturally hungry at the same time.

Thus, refined carbohydrates are a double whammy for people trying to lose weight and avoid obesity and diabetes. A person who eliminates their consumption of refined carbohydrates reverses these biochemical effects, usually within a matter of weeks. Without excess insulin in the bloodstream, their bodies no longer store fat and actually begin to release it by converting it back into blood sugar. These steady levels of blood sugar are now more evenly regulated, and the person feels less hungry than when they were overeating carbohydrates in the first place.

"Not only is most of our obesity related to carbohydrate excess," says Dr. Russell Blaylock in **Excitotoxins: The Taste That Kills**, *"...but many of the diseases that plague our society, such as cancer, arthritis, and cardiovascular diseases, are also related to this unhealthy practice."*

The low-fat diet debacle

For decades, many people thought you could reverse obesity by following a low-fat diet. The thinking was that dietary fat made you fat and, therefore, carbohydrates were the preferred source of calories. I know of several people who blindly follow this advice even today, guided firmly by their doctors who remain clueless about the relationship between carbohydrates and obesity. Artemis P. Simopoulos, M.D., explains this in **The Omega Diet**:

> *New research shows that eating a very low-fat diet -- the express goal of millions of dieters -- has the opposite effect: It turns your body into a fat-making machine! Just as a cow can transform low-fat grass into a generous layering of body fat and creamy milk, your body can convert fat-free food into a bulging belly and thicker thighs -- and it will do so whenever your diet is very low in fat and high in carbohydrates. To add insult to injury, the type of fat that your body manufactures is saturated fat, specifically a type of fatty acid called palmitic acid that is linked with an increased risk of heart disease.*

The book goes on to quote a study conducted at Rockefeller University in which researchers monitored the internal fat production of participants who were either fed a low-fat or a high-fat diet. Those participants fed a low-fat diet (10 percent of calories) were manufacturing saturated fats in their own bodies! Those eating a moderate fat diet (40 percent of calories) manufactured little or no fat. This shows that avoiding fat does not halt the creation of fat in your body.

Carbohydrates and heart disease

> *"There is substantial evidence that refined sugar intake is a significant factor in the development of atherosclerosis. Although a high sugar intake leads to elevations in triglyceride and cholesterol levels, the real culprit may be the elevations of insulin. When high-sugar foods are eaten alone, blood sugar levels rise quickly, producing a strain on blood sugar control and elevations in insulin. Elevated insulin levels are associated with elevations in cholesterol, triglycerides, blood pressure, and risk of death from cardiovascular disease."*
>
> **- Michael T. Murray, N.D., The Textbook of Natural Medicine**

Heart disease is a broad medical term covering a variety of physical and biochemical disorders affecting the heart and circulatory system. For the last several decades, heart disease has been routinely associated with the consumption of fat, but today, new evidence is turning that theory on its head. It turns out that heart disease is actually helped by the consumption of healthy oils like flax oil, and that the consumption of refined carbohydrates is the root cause of much of the heart disease now ravaging the world.

The consumption of refined carbohydrates increases the level of triglycerides in the blood, increases the levels of bad cholesterol (LDL), and can even result in a loss of heart function that is frequently diagnosed as a physical deformity. But on a low-carbohydrate diet, supplemented with healthy oils and adequate protein, all of these symptoms reverse: triglyceride levels fall, bad cholesterol drops while good cholesterol rises, and heart murmurs and other symptomatic disorders often vanish. It seems that the best dietary strategy for a healthy heart is one that avoids refined carbohydrates and includes healthy oils. Unhealthy oils like hydrogenated oils, on the other hand, can actually harm the heart, and I will be discussing these in more detail later in this guide.

One study mentioned in the book **Healing with Vitamins** describes this interaction:

> *"Researchers at the University of Texas Southwestern Medical Center at Dallas found that a diet with 45 percent of calories from fat produced lower blood levels of triglycerides (a heart disease-promoting fat), glucose and insulin than a typical high-carbohydrate diet. People with diabetes who benefited most from this dietary switch: those with high triglycerides and low levels of 'good' cholesterol."*

Clearly, the consumption of refined carbohydrates is a major causative factor of heart disease, which is one of the leading killers in the United States and other modern societies. But the dangers of refined carbohydrates don't stop there...

Carbohydrates and mental disorders

> *"Numerous studies of depressed individuals have shown a high occurrence of hypoglycemia. Because depression is one of the most frequent causes of anxiety, this provides a link between hypoglycemia and feelings of stress. Simply eliminating refined carbohydrates from the diet is sometimes all that is needed for effective therapy in patients who have depression or anxiety due to hypoglycemia."*
>
> **- Michael T. Murray, N.D., The Encyclopedia of Natural Medicine**

Depression is another disease commonly caused by the consumption of refined carbohydrates. Many people overlook the link between diet and mental state, but the research is quite clear: people who eat excessive amounts of refined carbohydrates experience extreme mood swings, depression, and unpredictable, erratic behavior (violence, ADHD, etc.). In adults, this can appear as moodiness, feeling down, or uncontrollable outbursts of anger. In children, the consumption of excessive carbohydrates appears as a disease known as attention deficit hyperactivity disorder (ADD or ADHD), which is now routinely treated by prescribing narcotics to children in the form of Ritalin. But as studies are showing, children who are taught to avoid refined carbohydrates literally transform their mental states and behavior in a matter of days. They become more focused, more calm, and gain the ability to focus on the task at hand. Their handwriting even improves markedly.

The most likely explanation for why refined carbohydrates cause depression is because the consumption of refined carbohydrates depletes the body of essential vitamins and minerals, and those vitamins and minerals are absolutely necessary for a healthy mental state. Not only are refined carbohydrate foods missing the key nutrients that are naturally present in unrefined grains, they also tend to strip these nutrients out of the body during the digestive process, leaving the person in a deeply deficient state.

The most common nutrients that are deficient in the diets of people who eat refined carbohydrates are the B vitamins, zinc and magnesium. Virtually all Americans are deficient in zinc and at least one of the B vitamins; sometimes these deficiencies appear as mental disorders like depression or schizophrenia. By following a refined foods diet, people remain in a state of vitamin deficiency, and rather than taming that deficiency through healthy nutrition, they frequently turn to prescription drugs in order to mask the symptoms of their disorders. Yet the root cause of these conditions can be traced to the consumption of refined carbohydrates.

The consumption of carbohydrates is especially dangerous to the mental balance of children and adolescents:

> *According to multiple university investigations, the serious increase in behavioral problems in children and adolescents is directly connected to diet and poor nutrition. The present day diet of adolescents consists mainly of junk food. Pathological aggressiveness in children and teenagers is related to the consumption of the refined sugars found in sweets and sodas. Jails are a showcase for this behavioral problem. In one of them a dietary experiment was carried out where sweets, cookies, and sodas were exchanged for fruit, fresh vegetables, and water. Aggressiveness and other behavior problems among the prisoners diminished remarkably in just a couple of weeks! This simple, inexpensive experiment clearly demonstrates the relationship between behavioral problems and diet.*
>
> **- Francisco Contreras, M.D., Health in the 21st Century**

One study that followed nearly 4,000 incarcerated juveniles also showed a strong reduction in violent behavior when refined carbohydrates were removed from their diet:

> *In the largest study, 3,999 incarcerated juveniles were studied over a period of two years. This study limited the dietary revisions to replacing sugary soft drinks with fruit juices, and high-sugar snacks with non-refined carbohydrates snacks (for example, replacing a candy bar with popcorn). When the 1,121 young men on the sugar-restricted diet were compared to the 884 on the control diet, there were significant differences. In the sugar-restricted group, suicide attempts were reduced one hundred percent; the need for restraints to prevent self-injury was reduced seventy-five percent; disruptive behavior was reduced forty-two percent; and assaults and fights were reduced twenty-five percent.*
>
> **- Michael T. Murray N.D., The Encyclopedia of Natural Medicine**

And yet most parents keep feeding their children hundreds of pounds of sugar each year in the form of breakfast cereals, toaster tarts, candies, soft drinks, cookies, and many more. But the parents don't have to let their children engage in this sort of eating behavior:

> *All too often we hear that "carbohydrates are the only thing this child will eat." But no child is born with the desire to consume bread, sugared cereals, pastries, candy, fruit, and soft drinks. These treats are given to them, usually by doting parents, but these initial offerings begin a lifelong addiction that can cause many health problems. Sooner than you would think, children begin to crave only non-nutritious foods.*
>
> **- Wolfgang Lutz, M.D., Life Without Bread**

Carbohydrates and cancer

> *"Tumor cells consume three to five times more glucose than normal cells. Avoiding all refined sugars and starches is an important dietary factor for inhibiting tumor cell proliferation. Cancer loves and feeds on sugar."*
>
> **- Donald R. Yance, Herbal Medicine, Healing & Cance**

There is increasing evidence that the consumption of refined carbohydrates is also linked to various cancers. The mechanisms are not so easy to understand or explain, however, because cancer is a systemic disorder involving the immune system, endocrine system, digestive system and circulatory system, among others. Refined carbohydrates promote cancer in the body through nutritional deficiencies, increases in bodily stress, and by causing unhealthy imbalances in hormone levels.

A study published in early 2004 in the **Journal of the National Cancer Institute** demonstrated this quite clearly. This eight-year study tracked 38,000 women and looked for patterns involving refined carbohydrates and colon cancer. What they found is that women who ate higher quantities of refined carbohydrates (white flour, refined sugar, soft drinks, and so on) had twice the rate of colon cancer compared to the rest of the women.

In a follow-up statement to the study, Ritva Butrum, Ph.D., Senior Science Advisor at the American Institute for Cancer Research, said:

> *...diets with high glycemic loads -- that is, diets rich in processed foods like white bread, white rice and other foods made from refined grains (cakes, cookies, chips, etc.) as well as other high-glycemic foods like potatoes and corn -- were associated with increased risk of colorectal cancer.*

Many researchers and authors wouldn't be at all surprised with that outcome. In the book **Life without Bread**, author Christian Allan states:

> *...eating a low-carbohydrate diet reduces the risk of cancer because the most important food for cancer cells is glucose. The Eskimos who ate only fat and protein never had any cancer in their population until a high-carbohydrate diet was introduced. Why don't we ever hear of cancer of the heart? Probably because the heart uses almost all fat for energy, thus cancer does not have a chance to develop in those cells.*

Theories on why refined carbohydrates lead to cancer

There are other theories that help explain refined carbohydrate consumption leads to cancers of the digestive system. One theory discusses the ability of refined carbohydrates to upset the natural balance of intestinal flora, thereby causing unhealthy digestive stagnation:

> *People who eat a diet high in refined sugar (sucrose) put themselves at a higher risk for developing cancers of the colon and rectum. A high sugar intake alters the environment for the "friendly" bacteria that live in the colon and slows down the passage of bowel contents through the colon. A diet high in sugar also weakens the immune system, which you depend on to be ever-vigilant to destroy any of your body's cells gone haywire. Recommendation: If you have a family tendency for polyps or colon cancer, you should sharply reduce or totally eliminate from your diet all refined sugars (table sugar, corn syrup, and high-fructose corn syrup) and all products made with these sugars.*
>
> **- Mary Dan Eades, M.D., The Doctor's Complete Guide to Vitamins and Minerals**

Since your body's immune system is responsible for fighting cancer and destroying cancerous cells in the first place, it also makes sense that any substance that impairs the ability of the immune system to do its job will also contribute to cancer:

> *A diet high in refined sugar debilitates your immune defense system by impairing your body's ability to produce antibodies to fight infection and by reducing the killing power of certain types of immune defenders. In medical studies, researchers could detect measurable drops in antibody production after people consumed as little as 18 grams of sugar -- that's about the sugar or corn syrup content found in half of a regular canned soft drink! Recommendation: Sharply reduce your intake of sugar, corn syrup, high-fructose corn syrup, molasses, and all products made with these substances.*
>
> **- Mary Dan Eades, M.D., The Doctor's Complete Guide to Vitamins and Minerals**

Carbohydrates and hormonal disorders

Lastly, refined carbohydrate consumption is strongly correlated with hormonal disorders that affect both men and women. One of the more disturbing effects of consuming too many refined carbohydrates is the falling production of growth hormone (GH) in the body. As explained by Dr. Wolfgang Lutz in **Life without Bread**:

> *Now that we have shown that hormonal imbalance from excess carbohydrate consumption is the primary event that leads to many diseases, let's take a look at just what happens to people who have some hormonal imbalance. Many of us have experienced this imbalance -- it is often associated with irritability and crankiness. Women experience these changes near their menstrual cycle.*

> *We have touched upon the idea that increases in insulin can result in decreases in the production of growth hormone. Too much insulin results in depressed levels of anabolic hormones, such as growth hormone. ...Anyone who adopts a low-carbohydrate nutritional program for any appreciable length of time will notice many changes in her body that can be attributed partially to increases in growth hormone. Over time, fat is reduced and muscle begins to increase, even in the absence of exercise. With exercise, the increase in muscle is very rapid. Fingernails grow faster and hair growth responds as well. While one may not regain hair that is lost, usually the receding hairline stops. The rate of tissue repair and overall quality of the skin also improves.*

Women who suffer greatly on high-carbohydrate diets often report remarkable improvements in both comfort and mood when they choose to avoid these processed carbs. The explanation for this probably rests in the nutritional deficiencies caused by eating refined carbohydrates. As mentioned above, refined carbohydrates deplete the body of the B vitamins, and B vitamins are extremely important for healthy hormonal balance in women, especially during menstruation.

Supporting information from **The Encyclopedia of Nutritional Supplements by Michael T. Murray, N.D.** explains:

> *Diet appears to play a major role in the development of PMS. Compared to symptom-free women, PMS patients consume 62 percent more refined carbohydrates, 275 percent more refined sugar, 79 percent more dairy products, 78 percent more sodium, 53 percent less iron, 77 percent less manganese, and 52 percent less zinc. The first step in addressing PMS is limiting the consumption of refined sugar and decreasing or eliminating milk and dairy products.*

Refined carbohydrates: Promoters of Disease

In all, the consumption of refined carbohydrates is linked to a great number of disorders and diseases which account for the vast majority of health care costs in the United States and other developed countries.

If you look at the diseases and conditions associated with the consumption of refined carbohydrates offered by the authors of just the books mentioned here, you get a rather frightening list (in alphabetical order):

- anxiety
- arthritis
- bone loss
- cancer
- cardiovascular disease
- colon cancer
- depression
- diabetes
- emotional imbalances
- heart disease
- high blood pressure
- hormonal imbalances
- hypertension
- immune deficiency
- irrtability
- kidney disease
- loss of memory
- male impotence
- menstrual problems
- obesity
- paranoia
- syndrome X
- tooth decay
- violence

That's what refined, processed carbs deliver: everything from anxiety to violence. Maybe it's time to stop buying that white bread, huh?

What I've presented here is just a summary of the links between the consumption of refined carbohydrates and modern disease. It offers you just a hint of the considerable scientific evidence now supporting this link. But how can refined carbohydrates be so bad for you in the first place? What, exactly, are food manufacturers doing to the substances that makes them so unhealthy?

To understand the answer to that question, allow me to take you on a quick tour through a food factory.

The refined foods factory

> *"Problems with carbohydrates begin when they are refined, which strips them of associated nutrients and increases their rate of absorption. Virtually all of the vitamin and trace-mineral content has been removed from white sugar, white breads and pastries, and many breakfast cereals. Currently, more than half of the carbohydrates consumed in the United States are in the form of sugars added to processed foods as sweetening agents."*
>
> **- Michael T. Murray N.D., The Encyclopedia of Natural Medicine**

I'm going to take you on a virtual tour through an imaginary food factory. This imaginary factory operates very much like real food factories, but this is obviously a simplified explanation of what goes on in the real world.

The purpose of this food factory is to take raw food materials such as corn, wheat, and soybeans, and to produce bulk ingredients for use by brand-name food manufacturers who make the popular cookies, crackers, cereals and other snacks that people purchase in the grocery store. The profit margins at this food factory are very slim.

At one end of this factory, you'll find an unloading dock where trucks carrying grains dump their loads onto a conveyor belt. At the other end of this factory, there is a shipping dock that ships out the bagged, bulk ingredients, like 50 lb. bags of white flour, to be delivered to companies that manufacture brand-name products based on carbohydrates.

What we're concerned with, of course, is what happens to these grains between the unloading dock and the shipping dock. To understand this, let's examine the natural state of the grains when they arrive at the unloading dock.

Nature's grains start out quite healthy

Nature does a great job providing us with the nutrients we need to be healthy human beings. When these plants come out of the ground, they contain health-sustaining levels of vitamins, minerals, healthy oils and fiber. The vitamins include the B vitamins, and the minerals include magnesium, zinc and many others. The oils are made up of a combination of monounsaturated and polyunsaturated oils, and the fiber is insoluble fiber that aids in the health of the digestive system.

When we are talking about grains like wheat, these nutrients are largely contained in the bran and germ of the grains. The bran is the outer covering of the grain, and the germ is **the vitamin-rich "seed" of the grain** that contains the future wheat plant that would grow if you planted the grain. The remainder of the grain is called the endosperm, and it contains little more than carbohydrate energy to fuel the growth of the seed. This endosperm contains no fiber, and almost none of the nutrition of the whole grain.

As described in the book **Power Foods** by Stephanie Beling, M.D., *"The milling process that creates refined white flour also reduces nutritional content. The process, comprising upwards of twenty separate steps, removes the hull and parts of the bran from the kernels, then grinds the grain into powder-like flour. In making white flour, both the germ and the bran are stripped away from the wheat kernel, leaving only the endosperm."*

In **Nutrition and Physical Degeneration**, author Weston Price adds:

> *"In the production of refined white flour approximately eighty per cent or four-fifths of the phosphorus and calcium content are usually removed, together with the vitamins and minerals provided in the embryo or germ."*

With this in mind, don't be shocked to learn that the very first thing our food factory does with a truckload of wheat is to physically **remove the bran and the germ**. These parts of the grain are sent into a waste pile, and are not intended for human consumption. Humans are taught to consume the carbohydrate-rich endosperm, which is separated from the whole grain and then ground into a fine powder. This fine powder lacks virtually all of the nutrients contained in the original grain. It is missing as much as 98 percent of the original mineral content and it contains none of the healthy oils found in the whole grain. In fact, this white powder is so lacking in vitamins that federal law requires the food factory to add in tiny amounts of certain, isolated vitamins such as B3 to make sure this food doesn't cause obvious nutritional deficiency diseases like beriberi.

How refined, milled grains cause nutritional deficiencies

This phenomenon is explained well by Dr. Elson Haas in **Staying Healthy with Nutrition**:

> *With the milling of grains and use of refined flours and white or "polished" rice, many of us are no longer getting the nourishment of thiamine that is available when we eat wholesome, unprocessed foods. As examples of how easily vitamin B6 is lost in the processing of food, raw sugar cane has a good amount, while refined sugar has none; whole wheat flour contains nearly 0.5 mg. of pyridoxine (wheat germ and wheat flakes have much more), while refined wheat flour has almost none, and even whole wheat bread has lost nearly all of its vitamin B6. Much of the chromium in whole grains and sugarcane is lost in making refined flour (40 percent loss) and white sugar (93 percent loss). In addition, there is some evidence that refined flour and sugar deplete even more chromium from the body.*

Haas goes on to describe the subsequent "enrichment" of milled grains as required by federal law in order to prevent diseases due to nutritional deficiencies:

> *Refining grains and flours creates a number of problems. The major one is the loss of nutrients that occurs from processing them, particularly the loss of most of the B vitamins, vitamin E, and the many minerals that are found naturally in whole grains. In the United States, by law, thiamine, riboflavin, niacin, and iron must be added back into the grain products, making the 'enriched' breads, pastas, cereals, and so on. But other important nutrients are lost and not replaced. These include pyridoxine (B6), pantothenic acid, chromium, zinc, manganese, folic acid, and vitamin E plus other trace minerals. And those are all essential to human health.*

With a token quantity of vitamins added back into the white flour, it is now called "enriched," and is bagged out and shipped off to food manufacturing companies to be used in cereals, crackers, pasta, cookies, breads, and other common foods. What you're eating, as a result, is the **endosperm** of grains, not the whole grain.

The healthy ingredients are never intended for human consumption

But what happened to all of the healthy minerals, vitamins and oils that were originally contained in the grain? I didn't tell you about a back door to this factory, the one that delivers products for use in livestock like cattle and pigs. Through this door, all the "waste byproducts" of refining wheat -- the healthy oils, minerals, vitamins and fiber -- are delivered to be used as feed for cattle, chickens, and pigs.

In **Staying Healthy with Nutrition**, Haas describes the process:

> *Milling of wheat has been the subject of the most research, and the findings are listed in the above table. But similar losses arise with polishing rice and refining cornmeal. Raw cane sugar has a wide range of trace elements, almost all of which are lost when white sugar is made; figures for these losses are also given below. The molasses left after refining sugar, which is rich in minerals, is usually fed to animals; the same is true of the 'mill feed' pulled out of wheat and other grains. Similar losses occur for most of the vitamins.*

Thus, the healthy substances in the whole grain are sold to animals while the unhealthy, disease-causing carbohydrate portion of the grain is shipped off for consumption by humans.

Why is this allowed to happen? Think about it: farmers and ranchers simply cannot afford for their livestock to get sick. They don't have health insurance for cows, and if a cow dies from a disease caused by a nutritional deficiency, the rancher loses money. Thus **it is in the interests of ranchers to keep their livestock healthy** by feeding them foods that support health. Those are precisely the food ingredients that are rarely used in foods intended for human consumption. In other words, **most cows get better nutrition than most people**. And, remarkably, this is a system that was designed by people!

It's all about profit, not health

Knowing all of this, you might ask yourself, "Why is this the case? Why do the food manufacturers strip out everything that's good for you and produce a disease-promoting substance for use in human foods?" There are two answers to this: consumer demand and shelf life. And both answers come down to one common answer: profits.

As Price relates in **Nutrition and Physical Degeneration**, food millers prefer to ship milled grains stripped of their nutrition because those grains actually kill insects that would otherwise flourish and infest healthy grains:

> *Modern white flour has had approximately four-fifths of the phosphorus and nearly all of the vitamins removed by processing, in order to produce a flour that can be shipped without becoming infested with insect life. I have been advised by millers that they could not ship flour if the minerals and vitamins were not removed. At once, we have an important measure of the value of a food; namely, the quality of insect life that it can support. The more valuable the product for human food, the more insect life it will support. Whereas highly refined white flour will support almost no insect life, a good product will support a relatively large amount of insect life in proportion to the volume of flour.*

Consider this: food factories must deliver the food ingredients that are desired by manufacturers. And manufacturers, in turn, must deliver the foods and grocery products that are desired and purchased by consumers. Thus, it is ultimately consumers who decide which products succeed in the marketplace and how grains are processed. When consumers purchase products made with refined white flour, they are in a sense of voting for this production process. The more consumers purchase foods that contain healthy oils, fiber, and whole grains, the more food factories and food manufacturers will retool their processes to meet that consumer demand. For example, one well known breakfast cereal manufacturer in the United States announced in late 2004 that it would switch to whole grains for its entire cereal line.

So when you look at the big picture here, you can't blame the food manufacturing companies for creating products that consumers demand. It's a consumer-driven marketplace, after all, and the only way to alter the manufacturing practices of these companies is to educate people and shift demand.

The other answer is that refined carbohydrates have a much longer shelf life than the whole-grain products because whole-grain products contain oils that very quickly go rancid on the shelf. Products that have a shortened shelf life are not profitable to stock because they have an increased risk of going bad and being returned for credit. Thus, it is also in the financial interests of food manufacturing companies to create ingredients that don't go rancid.

The FDA actually banned vitamin-enriched sugar

Decades ago, some millers actually attempted to improve the nutritional value of their refined white sugar products by enriching them with essential vitamins and minerals. These were called "enriched" sugar products.

But with the claim that some white sugar products were now "enriched," other sugar producers balked and applied sufficient political pressure to the FDA to get the federal agency to actually ban enriched white sugar. The full story is related in **Sugar Blues** by William Duffy:

> *In 1961, an Ohio food company came up with a real marketing coup. They introduced a new product, fortified sugar. For years, grains, flours, and bread -- gutted of vitamins and minerals in the refining process -- had been sold as "fortified" and "enriched," after addition of a few synthetic vitamins. The FDA kept telling us that enriched flour was just as good as the real stuff. Billions of dollars in advertising had programmed the American housewife into grabbing for enriched this and fortified that. So why not enrich white sugar? Suddenly somebody did. "Fortified sugar" appeared on the market with a list of vitamins and minerals on the package: Iodine, iron, vitamin C, four B complex vitamins, and 400 units of vitamin A.*
>
> *What were the sugar pushers to do? If the peddlers of refined white sugar were going to compete by listing their vitamins and minerals on the package, they would have nothing to reveal except a string of zeroes. If the sugar pushers rose to the bait and began fortifying their refined white sugar with vitamins and minerals, they were between the devil and the deep. Some of their biggest customers like Coca-Cola and the soft drink makers might regard this as distinctly unfair. The FDA rode to the rescue. Government inspectors seized quantities of fortified sugar and declared by **administrative fiat** that the product was misbranded.*

Refined foods cause nutritional deficiencies

> *Sucrose is a refined carbohydrate; refinement removes 90 percent of its bulk and all its vitamins and minerals. This is precisely where the major damage to the body from refined sugar arises. To absorb this "predigested carbohydrate," the body has to deplete its store of vitamins and minerals; imbalance is created. Since the stress is continual if the diet is sugar-heavy, the eventual results are chronic ill health.*
>
> **- William Duffy, Sugar Blues**

It isn't just that milling grains strips their naturally occurring vitamins, minerals and oils, by the way: once these refined, processed carbohydrates are consumed, they also deplete the existing supplies of those very same vitamins and minerals in the human body.

> *All refined food has the characteristic of reducing certain types of nutrients in the body while adding others and creating imbalance as a result of incomplete digestion. Thus many individuals become obese yet mineral-deficient from eating too many carbohydrate foods containing refined sugar and white flour.*
>
> **- Paul Pitchford, Healing With Whole Foods**

And...

> *"Refined sugar is lethal when ingested by humans because it provides only that which nutritionists describe as empty or naked calories. In addition, sugar is worse than nothing because it drains and leeches the body of precious vitamins and minerals through the demand its digestion, detoxification, and elimination make upon one's entire system."*
>
> **- William Duffy, Sugar Blues**

It seems that sugar and refined carbohydrates tend to actually pull important minerals right out of the body. One result, as explained in **The Encyclopedia of Natural Medicine**, is osteoporosis:

> *"Another dietary factor that increases the loss of calcium from the body is refined sugar. Following sugar intake, there is an increase in the urinary excretion of calcium. Considering that the average American consumes 150 grams of sucrose in one day, along with other refined simple sugars, carbonated beverages loaded with phosphates, and large quantities of protein, it is little wonder that there are so many people suffering from osteoporosis in this country."*

It's not only calcium that gets depleted when people consume refined carbohydrates and sugars, either: chromium -- an important mineral for regulating blood sugar levels -- is also depleted:

> *"The amount of chromium in foods decreases with processing. The widespread tendency toward increased consumption of highly processed foods, particularly refined sugar, which stimulates urinary losses of chromium, may result in a marginal intake of chromium and depletion of tissue chromium stores."*
>
> **- Michael T. Murray, N.D., The Textbook of Natural Medicine**

So what happens to the health of a person who consumes a large quantity of refined carbohydrates and suffers from the resulting vitamin and mineral deficiencies? They exhibit a vast array of symptoms and disorders:

> *At least thirteen B vitamins are found in our food. Some may be lacking in many Americans' diets because of the consumption of refined flour products, sugar, coffee, and alcohol, which can deplete B vitamins. Deficiency symptoms include fatigue, irritability, nervousness, depression, insomnia, loss of appetite, sore (burning) mouth or tongue, and cracks at the corners of the mouth. Some deficiencies may also reduce immune functions or estrogen metabolism; other potential problems are anemia, especially from vitamin B12 or folic acid deficiency, constipation, neuritis, skin problems, acne, hair loss, early graying of the hair, increased serum cholesterol, and weakness of the legs, to name a few.*
>
> **- Elson Haas, M.D., Staying Health With Nutrition**

What's really fascinating is to look at the history of refined grains and their effects on human health. When refined grains first became popular, entire nations suffered from "mysterious" diseases that were actually a result of nutritional deficiencies related to vitamins and minerals lost during the milling of grains. From **Sugar Blues**:

> *The process of moving from whole grains through the various stages of ground meals had taken several centuries in the West, thus biological deterioration of the people was gradual. However, such deterioration was visited upon the Orient very rapidly. Polished white rice was new, modern, refined, and civilized. It was accepted wherever modernization was vogue. In its wake, it brought sudden outbreaks of new symptoms. Eventually, these new symptoms were labeled beriberi, after the Senegalese word for weakness.*
>
> *After the introduction of refined white sugar and white polished rice on Japanese battleships, beriberi began plaguing the sailors the way scurvy had the British. Instead of going back to eating unpolished rice like the peasants, the Japanese navy adopted western rations like those of the British and German navies. Meat and condensed milk, among other things, were added to the diet of the Japanese sailors.*
>
> *It was only imperialist colonizers, supersalesmen for European technology, and the great scientific geniuses of the West who thought of beriberi as a mysterious plague to be conquered by modern science. At first it was classified as a tropical disease. It was studied as a parasitic infection. Among the suggested therapies for beriberi were quinine, arsenic, bloodletting, cold douches, steambaths, sunbaths, strychnine, and massage. In Java in*

the 1890s, the Dutch army, Dutch missionaries, and colonial administrators were afflicted with a veritable epidemic of beriberi. They slept under mosquito netting and sprayed each other with carbolic acid and were careful not to let the dirty natives touch them on the way to church, but nothing seemed to protect them from beriberi.

- William Duffy, Sugar Blues

Conventionally trained modern doctors seem no wiser, by the way. When they see a pattern of symptoms that should clearly be identified as an obvious nutritional cause (such as Attention Deficit Disorder), they rarely consider the dietary causes and, instead, proceed to write prescriptions in order to mask the symptoms of the "disease."

It's sort of like seeing that your yard needs water because it's turning brown and then going to the hardware store to buy green paint rather than simply watering your lawn. Conventional medicine still doesn't get it when it comes to the causative links between refined foods and disease. In this way, they are even more ignorant than Japanese peasants in the 1800s who at least knew to eat whole grain rice if they were to stay healthy.

Contamination of milled, refined carbohydrates

As if the health effects from eating sugars and refined carbohydrates weren't bad enough, it turns out that the processing and milling of these substances also introduces minute quantities of other harmful contaminants. As Debra Dadd says in **Home Safe Home**, "As a food, refined white sugar is highly contaminated, having been sprayed with multiple pesticides, processed over a natural gas flame, and chemically bleached."

Author Elson Hass adds:

"In addition, the pesticides and chemicals sprayed on cane and beet sugar and the chemical bleaching process used to make "white" sugar are potentially hazardous; we are not advised about this on sugar packages or food labels. ...Eating too much of refined grain products also increases consumption of the toxic mineral cadmium in relationship to zinc, as zinc is lost in the outer layers and cadmium, when it is present, is contained in the internal kernel, and so can lead to cadmium toxicity problems."

- Elson Haas M.D., Staying Healthy With Nutrition

By now you hopefully have a deeper understanding of the health risks associated with eating refined carbohydrate foods, and the reasons why such foods are so common in our grocery stores. Without question, refined carbohydrate diet is a diet of disease: it promotes all of the modern diseases now afflicting the modern world and is clearly incompatible with human health.

GROCERY WARNING - PART 2

Metabolic disruptors found in everyday foods and groceries

Now let's get to the issue of looking at more of the disease-promoting ingredients found in everyday foods and groceries. As you'll learn here, these ingredients are responsible for causing cancer, heart disease, diabetes, nervous system disorders, and much more. And the most amazing part in all this is that you can go to any grocery store and find these exact ingredients listed right on the labels!

Let's start with one of the most toxic additives of all: sodium nitrite.

Sodium Nitrite

Virtually all bacon is packaged and treated with an ingredient known as sodium nitrite. This ingredient, which is used by the meat industry as a color fixer (it adds a healthy looking red color to the meat in the package) and as protection against botulism, is widely known to result in the creation of **nitrosamines** in the digestive system. Nitrosamines are highly carcinogenic chemicals that promote cancer in the human body. In fact, nitrosamines are used by laboratory researchers to induce diabetes or cancer in lab rats for the purpose of conducting experiments.

Here's an account of one experiment in which researchers used "very low doses" of nitrosamines to give rats bladder cancer in order to test whether saccharin would accelerate that cancer:

> *"In addition to the findings of carcinogenicity... saccharin has also been shown to induce bladder cancer in various other types of studies, including one in which pellets were implanted in rodent bladders... in which rats were fed saccharin after their bladders had first been primed by local instillation of very low doses of a nitrosamine-type carcinogen."*
>
> **- Samuel S. Epstein, The Politics of Cancer Revisited**

On the dangers of nitrosamines, this book goes on to say:

> *"Nitrosamines are a large group of chemicals, most of which are carcinogenic, producing tumors in a wide range of organs in a wide range of test animals. ...Nitrosamines are considered to be major human carcinogens ...due to the fact that they can be easily and rapidly synthesized by the interaction of common precursors, nitrites or oxides of nitrogen and amines, in a process called nitrosation."*

Through this process of *nitrosation*, an innocent-sounding ingredient like sodium nitrite becomes a cancer-promoting carcinogen in your digestive tract. *"Over the last decade, there has been growing interest in the possibility that nitrosamines and other N-nitroso compounds may be a major class of universal carcinogens responsible for a substantial number of human cancers," Epstein says. "...they can be simply and rapidly synthesized by a process called nitrosation, both in the environment and in the body, from two types of common and extensively distributed compounds, amines and nitrites."*

The fact that these nitrosamines cause cancer isn't even debated. Author Michael T. Murray, N.D.,

writing in **The Encyclopedia of Natural Medicine**, states,

> *"Preservatives such as sodium benzoate, nitrates, nitrites, and sulfites work to prevent spoilage primarily by checking the growth of microorganisms. All of these preservatives have come under attack recently. In the case of nitrates and nitrites, these compounds are known carcinogens." Later in the same book, he adds, "Stay away from cured meats such as bacon, pastrami, and some types of sausages; these foods are rich in compounds that can lead to the formation of cancer-causing compounds known as nitrosamines."*

In **Health and Nutrition Secrets That Can Save Your Life**, author Russell Blaylock writes,

> *"For decades, food scientists and cancer specialists have known that nitrates and nitrites were converted in the human stomach into powerful cancer-causing substances called nitrosamines. Yet, tons of these preservatives are still added to luncheon meats, hot dogs, bacon and other processed meats..."*

For a more technical view, take a look at the comments on this subject by author John Boik in **Cancer & Natural Medicine**, who says,

> *"Epidemiological evidence suggests that dietary and environmental factors play a significant role in the incidence of stomach cancer. Dietary intake of nitrites (found in high amounts in processed or "cured" meats) is suspected as a causative factor."*

So what happens when you consume sodium nitrite in processed, packaged meat products, year after year? To find the answer, let's look at how the dietary consumption of sodium nitrite affects children.

Sodium nitrite gives children brain cancer and leukemia

In one published medical study that followed children who regularly eat hot dogs containing sodium nitrite, researchers found that their risk for brain cancer quadrupled, and their risk of leukemia skyrocketed to 700 percent of the norm. *(Preston-Martin, S. et al. "N-nitroso compounds and childhood brain tumors: A case-control study." Cancer Res. 1982; 42:5240-5.)*

Keep in mind that the same ingredient, sodium nitrite, is found in far more foods than just hot dogs. It's in virtually all packaged meats. And this study with children is just the tip of the iceberg. Another study examining the health consequences of pregnant women who eat sodium nitrite found that consuming nitrite-preserved meats during pregnancy results in an increased risk of brain tumors in their children. *(Bunin, G.R., et al. "Relation between maternal diet and subsequent primitive neuroectodermal brain tumors in young children." N. Eng. J. Med., 3 29-536-41, 1993.)*

Sodium nitrite consumption is strongly linked to cancer

This story doesn't stop with brain cancer and leukemia, either. Sodium nitrite consumption has been linked with a frightening number of cancers, as described in this statement taken from the **Citizen Petition Seeking Labeling of Nitrate-Preserved Hot Dogs for Childhood Cancer Risk** (reprinted below):

> *"Nitrites are widely used as preservatives in hot dogs, besides other meat products. Nitrites combine with amines naturally present in meat to form carcinogenic N-nitroso compounds. N-nitrosodimethylamine has been identified in nitrite-preserved meat products. There is overwhelming evidence on the carcinogenicity of N-nitrosodimmethylamine in animal experiments. Furthermore, epidemiologic evidence has associated N-nitroso carcinogens with cancer of the oral cavity, urinary bladder, esophagus, stomach and brain."*

Adding to the conclusion that sodium nitrite is, indeed, a cancer-causing chemical, author Samuel Epstein writes:

> *"Nitrite-contaminated food is thought to be a cause of stomach cancer in the United States, Japan, and other nations. Recently, researchers reported that children who eat hot dogs cured with nitrite a dozen or more times monthly have a risk of leukemia seven times higher than normal. Furthermore, children born to mothers who consume hot dogs once or more weekly during their pregnancy are twice as likely to have childhood brain tumors."*

In wrapping up the health dangers associated with sodium nitrite and nitrosamines, he states:

> *"Of about 130 different nitrosamines so far tested, 80 percent have been shown to be carcinogenic. Nitrosamines are carcinogenic in more than twenty different animal species tested, and no species has been found to be resistant. Individual nitrosamines produce various types of tumors in many organs of various animal species."*

Clearly, sodium nitrite is a dangerous ingredient. In an honest society where the U.S. Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) actually did their jobs to protect consumers from health risks, they would have banned this ingredient long ago. But they didn't, and today it's still 100 percent legal to add to packaged meats, regardless of whether those meats actually need protection against botulism.

Most people, meanwhile, are consuming large quantities of sodium nitrite. And as a result, they are subjecting themselves to a rather serious risk of developing or accelerating cancers. Is it any wonder that cancer has now become the #1 killer in America, surpassing heart disease?

Citizens Petition FDA To Require Sodium Nitrite Warnings

You would think that somebody would have petitioned the FDA to stop this practice, right? Well, somebody did. In 1995, a group of informed citizens and authors petitioned the FDA to require the clear labeling of foods containing nitrites in order to warn people (and pregnant mothers, especially) of the cancer risk associated with consuming this ingredient. Here's the full petition:

Citizen Petition Seeking Labeling of Nitrate-Preserved Hot Dogs for Childhood Cancer Risk

April 25, 1995

David A. Kessler, M.D.
Commissioner, Food and Drug Administration, Room 1-23
12420 Parklawn Drive
Rockville, MD 20857

The undersigned submits on behalf of the Cancer Prevention Coalition, Inc. (CPC), Samuel S. Epstein, M.D., Chair, and on behalf of the Center for Constitutional Rights, Michael Deutsch, Esq., Legal Director. This citizen petition is based on accumulating scientific information on excess risks of childhood brain tumors and leukemia from the consumption of hot dogs containing nitrite preservatives.

The undersigned submits this petition under 21 U.S.C. 321 (n), 361, 362, and 371 (a); and 21 CFR 740.1, 740.2 of 21 CFR 10.30 of the Federal Food, Drug, and Cosmetic Act to request the Commissioner of the Food and Drug Administration (FDA) to label hot dogs that contain nitrites with a cancer risk warning.

A. Agency Action Requested

This petition requests that FDA take the following action:

Immediately require nitrite-containing hot dogs to be labelled with warnings such as hot dogs containing nitrites have been shown to pose risks of childhood cancer. Pursuant to 21 CFR 10.30 (h) (2), a hearing at which time we can present our scientific evidence.

B. STATEMENT OF GROUNDS

Nitrites are widely used as preservatives in hot dogs, besides other meat products. Nitrites combine with amines naturally present in meat to form carcinogenic N-nitroso compounds. 1,2,3,4 N-nitrosodimethylamine has been identified in nitrite-preserved meat products. (5,6) There is overwhelming evidence on the carcinogenicity of N-nitrosodimmethylamine in animal experiments.(7) Furthermore, epidemiologic evidence has associated N-nitroso carcinogens with cancer of the oral cavity, urinary bladder, esophagus, stomach and brain. (8,9,10)

There is substantial evidence on the risks of childhood cancer from the consumption of meats containing nitrites. (11,12,13) In 1982, Preston-Martin, et al. found that consumption

during pregnancy of meats cured with sodium nitrite has been associated with development of brain tumors in the offspring. (14)

Recent case-control studies have confirmed the risks of cancer from consumption of hot dogs. Eating many hot dogs by children, as well maternal hot dog consumption during pregnancy, has been shown to be associated with brain cancer and leukemia in children. (15,16,17)

Bunin, et al. studied children who were diagnosed with brain cancer before age six, between 1986 and 1989. Of 53 foods and beverages and three alcoholic beverages consumed by mothers during pregnancy, only hot dogs were associated with an excess risk of childhood brain tumor. (18)

Sarusua and Savitz studied 234 childhood cancer cases in Denver and found a strong association between the consumption of hot dogs and brain cancer. Children born to mothers who consumed hot dogs one or more times per week during pregnancy had approximately double the risk of developing brain tumors. Children who ate hot dogs one or more times per week were also at higher risk of brain cancer. In addition, children who ate hot dogs and took no vitamins, which retard the formation of N-nitroso carcinogens, were more strongly associated with both acute lymphocytic leukemia (ALL) and brain cancer. (19) Sarusua and Savitz concluded:

“The results linking hot dogs and brain tumors (replicating an earlier study) and the apparent synergism between no vitamins and meat consumption suggest a possible adverse effect of dietary nitrites and nitrosamines.(20)

Peters, et al. studied the relationship between the intake of certain foods and the risk of leukemia in children from birth to age 10 in Los Angeles County between 1980 and 1987. The researchers found that children who ate 12 or more hot dogs per month had approximately nine times the normal risk for developing childhood leukemia. A strong risk for childhood leukemia also existed for those children whose fathers’ intake of hot dogs was 12 or more per month. (21) Peters, et al. concluded:

“Our results provide evidence for an association between consumption of hot dogs and risk of childhood leukemia. Adjustments for all factors thought to be potential confounders did not affect these associations. Independent risks were associated with both children’s and fathers’ consumption...The findings, if correct, suggest that reduced consumption of hot dogs could reduce leukemia risks, especially in those consuming the most. (22)

These findings are of particular significance considering a 38 percent increase in the incidence of brain and nervous system cancers in children from 1973-1991. (23) Brain tumors account for about one in five childhood cancers. (24)

C. CLAIM FOR CATEGORICAL EXCLUSION

A claim for categorical exclusion is asserted pursuant to 21 CFR 25.24 (a) (11).

D. CERTIFICATION

The undersigned certifies, that, to the best knowledge and belief of the undersigned, this petition includes all information and views on which the petition relies, and that it includes representative data and information known to the petitioner which are unfavorable to the petition.

This petition is submitted by:

Samuel S. Epstein, M.D.
Michael Deutsch, Esq. Legal Director, Center for Constitutional Rights, N.Y.

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23. Reis, L. et al., “Maternal diet and risk of astrocytic glioma in children,” 177-87.

In response to this petition, the FDA had absolutely nothing to say. No discussion, no new labeling requirement, not even a public hearing. The issue was simply swept under the rug.

Those who know how the FDA operates are not at all surprised by this action. These days, both the FDA and the USDA focus their attention primarily on protecting industry profits, not the public health. Corporate profits garner a much higher priority than consumer safety, as is obvious to anyone who is familiar with the consistent actions of both agencies in this area.

But the USDA wasn't always like that. In fact, they tried to ban sodium nitrite decades ago...

The USDA tried to ban sodium nitrite in the 1970s

Even when these agencies try to do the right thing, political pressure from the food industry makes it virtually impossible. On September 19, 1977, a USDA advisory committee on nitrosamines asked the meat industry to find replacements for nitrites in meats.

Under Assistant Secretary for Food and Consumer Services of the USDA, Carol Tucker Foreman, the USDA also proposed the elimination of sodium nitrite and other nitrites in baby food. She proposed reductions in the levels of nitrite added to meats that would have drastically reduced the levels of nitrosamines in cooked bacon.

For this effort, she was attacked by the meat industry and accused of trying to "ban bacon." Ultimately, her best efforts failed because here we are, nearly three decades later, with sodium nitrite still found in virtually every packaged meat product found at every grocery store in North America.

The food manufacturers have won this political battle, and today, neither the USDA nor the FDA have the will nor the political clout to get sodium nitrite banned from foods. In fact, they aren't even trying! The popular media doesn't even cover the subject. Nobody talks about it. And yet tens of millions of Americans are currently battling cancers of one form or another.

In my view, sodium nitrite can only be accurately described as a "chemical catastrophe." It is widespread (virtually everyone consumes it), highly toxic (as the science shows), and yet happens behind closed doors and for the sole purpose of producing a profit.

According to the science, sodium nitrite promotes colon cancer, bladder cancer, and brain tumors. And chances are, you probably have some sodium nitrite in your refrigerator right now. So stop reading for a minute, go check your refrigerator, find a package of bacon (or other meats), and look for an ingredient called sodium nitrite.

The solution is to buy "uncured" meat products that are made with no nitrites. They are difficult to find, and you may need to visit a health food store like Wild Oats in order to find them, but they do exist. As information like this becomes more widely available, more food manufacturers will produce bacon and other products without sodium nitrite.

Action Item:

Avoid sodium nitrite. Look for it on labels of all packaged meat products.

Artificial chemical sweeteners

One of the dangers of eating everyday foods and groceries is turning to products that contain artificial chemical sweeteners. Sweeteners like aspartame, acesulfame, and sucralose are all made of artificial chemicals and are suspected of promoting serious health disorders, primarily neurological ones.

Aspartame

Of all the chemical sweeteners that are still legal (cyclamates were banned years ago), aspartame by far has the worst record.

> *It is my opinion, after reviewing an enormous amount of medical and research literature, that monosodium glutamate, aspartame, and other excitotoxin dietary additives pose an enormous hazard to our health and to the development and normal functioning of the brain. To continue to add enormous amounts of excitotoxins to our food is unconscionable and will lead to suffering and ruined lives for generations to come. The civilized world, especially the United States, has become the largest experimental laboratory in history.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

Aspartame is used as an artificial sweetener in a wide variety of foods and beverages. It's usually proudly proclaimed right on the label as "Nutrasweet." To truly understand the story of aspartame, however, you have to look behind the label and examine the history of this sweet-tasting chemical.

Aspartame was accidentally discovered in 1969 by James Schlatter, a biochemist trying to find a cure for stomach ulcers. He just happened to lick his thumb, the story goes, and was impressed by the sweetness of the chemical. Russell Blaylock, author of **Excitotoxins**, goes on to explain what happened next:

> *From this serendipitous discovery was born a business that would reap $736 million in sales for the NutraSweet® Company in 1988 alone. By 1989, G.D. Searle & Company, the manufacturer of NutraSweet®, had reached a profitability that put it ninth on the Fortune 500 list. Despite concerns over the safety of this new sweetener, including brain tumor induction in experimental animals, seizures, precipitation of headaches, and an adverse effect on the developing brain, the FDA approved its use as an artificial sweetener. Sales began to grow immediately. The NutraSweet® company spent over $60 million on advertising alone during its first three years.*
>
> *NutraSweet® hit the market at just the right time. Americans had become weight conscious and were looking for a sugar substitute, and it replaced the recently outlawed cyclamate. Soon, it surpassed saccharin in sales. In fact, NutraSweet® played a large role in making the soft drink business one of the fastest growing businesses in what had been a stagnant enterprise. Americans were guzzling diet colas under the mistaken belief that sugar consumption was the primary cause of obesity. But they were unaware of the serious health effects of excess aspartate consumption.*

Early testing shows aspartame to cause brain tumors

The fact that the FDA eventually approved aspartame seems to be due more to political pressure (and the FDA's collusion with private industry) than from any serious scientific study of the safety of aspartame. In fact, no long-term human safety trials were ever conducted. Of the tests that were conducted, some rather frightful results appeared:

> *The first experiments done to test the safety of aspartame before its final approval in 1981 disclosed a high incidence of brain tumors in the animals fed NutraSweet®. In fact, this study was done by the manufacturer of NutraSweet®, G.D. Searle. In this study, 320 rats were fed aspartame and 120 rats were fed a normal diet and used as controls. At the end of the study, 12 4of the aspartame fed rats had developed brain tumors, while none of the control rats had. This represented a 3.75 percent incidence of brain tumors in the rats fed aspartame, which was twenty-five times higher than the incidence of spontaneous brain tumors developing in rats (0.15 percent)*
>
> *When Dr. John Olney pointed out these findings to the FDA "Aspartame Board of Inquiry" he was told that the high incidence of tumors was the result of spontaneous development of brain tumors in rats. That is, that some rats develop brain tumors naturally, just as humans do. Dr. Olney reviewed the incidence of spontaneously occurring brain tumors in rats and found that out of seven studies using a total of 59,000 rats, only 0.08 percent developed brain tumors -- the aspartame fed rats had a forty-seven fold higher incidence.*
>
> *It became obvious that the G.D. Searle company was trying desperately to protect their potential billion dollar plus money maker. They claimed that more brain tumors were found because they searched the pathological slides so diligently. But, they searched just as diligently in the control rats and found none. Besides, neuropathologists examining the slides later stated that the tumors were large enough to be seen with the naked eye.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

Had the FDA done its job and actually demanded sufficient testing of aspartame, it would have almost certainly considered it too dangerous to approve for long-term human consumption. *"Had it not been for some fancy footwork by those in power in the FDA,"* explains Blaylock, *"...it never would have [been approved]. Early experiments using low, medium and high doses with aspartame all found dramatic tumor increases in test animals. These included brain, pancreas, and breast tumors, and tumors of the testes, thyroid and prostate. Experiments also demonstrated a direct correlation between intake quantity and tumor incidence."*

Aspartame begins to generate medical complaints

Regardless of the reasons for its approval, aspartame quickly became the world's most popular artificial chemical sweetener and founds its way into widespread use. Although this certainly generated enormous profits for its manufacturer, it also had the effect of raising red flags in the minds of some rather observant doctors who began to notice patterns in their patients:

> Dr. H. J. Roberts of West Palm Beach, Florida, is a dedicated medical doctor who has done much research on the adverse effects of aspartame. He has identified a number of what he calls "aspartame diseases." In his June 2002 article in the Journal of Townsend Letter for Doctors and Patients, Dr. Roberts lists a number of neurological problems produced by aspartame. Of 1,200 patients, 43 percent had headaches; 31 percent had dizziness and unsteadiness; 31 percent had confusion and memory loss; 13 percent had drowsiness and sleepiness; 11 percent had major epileptic convulsions; 3 percent had minor epileptic attacks and "absences of the mind"; 10 percent had severe slurring of speech; 8 percent had tremors; 6 percent had severe "hyperactivity" and "restless legs"; 6 percent had atypical facial pains. He reports that after cutting out the sweetener from the diet of these people, they improved; some were freed of their symptoms. As you might know, methyl alcohol and formaldehyde damage to the brain cells and the optic nerve is irreversible.
>
> **- Fereydoon Batmanghelidj, M.D., Water for Health, for Healing, for Life**

Before long, the FDA was flooded with health complaints from aspartame. More than 7,000 complaints of adverse reactions to aspartame have been filed with the FDA. This accounts for around 75 percent of all reactions to food substances received by the FDA. It's astounding: a single ingredient accounts for 3/4 of all the complaints received by the agency, and yet Americans continue to consume aspartame in alarming quantities: more than 17 pounds per person per year at present.

> *Of the thousands of adverse reactions [to aspartame] reported to the FDA, most concerned abnormal brain function, i.e., depression, fatigue, irritability, insomnia, vision problems, hearing loss, anxiety attacks, slurred speech, loss of the sense of taste, tinnitus, vertigo, and memory loss. Also included were a number of chronic illnesses, including brain tumors, multiple sclerosis, epilepsy, chronic fatigue syndrome, Parkinson's disease, Alzheimer's, mental retardation, lymphoma, birth defects, fibromyalgia, and diabetes.*
>
> **- Carol Simontacchi, The Crazy Makers**

Aspartame byproducts: chemicals so toxic they threaten the environment

But why does aspartame potentially cause these brain cancers and other neurological disorders? The answer rests in the byproducts of aspartame consumption. During the process of digestion in the human body, aspartame breaks down into methanol (an alcohol) and aspartic acid. The methanol, in turn, poses a severe health risk to humans:

> *Methyl alcohol is a powerful toxin that is carefully regulated by the EPA. Recent studies have found that even low doses can be quite harmful to cells, especially to DNA. When methyl alcohol is consumed it is converted in the cells to formaldehyde and formic acid, both potent toxins. Formic acid is the poison used by the fire ant that causes such intense pain. Formaldehyde is used as a preservative, and in the past, as an embalming fluid. It is also a known carcinogen.*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**

Formaldehyde, you may remember from high school science classes, is the pungent liquid in which laboratory specimens are preserved. No person in their right mind would drink formaldehyde, and yet people who drink soft drinks containing aspartame are indirectly doing exactly that. And the consequences can be quite severe:

> *One of the breakdown products of aspartame, an excitotoxin, is formaldehyde. Using a radioactive tracer method, it has been clearly demonstrated that the formaldehyde formed from aspartame accumulates near the DNA in cells, resulting in numerous deletions and strand breaks in the nuclear material. Even more frightening is the finding that the damage is accumulative, so that even drinking one diet cola a day can produce significant genetic damage. There are also several reports of severe aspartame addiction, characterized by the daily consumption of a gallon or more of aspartame-sweetened beverages.*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**

Making matters worse, soft drink companies put their liquid products containing aspartame in containers made of aluminum. When this aluminum -- a known neurotoxin -- is combined with aspartame, the results are multiplied:

> *In the case of diet drinks in aluminum cans, the very brain-toxic aluminum fluoride compound co-exists with multiple toxins found in aspartame, thus creating the most powerful government-approved toxic soup imaginable. With the strong association between aluminum, excitotoxins, aluminum fluoride complexes and Alzheimer's disease, it would be completely irresponsible to encourage people to consume this toxic mixture. Yet, this is done literally billions of times every year in advertising. It is important to remember that the aluminum can has been around for only about three decades, and most toxin-related diseases take years of accumulation to produce the full clinical expression of the disorder.*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**

Aspartame implicated in neurological disorders and diseases

The vast majority of conditions and side effects resulting from aspartame are neurological ones. That's no surprise, since methanol is toxic to nerve cells. The primary conditions now being blamed on aspartame are:

- Brain tumors
- Seizures and convulsions
- Blindness
- Dizziness, confusion
- Headaches and migraines

Doctors, authors and researchers who have studied this issue regularly warn their patients to avoid aspartame. In **Reversing Diabetes**, Dr. Julian Whitaker states:

> *What about artificial sweeteners, such as aspartame? I recommend that you avoid this chemical additive like the plague. It is broken down in the body into harmful components, including formaldehyde (a known toxin and carcinogen), formic acid (the poison in ant stings), and methanol (a nervous system toxin also known as free methyl alcohol). High intake of aspartame has been linked with a number of adverse effects, including headache, vision loss, seizures, mood disorders, and other nervous system problems.*

The idea that aspartame can induce blindness in humans is especially intriguing, given the high incidence of retinal damage (nerve damage in the eyes) experienced by many diabetics. Perhaps not so coincidentally, diabetics also tend to consume enormous amounts of aspartame in their quest to avoid the refined sugars that would only worsen their diabetes. But in avoiding sugar, they may actually be accelerating their own blindness:

> *Diabetics who drink large amounts of aspartame-sweetened drinks are more likely to go blind. Aspartame is composed of the excitotoxin, aspartic acid, as well as methanol (also a known eye toxin) and the amino acid, phenylalanine. Given this evidence, why, then, do the American Diabetes Association and thousands of doctors encourage their diabetic patients to use aspartame? At least where the American Diabetes Association is concerned, it may have something to do with the fact that the organization has received large monetary contributions from Monsanto -- maker of NutraSweet®!*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**

That last sentence is notable. The ADA does, indeed, have a close financial relationship with the makers of Nutrasweet. It's no surprise to learn that the ADA heavily promotes the use of aspartame and works to suppress information critical of aspartame while also stalling the approval of safer alternatives such as stevia (an herbal sweetener that will be discussed in detail later).

Flying blind with aspartame: pilots can't see their instrument panels

One group of professionals who are quite aware of the dangers of aspartame (and its potential to alter nerve system function) are pilots. *"A number of individuals had their driver or pilot licenses revoked or suspended because of aspartame-associated impaired vision, convulsions, or confusion -- depriving them of employment,"* says Dr. J.H. Roberts in **Aspartame - Is It Safe?** He goes on to report the following:

> *A young Air Force pilot told the Senate hearing held on November 3, 1987 that he suffered a grand mal seizure while consuming up to one gallon of an aspartame beverage daily. There had been no recurrence over the ensuing two years of abstinence. Nevertheless, he was permanently grounded because of the diagnosis of an "idiopathic partial seizure disorder."*

That account just scratches the surface, however:

> *One group of professionals most concerned about aspartame usage is airline pilots. In 1988, the Aspartame Consumer Safety Network installed a private hot line to receive inquiries from pilots who are in jeopardy of losing their flying licenses because of seizure episodes from the use of aspartame. Since 1988, more than six hundred calls have been made to the confidential hot line. One caller noted that "after just two cups of NutraSweetened hot chocolate, a pilot experienced blurred vision so severe he was unable to read instruments on his panel and very narrowly avoided a tragic landing. Safely on the ground, he related his story to the coworkers in his office. Two of them recounted similar symptoms experienced after brief exposure to aspartame."*
>
> **- Carol Simontacchi, The Crazy Makers**

Aspartame and Alzheimer's disease

There is considerable discussion that aspartame may also induce or accelerate Alzheimer's disease, which is a nerve disorder characterized by confusion, loss of memory, and other symptoms that sound quite similar to the symptoms currently being blamed on aspartame.

> *High levels of excitotoxins within the brain appear to play a major role in Alzheimer's disease. It is essential that individuals with a strong family history of Alzheimer's disease and those having had a stroke or high blood pressure avoid excitotoxin food additives. The simplest way to do this is to restrict foods from your diet that contain excitotoxin taste enhancers such as MSG, hydrolyzed vegetable protein, and aspartame.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

Aspartame and heat

Aspartame is also known to break down more quickly when exposed to heat. According to some accounts, as little as 86 degrees (F) will cause aspartame to break down into free methyl alcohol (methanol). Note that the temperature of the human body is higher than 86 degrees which means that, according to this, aspartame always breaks down into methanol when consumed by any living, breathing human being:

> *As aspartame passes through the digestive tract, it is digested into methanol or wood alcohol, which happens most readily when aspartame is heated (as when it is part of a "food product" or is improperly stored at high temperatures, as often happens in warehouses in hot climates). When heated above eighty-six degrees, free methanol is produced and is rapidly absorbed into the bloodstream. One liter of an aspartame-sweetened beverage can produce about fifty-six milligrams of methanol. When several of these beverages are consumed in a short period of time (one day, perhaps), as much as two hundred fifty milligrams of methanol are dumped into the bloodstream, or thirty-two times the EPA limit.*
>
> *Symptoms of methanol poisoning include headaches, ear buzzing, dizziness, nausea, gastrointestinal disturbances, weakness, vertigo, chills, memory lapses, numbness and shooting pains in the extremities, behavioral disturbances, and neuritis (inflammation of the nerves). According to the Aspartame Consumer Safety Network information, "The most well known problems from methanol poisoning are vision problems including misty vision, progressive contraction of visual fields, blurring of vision, obscuration of vision, retinal damage, and blindness."*
>
> **- Carol Simontacchi, The Crazy Makers**

In this way, a human being who consumes a six-pack of diet soft drinks made with aspartame is actually a **walking EPA violation**. That person technically carries enough methanol in their own body to qualify as toxic waste and be subjected to federal environmental laws. (I find it fascinating that it's illegal to dump methanol into rivers and streams, but it's perfectly legal to dump it into the bodies of consumers.)

Aspartame and cancer

Aside from all the seizures, brain tumors, blindness and other nervous system disorders associated with aspartame consumption, there is additional evidence that aspartame may promote cancer. In one study published in the journal **Food and Chemical Toxicology** in 1993 (*Mutagenic activity of peptides and the artificial sweetener aspartame after nitrosation*), researchers found that aspartame shows strong mutagenicity (cancer potential) when nitrosated in the stomach with the help of the digestive acids secreted by the stomach.

The primary conclusion of the study is as follows:

> *The time-course study of Trp-Trp nitrosation showed the production of at least two mutagens: a potent but unstable mutagenicity was seen at very short nitrosation times and a more stable but weaker effect was obtained after more than 60 min of nitrosation. Not only the absolute specific mutagenicity but also the nitrite dependence of the nitrosation reaction and the stability of the nitroso product must be taken into account in determining the risk posed by endogenous nitrosation of foods in the human stomach.*

Protein power authors change stance on aspartame

Two of the best known authors on health, Michael R. Eades and Mary Dan Eades, authors of **The Protein Power Lifeplan** and other nutrition books, used to actually recommend aspartame to their readers. Their position changed, however, upon reviewing the scientific evidence.

Now they stand squarely against aspartame and strongly caution their readers to avoid it. As they explain it:

> *First were claims that because the body breaks down the dipeptide molecule (a linkage of two amino acids) into methanol (wood alcohol), a known toxin that can cause blindness, and formaldehyde, a known cancer-causing agent, the product posed significant safety risks to the public. Subsequent to the publication of Protein Power, however, scientific papers came to our attention ... that caused us to review and ultimately to reverse our stance on this sweetener. We now feel that aspartame may pose significant hazards to the brain and nervous system and we no longer recommend its use. Here's why we no longer recommend this sweetener and, furthermore, actively discourage its use.*
>
> *Aspartame differs from other types of artificial sweeteners in that it is a dipeptide, a molecule made by joining two amino acids together; in other words, it's a tiny protein fragment. It can enter the bloodstream intact and find its way through the circulation to a vulnerable area of the brain called the bare area, where it can gain entry to the brain. Why is that a problem? The brain is quite picky about what it lets in and what it keeps out. Surrounding virtually the entire brain, a structure called the blood-brain barrier shields the brain from direct bloodstream access, allowing only certain ions and nutrients to pass. In the bare area, however, the barrier skips a spot, and here the brain can be vulnerable to entry of unwanted substances that once inside may stimulate the brain abnormally, an effect called excitotoxicity. Such is the case for aspartame; this sweetener -- along with other similar molecules, most notably MSG (monosodium glutamate), the food additive and flavor enhancer so pervasive in processed foods -- behaves as a brain excitotoxin. Its chemical structure allows it to fit into a receptor within the brain called the NMDA (N-methyl-d-aspartate) receptor, triggering such overstimulation in the nerve cell that it dies. In other words, the brain cell literally becomes excited to death. Certainly we use only a small percentage of our brain in thinking and functioning, but shouldn't we want to keep all of it that we can? And besides, certain areas of the brain, such as the hippocampal area, which is involved in memory, are quite sensitive to these kinds of toxic insults.*

Reports in the medical literature suggest that in susceptible people, consuming aspartame may result in such symptoms as mood disturbances, sleep disturbances, headaches, dizziness, short-term memory loss, fuzzy thinking, and inability to concentrate. And what's more ...is that the excitotoxic effect may permanently damage the brain and nervous system. The possible risks to your brain simply aren't worth it. Our advice -- if you must have more sweetness than a tiny amount of honey, use the natural sweetener stevia.

Outraged at the FDA

With all of this in mind, there seems to be plenty of justification for outrage at the FDA for allowing this nerve toxin to continue to be sold and consumed in tremendous quantities. Blaylock says it best:

As a neurosurgeon I see the devastating effects a brain tumor has, not only on its victim, but on the victim's family as well. To think that there is even a reasonable doubt that aspartame can induce brain tumors in the American population is frightening. And to think that the FDA has lulled them into a false sense of security is ***a monumental crime****.*

And yet the FDA says there is a "safe" level of aspartame consumption that won't harm people. But at the same time, it enforces absolutely no requirement that food and beverage manufacturers list the amount of aspartame used in their products, thereby making it impossible for even the most determined consumers to add up their aspartame consumption for any given day.

As a result, people are consuming aspartame in quantities that far exceed even the FDA's fictional "limit."

Because aspartame is found in so many products, it is very easy to overdose without realizing it. A child meets the FDA maximum safety limit by drinking only 5 cans of diet soda per day; a 150-pound adult would exceed the limit by drinking 16 cans. This sounds ridiculous (how many people drink 16 cans of diet soda each day?), but when you take a vitamin pill with aspartame, eat your breakfast cereal and hot cocoa with aspartame, have some aspartame-sweetened gelatin and a soft drink for lunch, chocolate pudding with aspartame for dinner dessert, and maybe another soda, it adds up very quickly. Part of the problem with the current labeling for aspartame is that the actual amounts used do not have to be listed, so you really have no idea how much aspartame you are consuming.

- Debra Lynn Dadd, Home Safe Home

If you know anything about the FDA, you're probably not surprised with all this. That agency is primarily concerned with protecting the profits of corporate giants and pharmaceutical companies, not in protecting consumers. It's no surprise, then, that the "official" position of both the FDA and the American Medical Association is perhaps the epitome of medical misinformation:

"The American Medical Association has agreed with the FDA and many other regulatory agencies around the world that NutraSweet is safe for consumption by people of all ages, including children and pregnant women."

It's just like the title of the book, "Toxic Sludge Is Good For You!" Really, that's the title of a book about the public relations tactics of food and medicine companies. With all of this evidence available, to suppose that aspartame is safe for human consumption is ludicrous. To stand behind its promotion to pregnant women and young children is nothing less than criminal.

> *It goes without saying that the breast-feeding mother needs to avoid aspartame, monosodium glutamate, and other chemicals known to induce brain damage. Just as these substances cross the placental barrier, they cross into the breast milk and the blood-brain barrier, passing directly into your baby's brain to inflict its subtle damage.*
>
> **- Carol Simontacchi, The Crazy Makers**

Spinning the truth about aspartame

With all of the brain tumors, blindness, nerve damage, and other disorders apparently being caused by aspartame, the chemical's manufacturer was facing a growing public relations challenge. After a considerable search, I was able to get my hands on a fascinating account of the thinking that was going on behind the scenes at Monsanto (which then owned the Nutrasweet brand) from none other than one of Monsanto's public relations managers. I located this in the book, **Trust Us We're Experts**, which details how the PR industry engages in lies and distortions to protect their corporate clients from accountability. The account:

> Speaking at a November 1996 PR trade conference, Farrell described his experience managing the image of chemical giant Monsanto's artificial sweetener, aspartame (trade name Nutrasweet). The product was having a hard time winning public acceptance, he said, because of "emotional and seemingly illogical responses" from the public. "This was important to our company because we were seeking to grow our franchise outside the accepted context of diet," he explained. In order to understand the public's resistance, Monsanto hired a psychologist.
>
> For years, Farrell said, the company had described Nutrasweet as "an artificial sweetener." But the word "artificial," it realized, "conjures up cancer, headaches, rat studies, laboratories, dueling scientists, allergies, epilepsy, you name it, none of which are very appetizing." Referring to Nutrasweet as a "sugar substitute" was also a mistake. "People don't like it when you claim to be like sugar," Farrell said, because "memories of sugar take them back to their childhood, a simpler time when there was less to worry about and sugar was a sweet treat, a reward. . . . Our own words were defining our product in a manner that created thoughts of being unnatural, unsafe, unsweet and led people to conclude that we believed Nutrasweet was better than the most beloved food product in history." The psychologist also advised them that "the American public admires and takes great pride in discoveries and innovations gained through hard work."
>
> Armed with this knowledge, Nutrasweet created "sweetspeak." According to Farrell, "Words such as 'substitute,' 'artificial,' 'chemical,' 'laboratory,' 'scientist' were removed forever from our lexicon and replaced with words such as 'discovered,' 'choice,' 'variety,' 'unique, 'different,' 'new taste.'"

> Using sweetspeak, Farrell gave an example of how Nutrasweet now responds to the question: How do you know aspartame is safe? The answer: “Aspartame was discovered nearly 30 years ago. Since that time, hundreds of people in our company and elsewhere around the world -- people with families like yours and mine -- have devoted themselves to making sure consumers can be confident of their choice when they choose the taste of Nutrasweet. People have looked at our ingredient in every which way possible, and we encourage that because we want consumers to be comfortable when they choose Nutrasweet. That has been our commitment for nearly three decades, and it will always be our commitment. You can feel confident choosing products that contain our ingredient, but if you don’t, you have other choices.”

Now if that’s not serious spin, nothing is.

Additional supporting quotes about the health consequences of aspartame
For your continued exploration on this topic, here are some additional quotes on aspartame from the books I’ve mentioned here. Additional resources are offered below.

> *Finally, the artificial sweetener, aspartame contains multiple breakdown products and primary components (phenylalanine, aspartic acid and methanol) that have been shown to increase free-radical production. For example, formaldehyde and formic acid formed from the breakdown of methanol, have been shown to severely damage DNA, most likely by such a mechanism. Another component, aspartic acid, is an excitotoxin that increases free-radical generation within the brain, especially the parts related to memory and fine coordinated movements. ...In addition, the metabolic breakdown of aspartame yields about a dozen toxic compounds, some of which have been associated with cancer induction and alteration of brain function.*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**
>
> *Scientific testing to establish aspartame’s safety prior to FDA approval resulted in brain tumors and grand mal seizures in rat studies, and depression, menstrual irregularities, constipation, headaches, tiredness, and general swelling in human test groups. Furthermore, during human evaluations, two of the subjects underwent cancer operations.*
>
> **- Debra Lynn Dadd, Home Safe Home**
>
> *Before it is absorbed, aspartame also produces formaldehyde and methyl alcohol in the intestines. The quantity depends on the amount of sweetener taken in sodas or in cooked food. Formaldehyde and methyl alcohol have been cited as producing eye-nerve damage -- to the point of even causing blindness.*
>
> **- Fereydoon Batmanghelidj, M.D., Water for Health and Healing**

Other side effects of Nutrasweet include headaches, depression, bladder irritation and feeling as if there is a continual need to urinate. The latter symptoms are often thought to be involved with a urinary tract infection. Visual symptoms appear to be more common with aspartame than MSG and some cases of blindness have been reported. The relationship of these visual symptoms with the methanol content of Nutrasweet has been suggested as a cause.

- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex

We are now aware of enough credible scientific research detailing the dangers to memory, sleep, and mood, and much more that may be suffered by some people using this sweetener that we discourage its use.

- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan

The problem with aspartame lies in overconsumption and the fact that phenylalanine alone (without its companion amino acids) is not a normal part of the diet. Large doses of phenylalanine are toxic to the brain and can cause mental retardation and seizures in people with phenylketonuria (PKU), a genetic disorder. For others, the sweetener may cause chemical changes in the brain that could contribute to headaches, depression, mood swings, high blood pressure, insomnia, and behavior problems. In addition, it could cause your appetite-control center to malfunction, so your diet drinks could be causing more harm than good. Aspartame may also cause birth defects and is not recommended for use by pregnant women.

- Debra Lynn Dadd, Home Safe Home

Where to learn more about aspartame

To learn more about not only aspartame, but also the hazardous health effects of other excitotoxins that people may be ingesting in dangerously high quantities, I highly recommend the books I've mentioned here:

- Aspartame: Is It Safe?
- Excitotoxins
- Home Safe Home
- In Bad Taste
- The Crazy Makers

Acesulfame-K, yet another artificial chemical sweetener

Another popular chemical sweetener is acesulfame potassium, also called acesulfame-K. Here's a brief definition and history of this artificial sweetener:

> *ACESULFAME K • Acesulfame Potassium. In a petition filed in September 1982, the American Hoechst Corporation asked for approval to make this nonnutritive sweetener, which is two hundred times sweeter than table sugar, for use in chewing gum, dry beverage mixes, confections, canned fruit, gelatins, puddings, custards, and as a tabletop sweetener. The petition, including fifteen volumes of research studies, said the sweetener is not metabolized and would not add calories to the diet. The FDA approved acesulfame K on July 27, 1988, for use in dry food products and for sale in powder form or tablets that can be applied directly by the consumer. It has about the same sweetening power as aspartame, but unlike aspartame, has no calories. Hoechst obtained approval to use acesulfame K as an ingredient in liquids, baked goods and candies. The sweetener had previously been approved for use in twenty countries including France and Britain. Pepsi and Coca-Cola use it in Europe and Canada in their diet drinks.*
>
> **- Ruth Winter, M.S., Food Additives**

While acesulfame-K generates nowhere near the number of health complaints as aspartame, it was nonetheless shown to produce tumors in animal testing. As described by Dr. H. J. Roberts in **Aspartame: Is It Safe?** :

> *Several potential problems associated with the use of acesulfame have been raised. They are based largely on animal studies since testing on humans remains limited.*
>
> *• It stimulates insulin secretion in a dose-dependent fashion, thereby possibly aggravating reactive hypoglycemia ("low blood sugar attacks").*
>
> *• It apparently produced lung tumors, breast tumors, rare types of tumors in other organs (such as the thymus gland), several forms of leukemia, and chronic respiratory disease in several rodent studies, even when less-than-maximum doses were given.*

The FDA says the tumors are perfectly "normal."

The FDA, which no reasonably informed person would really trust on matters like this in the first place, says that the increase in tumors during the acesulfame-K testing was "normal." That is, those tumors would have appeared anyway.

But many in the scientific community strongly disagree. In fact, the FDA has been the subject of harsh criticism from a long list of researchers, doctors and scientists who rightly claim that acesulfame-K simply has never been subjected to stringent safety testing. The testing that has been conducted so far is not only insufficient, these experts say, but downright flawed.

Here's a collection of quotes from several cancer experts commenting on the safety testing of acesulfame-K testing. These quotes are reprinted from the Center for Science in the Public Interest (CSPI) website:

Sample quotes from cancer experts' letters on acesulfame-K testing

"These data do not permit an assessment that use of this compound would provide a reasonable certainty of no harm. In fact, there are indications that it might be carcinogenic. I would strongly suggest that a properly designed long term study in both mice and rats be conducted before Acesulfame K be considered for approval." -- David Rall, M.D., Ph.D. Assistant Surgeon General, United States Public Health Service (retired). Former director, United States National Institute of Environmental Health Sciences (NIEHS/NIH). Former director, United States National Toxicology Program (NTP).

"There are several serious flaws in the design and conduct of the tests.... The only conclusion one can draw from looking at the available results is that acesulfame should be tested in a proper way before an evaluation of its carcinogenicity can be made." -- Lorenzo Tomatis, M.D. Former director, International Agency for Research on Cancer (IARC), a World Health Organization agency.

"These studies are inadequate to assess the carcinogenic potential of the compound. In the face of inadequate study design and conduct, which would tend to obscure a carcinogenic effect if it were there, nevertheless there was at least equivocal evidence for carcinogenic activity in several studies." -- Franklin E. Mirer, Ph.D. Director, Health and Safety Department, United Automobile Workers. Member of the Board of Scientific Counselors of the National Toxicology Program (NTP).

"I find the actual studies and the data analysis seriously flawed. New tests, properly designed, executed, and analyzed are needed. The usual consequence of poor tests is to make it harder to find any effects. Despite the low quality of the studies reported to you, I find that there is evidence of carcinogenicity." -- Marvin Schneiderman, Ph.D. Former Associate Director of Field Studies and Statistics at the National Cancer Institute.

"...(T)he available data on this compound is at best incomplete.... Because of the widespread consumption of 'diet' colas in the U.S., I concur with your position that FDA should require comprehensive testing prior to granting this additional use. The data on carcinogenicity are not negative.... (T)he findings are consistent with potential carcinogenicity." -- Ellen K. Silbergeld, Ph.D. Professor of Epidemiology and Toxicology, University of Maryland at Baltimore. Former member, Board of Scientific Counselors of the National Toxicology Program (NTP).

"...(I)t is clear that questions arising in earlier -- extremely inadequate -- studies about the additive's cancer-causing properties have not been resolved.... Given the likelihood that millions of Americans would be exposed to acesulfame were the additive to be approved for beverage use, the questions about its carcinogenicity must be resolved before a scientifically supportable regulatory decision can be made." -- Sidney M. Wolfe, M.D. Director, Public Citizen's Health Research Group. Former member of the NCI Carcinogenicity Clearinghouse.

In summary, although acesulfame-K might be less dangerous to you than aspartame, it remains a substance that should only be used sparingly. I agree with Eades' advice on this chemical sweetener:

> *In the same general chemical family as saccharin, acesulfame potassium (or, as it's usually called, acesulfame K) is potentially fraught with the same problems relative to cancer causation and the stimulation of insulin release. Thus far no human data has emerged (just as in the case of saccharin) to indict the sweetener as carcinogenic. Like saccharin, it's noncaloric and stable in liquids and in cooking. Is it safe to use? In small amounts infrequently, probably so. But once again, our advice to Protein Power LifePlan Dilettantes and Hedonists who might choose to use acesulfame K is to use it sparingly!*
>
> **- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

As it turns out, the real test of acesulfame's safety is being conducted right now -- on the entire population. It will take years, perhaps decades, for the true long-term results of acesulfame consumption to become apparent. In the meantime, my advice is to avoid acesulfame and stick to more natural sweeteners as discussed below.

The Sucralose question

The chemical sweetener now rapidly gaining market share is sucralose. Sucralose is sold under the brand name Splenda. Its use is accelerating rapidly around the world, but is it safe?

Approved for use by the FDA in 1998, sucralose doesn't have the track record to prove either its safety or potential dangers to human health. Of the artificial chemical sweeteners discussed here, sucralose has the least number of critics, and it hasn't produced the avalanche of complaints caused by aspartame.

Once again, Eades' takes a conservative approach to sucralose:

> *Sucralose remains stable, withstands heat in cooking, measures like sugar, to most people tastes remarkably like sugar with no detectable aftertaste, and contains no absorbable calories -- so it looks perfect. But is it? It's tempting to say so, but based on the track record of its forerunners, we'd have to say let's wait and see. To date, it looks like the most promising sugar substitute yet formulated, and it's the one we currently use ourselves when we occasionally need an extra bit of sweetness (which is actually a pretty rare occurrence for us).*
>
> **- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

Like aspartame, sucralose was approved by the FDA after minimal testing on human beings. Although sucralose is made from real sugar, it is manufactured by altering the chemical structure of sugar molecules to include chlorine atoms. Chlorine is not a chemical substance that belongs in the human body.

Dr. Joseph Mercola, author of **The No-Grain Diet** and Mercola.com, states the following about sucralose safety:

> *Few human studies of safety have been published on sucralose. One small study of diabetic patients using the sweetener showed a statistically significant increase in glycosylated hemoglobin (Hba1C), which is a marker of long-term blood glucose levels and is used to assess glycemic control in diabetic patients. Research in animals has shown that sucralose can cause many problems in rats, mice, and rabbits, such as:*
>
> *Shrunken thymus glands (up to 40 percent shrinkage)*
> *Enlarged liver and kidneys.*
> *Atrophy of lymph follicles in the spleen and thymus*
> *Increased cecal weight*
> *Reduced growth rate*
> *Decreased red blood cell count*
> *Hyperplasia of the pelvis*
> *Extension of the pregnancy period*
> *Aborted pregnancy*
> *Decreased fetal body weights and placental weights*
> *Diarrhea*

The sucralose manufacturer spins the study results

Interestingly, in a fairly typical “Eat toxic sludge!” response by the manufacturer regarding the shrunken thymus glands experienced by the test animals eating sucralose, they claimed that the taste of sucralose was unpleasant to the animals and they simply stopped eating. The shrunken thymus glands were due to starvation, if you can believe that! (Adapted from the **Sucralose Toxicity Information Center**).

The fact is, the jury is still out on sucralose. This substance has in no way been proven safe, and the fact that it uses chlorine atoms makes it highly suspect in the first place.

This lack of evidence of safety for sucralose is especially troublesome for people trying to avoid added sugars, since so many of the available sugar-free now contain sucralose as their sweetener. So it may not be easy to digest, so to speak, when I suggest that sucralose is yet another chemical sweetener that should be avoided by those wishing to protect their health. The available evidence doesn’t necessarily prove that sucralose is harmful to health, but neither has it been proven safe for long-term human consumption, and until this product is sufficiently tested for widespread human consumption, I don’t think it’s wise to volunteer as a human guinea pig to field test a chemical substance that’s manufactured with chlorine atoms.

Additional resources for learning more about sucralose

Sucralose Toxicity Information Center:
http://www.holisticmed.com/splenda

Dr. Joseph Mercola's site on sucralose:
http://www.mercola.com/2000/dec/3/sucralose_dangers.htm

The inside story on the FDA and the politics of saccharin

I won't say much about saccharine, since few manufacturers use this ingredient anymore. It has been clearly shown to promote cancer and its use by food manufacturers has dropped to almost nothing. Informed consumers already know that saccharin is to be completely avoided, even though the FDA mysteriously decided in 2000 that saccharin no longer posed a cancer risk and eliminated the cancer warning label requirement on products containing it.

> *Saccharin has been extensively tested for carcinogenicity in rodents over the last three decades. Approximately a dozen conventional feeding tests, one dating back to 1948, have shown that saccharin is carcinogenic in both rats and mice. While each of these individual studies may be criticized on some grounds or other, taken together the weight of evidence proving the carcinogenicity of saccharin is overwhelming. In addition to cancer of the urinary bladder in rats, the predominant tumor induced in these tests, saccharin also induced cancers in female reproductive organs, and lymphomas or leukemias in both mice and rats.*
>
> **- Samuel S. Epstein, M.D., The Politics of Cancer**

Interestingly, the FDA actually tried to ban saccharin, which is unusual for the agency. In this case, it were thwarted by political pressure from the Calorie Control Council, an industry group made up of saccharin manufacturers and food manufacturers using saccharin. There were profits to protect, after all!

> *The FDA proposed restricting saccharin to fifteen milligrams per day for each kilogram of body weight or one gram a day for a 150-pound person. Then, on March 9, 1977, the FDA announced the use of saccharin in foods and beverages would be banned because the artificial sweetener had been found to cause malignant bladder tumors in laboratory animals. The ban was based on the findings of a study sponsored by the Canadian government that found that seven out of thirty-eight animals developed tumors, three of them malignant. In addition, one hundred offspring were fed saccharin, and fourteen of them developed bladder tumors. In contrast, one hundred control rats were not fed saccharin and only two developed tumors. At the time of the FDA's announcement, five million pounds of saccharin were being consumed per year, 74 percent of it in diet soda, 14 percent in dietetic food, and 12 percent as a tabletop replacement for sugar. There was an immediate outcry, led vociferously by the Calorie Control Council. The FDA, urged by Congress, then delayed the ban. The moratorium on prohibiting the use of saccharin has been extended indefinitely.*
>
> **- Ruth Winter, M.S., Food Additives**

In the year 2000, the FDA, under even more pressure from industry, dropped saccharin from its official list of substances that may cause cancer. Now, food products using saccharin don't have to print the cancer warning. By simply "redefining" saccharin, the FDA, which once sought to ban this chemical, has essentially proclaimed the ingredient to be perfectly safe!

Avoid all chemical sweeteners and use stevia instead

Looking at all of these chemical sweeteners, you may think I'm just the bringer of bad news. It turns out none of these chemical sweeteners have been proven safe for widespread, long-term human consumption. And most have been sufficiently researched to raise important, serious questions about whether they actually contribute to health disorders.

But I want to tell you there is good news yet to come. The single best alternative sweetener is one not yet approved for use in foods by the FDA: stevia. Stevia is derived from a plant and has been used for decades throughout the world as a non-calorie alternative sweetener. It contains no chemicals or artificial substances, has virtually no calories, adds nothing to your carbohydrate count, and does not alter blood sugar levels or cause the pancreas to produce insulin. I've been using stevia for years and recommending it to people since 1998. It is the single best alternative sweetener I've seen yet and is becoming increasingly available in nutritional supplements and even as standalone products in health food stores.

If stevia is so safe and such a perfect alternative sweetener, then why hasn't it been approved for human consumption by the FDA? The answer is politics. If you know anything about the FDA, you know that the agency's demonstrated purpose is to protect the profits of private industry. Approving stevia as a safe ingredient would destroy the profits of the manufacturers of aspartame and sucralose. Some believe, with good reason, that the FDA has been pressured to avoid approving stevia in order to protect the profits of these chemical companies.

Regardless of politics, as an informed consumer you can use stevia in any way you like. And thankfully, many food manufacturing companies are adding stevia to their products despite the status of the herb held by the FDA.

I'll talk more about stevia later, but for now I want to bring you back to the main point of this section: that too many consumers frequently turn to products sweetened with chemical sweeteners, and as a result, they are turning themselves into human guinea pigs and consuming chemicals that have never been proven safe for long-term consumption.

As a person who used to eat refined carbohydrates and who now avoids them, I certainly understand sweet tooth cravings. I can also tell you that the way to eliminate those cravings, or at least bring them back under control, is to engage in aggressive nutritional supplementation. In my experience and that of many others, sweet tooth cravings are primarily caused by nutritional deficiencies. A lack of certain minerals, including trace minerals, promotes these cravings.

When you do have cravings for carbohydrates, it's best to turn to foods and drinks that are sweetened with natural sweeteners. Stevia is my favorite, as I mentioned, but there are many others available as well (barley malt extract, brown rice syrup, agave nectar, etc).

You can read my articles on stevia, which will include recommendations on sources, at:

http://www.newstarget.com/stevia.html

Sugar alcohols

When it comes to ingredients that replace the sweetness of sugar, food manufacturers frequently turn to a class of sweeteners known as sugar alcohols.

These sugar alcohols include ingredients like maltitol, glycerin, mannitol and xylitol. There are some annoying side effects associated with these sugar alcohols, and at least some slight indications of possible health risks from their heavy consumption. From **Food Additives**:

> *MALTITOL and MALTITOL SYRUP • Obtained by the hydrogenate from maltose (**see**). A candidate for a sugar substitute, it has 90 percent the sweetness of sugar and does contain calories. It has the potential for use in confections and candy coatings. In a cancer study in rats, changes were observed in the adrenal gland, which included increased incidence of both benign and malignant tumors of the adrenal glands in both sexes and a "slight increase" in breast cancer in female rats. The FAO-WHO Expert Committee on Food Additives did not consider these cancers to be related to treatment. The Committee, however, recommended that the information database on adrenal overgrowth and tumors associated with polyols and other poorly absorbed carbohydrates (**see both**) be reviewed that the mechanisms of appearance of these lesions and their toxicological significance be assessed at a future meeting.*
>
> *XYLITOL • Formerly made from birch wood, but now made from waste products from the pulp industry. Xylitol has been reported to have diuretic effect but this has not been substantiated. It is used in chewing gum and as an artificial sweetener. It has been reported to sharply reduce cavities in teeth but costs more than sugar. The reason is that, unlike sugar, it doesn't ferment in the mouth. Therefore, it is sold for foods that stay in the mouth for some time, such as gum, toffee, and mints. FDA preliminary reports cited it as a possible cancer-causing agent. Xylitol is now used in eleven European countries and the United States and Canada. It is also used in large amounts in the Soviet Union as a diabetic sweetener. Xylitol was evaluated by the FAO-WHO Expert Committee on Food Additives in Geneva, April 11-20, 1983. On the basis of submitted data, the committee accepted that the adverse effects observed in British studies, in which cancer-prone rats were fed large doses of xylitol, were species-specific and could not be extrapolated to humans. Therefore, no limit on daily intake was set and no additional toxicological studies were recommended. It can cause stomach upsets when taken in large amounts. It may be of benefit to diabetics since xylitol metabolization does not involve insulin.*

These ingredients come from natural sources (yes, even "wood pulp" is a natural source), but they have a chemical structure that delays digestion and conversion into blood sugar in the human body. In other words, they they won't raise your blood sugar in the way that refined carbohydrates do.

They do have another side effect, however: in some people, they can contribute strongly to **diarrhea or flatulence**. This occurs because even though these sugar alcohols are not converted to carbohydrates, they do pass through your large intestine where your intestinal flora can consume

the sugar alcohols and emits various gases as a byproduct of their own metabolism. The results can be extraordinary in terms of the volume of gas coming out of your own body, a phenomenon that has given rise to the phrase “riding the low-carb rocketship.”

In my experience, xylitol is especially potent as rocket fuel, which is a shame because I think xylitol is a wonderful alternative sweetener that offers protection against dental cavities as a positive side effect. Out of these sugar alcohols, xylitol is also the most expensive, which is one reason why you rarely see it used in food products like food bars.

Whether these sugar alcohol sweeteners create a flatulence effect in your own body is something that you may wish to experiment with, preferably over a weekend when you’re not planning any social engagements. When you eat sugar alcohols, these side effects don’t appear until half a day later, and when you stop eating sugar alcohols, you have a one-day lag time before your system returns to normal. So proceed carefully when consuming these ingredients.

Aside from these rather annoying side effects, sugar alcohols don’t seem to impose any additional health risks to your system. From the research I’ve conducted, that makes them far healthier than any of the artificial chemical sweeteners we’ve previously discussed. If you find that your system is somehow immune to the gaseous effects of sugar alcohol, these natural sweeteners would be an excellent dietary choice. And even though I still believe that stevia is the best alternative sweetener of all (with none of the rocketship affects of sugar alcohols, by the way) sugar alcohols like xylitol have a far better taste, according to most people. Xylitol tastes just like sugar, and it has a similar consistency as well.

Summing up the good and the bad of sugar alcohols like xylitol

Let’s review the upside of sugar alcohols:

- No chemicals
- Not artificial
- Low glycemic index
- Taste almost like sugar
- Fewer calories than sugar

The downside of sugar alcohols:

- Diarrhea
- Flatulence
- Can be expensive (xylitol)
- Long-term safety for human consumption not demonstrated

The word of wisdom on sugar alcohols, according to Eades, is once again "caution!" Here's the scoop:

> *Sugar Alcohols. These products, such as xylitol, sorbitol, and maltitol, retain the sweet-taste-bud stimulating properties of sugars, but their altered structure prevents their absorption from the intestinal tract. As a consequence, eating them won't make your blood sugar rise or spur a release of insulin. Their lack of effect on the blood sugar and insulin metabolism has placed them in the forefront as sweeteners for "diabetic" products, such as candies and chewing gum. In small doses, they appear to be harmless. As is our usual recommendation with artificial sweetening agents, the bywords are small doses and used occasionally, and for very practical reasons: since they're not absorbed and pass through with the intestinal contents, they can cause what's termed an osmotic diarrhea if consumed in large quantities. Use sparingly!*
>
> **- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

Hydrogenated Oils and Trans Fats

> *I'm more concerned about trans fatty acids, for they are like nothing Mother Nature has ever seen before. These chemically altered fats are cropping up everywhere: in margarine, hydrogenated oils, peanut butter, baked goods, and fried foods. Recent research suggests that trans fatty acids are even more harmful than saturated fats. They increase the risk of heart disease to a greater degree than saturated fats, for in addition to raising total cholesterol, they lower protective HDL cholesterol. They also have been implicated in cancer of the breast and prostate, diabetes, immune dysfunction, and infertility. Drs. Walter Willett and Alberto Ascherio of the Harvard School of Public Health have estimated that 30,000 premature deaths every year are attributable to our consumption of trans fats.*
>
> **- Julian Whitaker, M.D., Reversing Diabetes**

Of all the metabolic disruptors and unhealthful ingredients discussed so far, none are more frequently abused and more damaging to your overall health than the ones discussed here: hydrogenated oils and trans fatty acids. I'll be discussing them together because they go together in most foods.

Most people are at least somewhat aware of the dangers of "trans fats" since they have received so much media attention over the last few years. But few people are aware that **all hydrogenated oils contain trans fats**. And few people read labels of the foods they buy, so even though they know trans fats are dangerous to their health, they buy them and eat them anyway!

And yet few people truly realize the degree of harm these hydrogenated oils and trans fats are causing to their bodies:

> *The artificially produced trans fats, formed by the process called partial hydrogenation, pollute the cell membranes and interfere with their function. Their toll on health is vast, including: lowering HDL (the good cholesterol), raising LDL (the bad cholesterol), raising overall cholesterol, decreasing reproductive functions, lowering the nutritional quality of breast milk,* weakening the ***immune system****, stiffening the cell membranes, interfering with the production of good essential fats from dietary fat, contributing to the development of* ***obesity****, and, most importantly, directly contributing to the development of* ***insulin resistance*** *and hyperinsulinemia. These fats occur in all sorts of prepackaged and processed foods, from* ***margarine*** *and salad and cooking oils to bakery goods, chips, crackers, and candies. Look for the words* ***partially hydrogenated*** *on the label and avoid any food containing these fats.*
>
> **- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

The FDA drags its feet on requiring food manufacturers to list trans fats on labels

Yet despite the well established negative health consequences of consuming hydrogenated oils, the FDA, in typical FDA fashion, dragged its feet for years, refusing to require food companies to list trans fats on their labels. Finally, under mounting pressure from health advocates and organizations like CSPI and Public Citizen, the FDA gave in and will start requiring food companies to list trans fat content in January, 2006.

Given the overwhelming evidence of the link between trans fats and diseases like cancer, cardiovascular disease and diabetes -- all of which will be discussed in more detail -- you might wonder what sort of bizarre justification the FDA could come up with for protecting the food industry by not requiring the listing of trans fats on these nutrition facts labels years ago. Hold on to your seat, because here it is:

The FDA has decided that since trans fats should be entirely avoided in the diets of all human beings, there is consequently no recommended daily allowance of trans fats. Thus, manufacturers of foods cannot list the trans fat content of their food products in any “meaningful” way on the label, according to the FDA.

That's FDA logic for you. But to truly understand the magnitude of the harm being perpetrated by the FDA in allowing hydrogenated oils to continue to be used in the food supply, you'll need to examine all of the diseases and disorders that have been linked to hydrogenated oils and trans fats:

- Breast cancer (rates triple for women who eat hydrogenated oils)
- High levels of "bad" cholesterol
- Coronary heart disease and heart attacks
- Cancer
- Prostate disease
- Diabetes
- Obesity
- Immune system suppression
- Low birth weight infants (when mothers eat hydrogenated oils)
- Abnormal sperm production
- Decreased testosterone in men
- Essential fatty acid (EFA) deficiencies
- Brain function disorders

All of this adds up to an estimated 30,000 premature deaths each year in the United States alone from the consumption of hydrogenated oils. That's nearly ten times the casualties of the 9/11 attack, and yet there's no outcry, no wave of new laws to ban this ingredient, and nothing but silence from the FDA.

The problem with all this is trans fats are everywhere in the food supply. If you eat refined foods or processed foods, it's very difficult to avoid trans fats or hydrogenated oils:

Foods containing hydrogenated oils

> *It is difficult to live in the United States and avoid trans-fatty acids because they have infiltrated the entire food supply. Anytime you see the words "partially hydrogenated" on a label, trans-fatty acids lurk within. Take the time to go through the supermarket aisles and read the labels on baked goods, snack foods, and mixes. Virtually every one contains trans-fatty acids.*
>
> **- Artemis P. Simopoulos, M.D., The Omega Diet**

The number of foods at the grocery store that contain hydrogenated oils is truly staggering. Walking down the "cookie and cracker" aisle and reading the ingredients of all the products leaves a person bewildered: practically every cookie or cracker product is made with hydrogenated oils!

It's no better in the snack aisle either: almost all of the potato chips, corn chips, flavored popcorn, party mixes and other snacks contain hydrogenated oils, too:

> *Many of the foods you buy in the store and in restaurants are prepared with or cooked in hydrogenated oil. Fried foods sold in grocery stores and restaurants are usually cooked in hydrogenated oil. Many frozen, processed foods are cooked or prepared in hydrogenated oils. Hydrogenated oils are used in making french fries, biscuits, cookies, crackers, chips, frozen pies, pizzas, peanut butter, cake frosting, candy, and ice cream substitutes such as mellorine.*
>
> *The processed vegetable oils you buy in the store aren't much better. The heat used in the extraction and refining process also creates trans fatty acids. So that bottle of corn or safflower oil you have on the kitchen shelf contains trans fatty acids even though it has not been hydrogenated. Unless the vegetable oil has been "cold pressed" or "expeller pressed," it contains trans fatty acids. Most of the common brands of vegetable oil and salad dressings contain trans fatty acids.*
>
> **- The Healing Miracles of Coconut Oil**

The primary source of consuming hydrogenated oils and trans fats in the Western diet is: 1) Margarine, and 2) Shortening. Margarine is easy to avoid, since the only action required is to look for new trans-fats-free products made without hydrogenated oils (you can find them in any grocery store these days).

But shortening is harder to avoid, since it's an added ingredient in all sorts of food products like peanut butter, baked crackers and most snack foods. It's even in most tortillas.

Here's an expanded list of the types of foods and grocery products that contain hydrogenated oils and trans fats:

- Shortening
- Margarine
- Peanut butter
- Cookies
- Crackers
- Fried foods
- Milk
- Milk products
- Salad dressings
- Potato chips
- Corn chips
- Graham crackers, animal crackers, cookie sandwiches
- Granola
- Tortillas
- Doughnuts
- Pie crusts
- Cinnamon rolls and most pastries
- Cake mixes, muffin mixes
- Biscuit mixes
- All fried foods, whether frozen or not

Action Item:

Look for "partially-hydrogenated" oils on food labels. Strictly avoid <u>any product</u> that lists partially-hydrogenated oils as one of its ingredients.

Let's take a closer look at the diseases known to be caused by hydrogenated oils and trans fats:

Hydrogenated oils, trans fats and heart disease

There is overwhelming evidence that hydrogenated oils and trans fats pose severe health risks to humans. The most obvious risk is that of heart disease and cardiovascular disorders:

> *A study involving 600 men (ages 64-87), determined that every 2 percent increase in trans fatty acids increased the risk of developing* ***coronary heart disease*** *25 percent over the next 10 years. The influence of different types of fats can also be observed in the progression of diabetes. For example, the risk of diabetes was not increased among 84,204 women whose intake of fats came chiefly from nuts, seeds, and avocados, but a 2 percent increase in calories from trans fatty acids raised the* ***risk of diabetes by about 39 percent****. Conversely, a 5 percent increase in calories from polyunsaturated fats lowered the risk of diabetes 37 percent.*

> *In 1993, doctors at Harvard Medical School found that women who ate four or more teaspoons of margarine a day had a **50 percent greater risk** of developing **heart disease**, compared to women who ate margarine only rarely (Harvard School of Public Health 2002).*
>
> *Growing public awareness regarding the dangers imposed by trans fats has prompted a reduction in their consumption. An example of the benefits of eliminating trans fatty acids from the diet comes by way of a study released from The Netherlands. An average **2.4 percent drop in trans fatty acid** consumption prompted a* **23 percent decrease in coronary deaths** *and saved, it is speculated, about 4,600 lives.*
>
> **- Disease Prevention and Treatment by the Life Extension Foundation**

Most of the research on hydrogenated oils and trans fats focuses on the damage to the heart and cardiovascular system. This is where these "toxic fats" do the most harm. Based on the research, they are more harmful than even saturated animal fats (like hamburger fat or butter) which have long been blamed for promoting cardiovascular disease.

> *One of the primary causes of heart disease in this country is bad fats. This doesn't just apply to saturated fats (which really aren't bad for you unless you eat too much of them). It applies much more to the trans fatty acids found in hydrogenated oils and margarine-type products, which are bad for you in any amount. These partially saturated, man-made fats were designed not to go rancid, but they have been found to actually cause heart disease.*
>
> **- Earl Mindell, Ph.D., Prescription Alternatives**

The primary mechanism blamed for the destructive effects of trans fats on the heart is that it raises the "bad" cholesterol while lowering the "good" cholesterol, creating a "double whammy" negative impact on the health of your blood:

> *While they may lack saturated fat, hydrogenated products such as margarine can be even more dangerous to your heart. Three studies have found that trans-fatty acids can raise cholesterol even higher than saturated fat ...and the damage isn't only to your arteries.*
>
> **- Bill Gottlieb, New Choices in Natural Healing**
>
> *Recent research indicates that these synthetic fats raise cholesterol levels in the arteries much the way saturated fats do. Thus trans-fatty acids not only increase the likelihood of a variety of metabolic disorders including arthritis and cancer, but also contribute to heart disease. In the United States, 95 percent of trans-fatty acid ingestion is from eating margarine and shortening.*
>
> **- Paul Pitchford, Healing With Whole Foods**

Trans-fatty acids raise your LDL cholesterol at the same time that they lower your HDL (good) cholesterol, pushing both of these blood fats in the wrong direction. A Boston research team found that people with the highest levels of trans-fatty acids in their diet had two and a half times the risk of heart attack as those who ate the least amount of this artificial fat.

- Artemis P. Simopoulos, M.D., The Omega Diet

What's clear from all this is that anyone who has suffered from a heart attack, or who is at risk of heart attacks or stroke, should clearly stay away from hydrogenated oils and trans fats for life. There is no safe level for human consumption, no matter what your state of health. Because heart disease is only the beginning...

Hydrogenated oils, trans fatty acids and cancer

The consumption of hydrogenated oils also shows strong correlation with the onset of cancer, as described in **Eat To Beat Cancer** by J. Robert Hatherhill, Ph.D.:

Delve into your pantry and discard all your omega-6 vegetable oils like corn, safflower, and cottonseed oils. Halt your consumption of, and generally avoid, partially hydrogenated vegetable oils. The process of hydrogenation is accomplished by bubbling hydrogen gas through oil, which produces trans-fatty acids. Recent human studies indicate that consumption of trans-fatty acids in margarine and shortenings may contribute to higher rates of cancer and heart disease. Food makers add these to improve the creaminess of a product, and to extend its shelf life. Be wary since food labels do not include the amount of trans-fatty acids.

- J. Robert Hatherill, Ph.D., Eat To Beat Cancer

To understand the mechanism by which these trans fats may be promoting cancer, read this passage from **Herbal Defense**:

The rise in cancers and other illnesses has been attributed in part to Americans' increased use of these highly processed, "deformed" fats. This is logical, since the fat we eat is what our cells become. Since fats are used as materials to build cell membranes, it makes sense that misshapen, twisted fatty-acid molecules will create messed-up cells. "Good" fats with the correct structure fit into the membranes properly. But "bad" fats with their irregular shape fit into cell membranes like a broken key. The unnatural fatty acid disrupts the cell's functioning, locks out the natural-form fatty acids that are actually needed there, and leaves a defective problem cell.

- Robyn Landis, Herbal Defense

This same mechanism -- the abnormal alteration of cell membranes -- is also visited in **Herbal Medicine, Healing & Cancer**, which discusses the ability of trans fats to promote breast cancer:

> Trans fatty acids, which are not found in nature, incorporate themselves into the cell walls, altering the cell membranes and making them more permeable. This can lead to abnormal hormonal extracellular stimuli and the eventual promotion of breast cancer.
>
> **- Donald Yance and Arlene Valentine, Herbal Medicine, Healing & Cancer**

When it comes to trans fats and cancer, the links are well documented and widely known in the scientific community. They are hardly known at all by the general public, however, and there is no public education campaign that seeks to warn consumers about the cancer risk of consuming hydrogenated oils.

Hydrogenated oils, trans fatty acids and diabetes

> *Researchers followed the medical and dietary histories of 84,204 nondiabetic women over 14 years. From this group, 2507 cases of type 2 diabetes were documented. Statistics showed that intake of total fat, saturated fat, and monounsaturated fat (as found in nuts, seeds and avocados), did not influence diabetic risk. However, a 2 percent increase in calories from* ***trans fatty acids raised the risk by 39 percent****, and a 5 percent increase in calories from polyunsaturated fat reduced the risk by 37 percent. It is speculated that substituting foods rich in trans fats with polyunsaturated fats could reduce the risk of type 2 diabetes by nearly 40 percent (Salmeron et al. 2001).*
>
> **- Disease Prevention and Treatment by the Life Extension Foundation**

As this study shows, there exists evidence that trans fats also promote diabetes in adult human beings. If you didn't have enough reasons to avoid trans fats already (heart disease and cancer), this is a third one: diabetes.

Since so many people who are dieting already suffer from either existing diabetes or high risk factors for diabetes, their avoidance of trans fats becomes extremely important. A person who gives up refined carbohydrates but starts consuming increased quantities of hydrogenated oils is setting themselves up for a health disaster.

Hydrogenated oils and trans fatty acids as "brain poison"

While most people who know about the dangers of hydrogenated oils associate them with cardiovascular disease and heart disorders, the health consequences of eating this substance go far beyond the circulatory system. Authors Michael and Mary Eades call attention to the ability of hydrogenated oils and trans fats to alter brain function:

> *Because of their abnormal shape, when they're taken up as raw material for the cell membranes, they simply don't fit properly. They stack too neatly, pack too tightly, and make the cell membrane less malleable. When this happens, receptors fail to function properly, brain-signaling chemicals can't transmit their messages normally, the insulating properties*

of the nerves break down, and the brain fails to perform optimally. And we may fall prey to depression, mood disorders, fuzzy thinking, sleep disturbances, and the whole host of brain and nervous system diseases that we mentioned earlier. Eating trans fats is like eating brain poison. We urge you to avoid them wherever you can. We feel strongly enough about the dangers of trans fats to your brain and to your general health to make this trans fat avoidance recommendation across the board.

It will take a while -- sometimes only weeks but often six months or longer -- for your dietary changes to make a noticeable impact on your brain and nerve tissues. It takes time to replace the poor-quality fats that may now be lurking in your tissues with good-quality ones. But one of the great things about the design of the human body is that it constantly renews, and because of this miracle, with good nutrition you can in time rebuild a healthier body and brain.

- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan

The “brain poison” problem isn’t only limited to people who consume trans fats -- it also involves their infants! A mother who breastfeeds her child needs to be especially careful to avoid trans fats in her diet:

Women who consume large amounts of trans-fatty acids (as found in margarine and other hydrogenated products, for example) have lower amounts of essential fatty acids in their breast milk. Hydrogenated fats are not adequate for optimum development of brain tissue. The milk of women who eat large amounts of trans-fatty acids (margarine, fried foods, shortening, etc.) contains harmful amounts of trans-fatty acids that are passed on to her child. In fact, trans-fatty acids are transmitted ***through the placenta into the fetus****, impairing* **formation of the brain tissue***.*

- Carol Simontacchi, The Crazy Makers

Hydrogenated oils and trans fatty acids interfere with the absorption of essential fatty acids (EFAs)

The hydrogenation process has a number of unwanted consequences, however. One rarely discussed fact is that it reduces the essential fatty acid content of oils, both omega-6 and omega-3. Untreated soybean oil, for example, contains about 8.5 percent omega-3 fatty acids. When partially hydrogenated, its omega-3 content drops to 3 percent. Another drawback of hydrogenation is that it rearranges the molecular bonds on fatty acids, transforming them into look-alike molecules called “trans-fatty acids.” Trans-fatty acids behave in many ways like saturated fat, including raising your LDL (bad) cholesterol. But they are even more destructive than saturated fat because they also lower your HDL (good) cholesterol, pushing both of these blood fats in the wrong direction. To make matters worse, they take the place of EFAs in cell membranes, interfere with their metabolism, and usurp some of the enzymes needed to create **hormone-like** *substances called eicosanoids that are involved in many aspects of human physiology.*

- Artemis P. Simopoulos, M.D., The Omega Diet

One of the problems with consuming hydrogenated oils is that they “compete” with the absorption and utilization of healthy oils -- omega-3 oils and other EFAs -- in your body. In other words, the more hydrogenated oils you have in your system, the less your body can absorb healthy omega-3 oils.

You are probably well aware that you need healthy oils in your body: monounsaturated oils like omega-3 fatty acids. That’s why these are called “essential” fatty acids: they’re essential to your good health! Without them, your body will begin to suffer from a number of metabolic disorders. And the more hydrogenated oils you eat, the less your body can absorb the healthy EFAs -- the “good” fats that you need!

Hydrogenated oils, trans fatty acids and obesity

> *In one study, women who ate margarine four or more times per week had a higher than normal risk of having three of the symptoms of Syndrome-X: low HDL cholesterol, high total cholesterol, and high triglycerides. They also weighed, on average,* ***five pounds more*** *than women who used other types of fat, with no indication they were eating more food or being less active. A related phenomenon has been observed in rats. When rats are fed a diet high in trans-fatty acids, they develop* ***larger fat cells****. Large fat cells have fewer insulin receptors and can store considerably more fat, increasing the* ***likelihood of obesity****.*
>
> **- Artemis P. Simopoulos, M.D., The Omega Diet**

It’s little surprise that these hydrogenated oils also promote obesity. And this provides a clue to how people can easily accelerate their weight loss results: avoid all hydrogenated oils! You will not only be doing your heart and your cells a huge favor, you’ll be avoiding the risk factors of diabetes that are associated with the consumption of these unhealthy fats.

When you put all of the health risks posed by hydrogenated oils together, the picture is shocking. With heart disease, cancer, brain disorders, diabetes and obesity all wrapped up in one single ingredient, any food made with that ingredient is following a recipe for disaster.

Speaking of disaster, how is it that trans fats cause all this damage in the first place? What’s really happening at the cellular level to make these oils so dangerous?

How trans fats cause such damage to the health of the human body

> *Since trans fatty acids are unnatural fats, the body hasn’t developed a specific way to deal with them, so it treats them like real fats and just does the best it can. Unfortunately, thanks to a sinister quirk of biochemistry, the body tends to incorporate trans fats into the lipid bilayer in preference to good-quality unsaturated fats, especially during times of essential-fatty-acid deficiency. Since most of us have a deficiency in omega-3 essential fats -- especially if we’re eating a diet containing a lot of trans fats -- and a surplus of omega-6 fats, what we end up with is a lipid bilayer made of trans fats and omega-6 fats, a real recipe for disaster.*
>
> - **Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

But to really understand the health danger posed by hydrogenated oils and trans fats, let's go right to one of the world's foremost experts on the physiological impact of dietary oils, Dr. Mary Enig, a research scientist at the University of Maryland. She has studied processed foods, hydrogenated oils and trans fats for many years, publishing a steady stream of scientific papers that describe the various "physiological alterations" that occur when people consume these unhealthy fats. As she describes:

> Trans fatty acids lower HDL (the good cholesterol) in a dose-response fashion; that is, the more trans fats you eat, the lower your HDL will be; they raise LDL (the bad cholesterol); they raise lipoprotein(a) -- in fact, trans fatty acids are one of the only substances known for sure to raise the levels of this mysterious, but dangerous, lipoprotein; and they raise total cholesterol in the serum by 20 to 30 milligrams per deciliter.
>
> And that's not where the damage stops. Trans fats interfere with the reproductive system, too, by decreasing the levels of testosterone in male animals, increasing the numbers of abnormal sperm. In the female, elevated levels of trans fats decrease the amount of cream in human breast milk, reducing the overall quality available to nourish the growing infant, which correlates with low birth weights. They also inhibit the function of a number of enzymes, in particular the delta-6 desaturase enzyme, one of the enzymes responsible for conversion of both omega-3 and omega-6 fats into their more unsaturated products, as well as altering the activities of the enzyme system that metabolizes toxic chemicals, carcinogens, and medications; and to add insult to injury, they even weaken the immune response while they increase the production of free radicals.
>
> ...Trans fats wreak even more havoc by decreasing the response of the cells to insulin. In other words, trans fats contribute to the development of insulin resistance directly as well as causing hyperinsulinemia. They hamper proper function of the insulin receptor by changing the fluidity of the lipid bilayer and other cellular membranes and even cause alterations in the size of adipose tissue cells, their number, and their fatty-acid composition, further worsening the effects of essential-fatty-acid deficiency.
>
> As you can see from this list, trans fatty acids cause a plethora of damaging effects throughout the body. We -- or, more precisely, food manufacturers -- have made a real Faustian bargain: we've traded a longer shelf life for a shorter human life.
>
> - **Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

Part of the underlying metabolic cause for the destructive effects of consuming hydrogenated oils may be due to the oxidation that occurs in the human body:

> *Oxidation in our body of such substances as the fat molecules, particularly from ...eating other oxidized fats such as hydrogenated oils and rancid oils, causes the genesis of free radicals, unstable molecules that can lead to cellular and tissue irritation and damage, which leads to chronic inflammation, especially in the vascular lining. Excess free radical formation comes from a variety of chemical reactions in the body and is the biochemical basis of many diseases, such as* **atherosclerosis***,* ***heart disease****,* ***hypertension****, arthritis, senility, and probably even* **cancer***.*
>
> **- Elson Haas M.D., Staying Healthy With Nutrition**

On the subject of hydrogenated oils and trans fats, at least, all doctors (informed doctors, anyway) agree. There is no doctor anywhere in the world who would recommend the consumption of hydrogenated oils unless he were utterly isolated from the last decade of nutritional science:

> *Once you realize what horrible products trans fatty acids are and how widespread is their use in processed foods, it becomes easy to understand why most people see such an improvement in their health no matter what kind of diet they go on. There is no physician, nutritionist, or dietitian I know who recommends a diet high in trans fatty acids.*
>
> **- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

Why food manufacturers use hydrogenated oils in their products

> *Trans fatty acids are processed fats, a product of technology, not of nature. To make trans fatty acids, food technologists start with good-quality unsaturated fats that they heat to a high temperature. They then add a nickel catalyst to the heated fat and pump hydrogen gas into the mixture. What comes out the other end of this process called partial hydrogenation is a trans fatty acid, a fat that looks like a natural fat but doesn't act like one.*
>
> **- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

If hydrogenated oils are so dangerous to human health, then why do food manufacturers use them? The answer, as always, is found in the economics of food production and storage. By hydrogenating cheap oils like soybean oil (that's the one most commonly used), food producers can create a nice-tasting, creamy, solid oil substance that won't leak out of foods sitting on the shelves.

Better yet (from the point of view of food manufacturers), hydrogenated oils have an extended shelf life. Products made with this toxic substance can sit around for months -- even years! -- without going rancid. Shelf life is extremely important to the economic equation for food production and distribution.

Hydrogenated oils are made by taking a vegetable oil like soybean oil and bubbling it at high temperature in the presence of a catalyst -- usually nickel. The resulting oil is solid at room temperature and now qualifies as a “saturated” fat. Worse yet, it now contains trans fatty acids:

> *Also hazardous to health are the so-called trans-fatty acids, found in margarine and other synthetic foods. Created in the laboratory, trans-fatty acids result when manufacturers add hydrogen to unsaturated vegetable oil. Due to the configuration of the new chemical bonds -- different from those found in most naturally occurring saturated fatty acids -- trans-fatty acids are even more stable than those of saturated fatty acids. The advantage is longer shelf life without spoiling for processed foods. The disadvantages, according to a spate of recent studies, include risk for coronary heart disease in excess of that associated with saturated fat.*
>
> **- Andrew L. Stoll, M.D., The Omega-3 Connection**

Virtually all of the research on trans fats shows this dangerous form of fat is far worse for your cardiovascular health than even saturated animal fats. In other words, butter is healthier for you than margarine, because margarine is made primarily from hydrogenated oils that contain trans fats.

> *Hydrogenation turns liquid oils, such as corn, soybean, sunflower, sesame, and cotton, into a semisolid shortening or margarine. (The harder the fat, the more trans fats it contains.) This process changes a cis (a beneficial fat) to a nonfunctional form (a trans fat) that can no longer participate in prostaglandin production.*
>
> **- Disease Prevention and Treatment, by the Life Extension Foundation**

The low-fat theory falls apart: many fats are good for you

Two decades ago, the scientific consensus was that all fats were bad for you, especially animal fats. But over the last 25 years, the research is clearly showing that you can’t lump all these fats into the same group. Some fats -- refined, processed fats, namely -- are extremely dangerous to your health. Other fats, such as EFAs (essential fatty acids) and even some saturated fats like coconut oil, are very good for you.

The pattern I’ve noticed is that raw fats from plant sources are the healthiest, while any refined, processed fats are likely to be extremely bad for you. That’s why I always recommend people eat avocados, nuts, and coconut oil. These are extremely healthy sources of fat. Macadamia nut oil is one of the best.

Here’s a passage from **The South Beach Diet** that discusses the differences in good fats vs. bad fats:

> *To avoid saturated fats in the diet, a special type of polyunsaturated fat became popular: the trans fats. They are the partially hydrogenated oils found in so many commercial products, including cakes, cookies, and margarines. Unfortunately, they are as dangerous, or **more dangerous, than saturated fats**. They increase bad cholesterol levels and are associated with **heart attacks and strokes**.*

An ever-growing body of research documents that many fats do not have the adverse effects of the saturated and trans fats. In fact, evidence is building that the unsaturated, non -- trans fats are actually good for us. Where Mediterranean oils are used abundantly, heart attack and stroke rates are very low.

The most impressive diet study ever reported was the Lyon Heart Study. Here, the mostly monounsaturated fat, canola oil, (with omega-3 fat as well) was used in a spread by one-half of the patients studied. All those in the study had already had heart attacks, but those receiving the good fat had a ***70 percent decrease in subsequent heart attacks****.*

- Arthur Agatston, M.D., The South Beach Diet

Also, it's important to note that it is the processing of the oil that matters as much (if not more) as the nature of the original oil. Many natural plant-based oils, such as canola oil, are considered rather healthy in their natural form. But by hydrogenating them, food producers transform them into highly toxic substances. As a consumer, you have to be especially wary of the labeling claims on oil-based foods and actually read the ingredients. Just because something is "made with canola oil" doesn't mean it's healthy:

Margarine and shortening, furthermore, contain hydrogenated polyunsaturated vegetable oils. Hydrogenation is an extremely harmful process that creates an immune-damaging synthetic fat, a type of trans-fatty acid described earlier that -- to the dismay of confirmed margarine users -- has also been found to actually elevate blood cholesterol. Most margarines made from soy and safflower oils and sold as "natural" are also hydrogenated and just as harmful as any other margarine. However, margarines made by other processes are now becoming available. Even though some of these margarines contain preservative chemicals, colorants, and other questionable ingredients, they are to be preferred over hydrogenated margarines. These margarines are identified by checking the ingredients for the absence of "hydrogenated" or "partially hydrogenated" oils; they are often sold in certain supermarkets and health food stores.

- Paul Pitchford, Healing With Whole Foods

And from **The Protein Power Lifeplan**:

T*rans fatty acids are everywhere, and, unfortunately, there are no labeling laws on the books at this time forcing food manufacturers to divulge the amount of these fats in their products. You can be sure, however, that if you buy any kind of vegetable oil or vegetable-oil product that doesn't have a dark colored bottle and that doesn't require refrigeration after it's been opened, you've got a trans fat. Commercially made salad dressings, for example, contain a significant amount of trans fatty acids. If you look at the label, you will often see that it's made of soybean oil, not a particularly bad oil in its fresh state, but one that food manufacturers love to partially hydrogenate and convert to a "plastic" food. According to Mary Enig, approximately 70 percent of the soybean oil consumed in this country has been partially hydrogenated. That means that if you see soybean oil as an ingredient in a product you're eating, the odds are that it's been hydrogenated. The hydrogenation process converts soybean oil from having no unnatural fats to a substance containing over 53 percent chemically altered fats.*

The margarine scam and hydrogenated oils

> *Margarine is a processed polyunsaturated vegetable fat, sold as a "healthier" alternative to butter. It is hydrogenated oil, which means that hydrogen gas is bubbled through a tank of liquid polyunsaturated oil in the presence of nickel. The process turns cheap polyunsaturated fats such as corn or safflower oil into saturated fats. So when you think you are getting a polyunsaturated fat in your margarine, you are actually getting the very saturated fats the margarine sellers claim they are helping you avoid.*
>
> **- Debra Lynn Dadd, Home Safe Home**

It was a brilliant marketing scam: by distorting a handful of scientific studies that linked saturated fats to cardiovascular disease, industry groups representing vegetable oils like corn oil and soybean oil were able to mislead the entire country (not to mention the press) with scientific-sounding nutritional lingo and get everybody to switch from butter to margarines made with hydrogenated oils. This produced a windfall for the profits of soybean growers while simultaneously creating a major setback for the health of Americans.

The primary message of the margarine makers was that saturated fats are bad for you. Therefore, they said, you should be eating margarine products made from "healthy, natural plant oils" like soybean oil. What they didn't say is the oils found in margarine products have been artificially manipulated through the hydrogenation process to create a harmful substance that is actually worse for your body than saturated animals fats and contain trans fatty acids. This critical fact was concealed from the press and the public for over two decades.

> *For optimal health it appears to be very important to eliminate the intake of margarine and foods containing trans-fatty acids and partially hydrogenated oils. The manufacture of margarine and shortening entails the hydrogenation of vegetable oils. This means that a hydrogen molecule is added to the natural unsaturated fatty acid molecules of the vegetable oil to make it more saturated. Trans-fatty acids interfere with the body's ability to utilize essential fatty acids.*
>
> *Many researchers and nutritionists have been concerned about the health effects of margarines since they were first introduced. Although many Americans assume they are promoting their health by consuming margarine rather than butter and saturated fats, the reverse appears to be the case. Margarine and other hydrogenated vegetable oils not only raise LDL cholesterol, they also lower the protective HDL cholesterol level, interfere with essential fatty acid metabolism, and are suspected of being causes of certain cancers, such as breast cancer.*
>
> **- Joseph E. Pizzorno,N.D., and Michael T. Murray, N.D., The Textbook of Natural Medicine**

These days, the well-informed know all this. The margarine scam is winding down (although the negative health impact of the margarine industry will continue to ring up profits for prescription drug companies and hospitals for decades to come). Sales of margarine products containing hydrogenated oils are plummeting. Yet, amazingly, many margarine products made with this oil remain on the shelves.

From the point of view of the food manufacturers, they long for the days when the public was ignorant of the health impact of hydrogenated oils and they could profitably manufacture and distribute these yellow tubs of spreadable heart disease. Hydrogenated oils are well liked by food manufacturers because they store well, they ship easily, and they have an impressive shelf life:

> Little did Americans know that along with the highly touted corn oil margarine and all-vegetable shortening came trans-fatty acids. Liquid vegetable oils present food producers with a number of problems. Corn oil can't be spread on bread, for instance, and it makes a poor pie crust. It is also prone to oxidation by light, air, and heat, especially after the refining process has robbed it of its natural antioxidants and phytochemicals. Hydrogenation was the answer. Through modern alchemy, vegetable oil could be heated, exposed to a metal catalyst such as nickel or copper, and transformed into a more plastic, less perishable fat. This fat could then be added to convenience foods, allowing them to be shipped in warm, humid weather and parked on the grocery shelf for months on end. By 1979, the American public was consuming an estimated 10 billion pounds of fat and oil per year, of which 60 percent was partially hydrogenated oil.
>
> **- Artemis P. Simopoulos, M.D., The Omega Diet**

This trend continued well into the 1980s and 1990s. In fact, it was only in the 1990s that the research about the dangers of trans fats started to gain some attention. Even then, it was only well known in certain research circles. By the mid 90s, the media was slowly starting to run with the story, and consumer demand caused some margarine makers to introduce products made without hydrogenated oils.

A frightening look at how margarine is actually made

What the press never gave the public, however, was the inside story on how margarine is made in the first place. Here, courtesy of a fascinating book titled The Secret House, is an account of how margarine is actually made. Not all margarines are made this way today, but many of the cheaper ones undoubtedly are.

> *Margarine is made from fat. It was first invented in response to an award offered by the French Emperor, Napoleon III, after the urban rebellions of 1848 to find a cheap source of fat for the working classes who could not afford butter. Today there's soya fat in margarine, also the fat you get from squished herrings, and about 20 per cent of the total is beef fat or even nice old-fashioned lard -- pig's fat. All these fats are mixed together and melted, and if you think molten pig's fat smells bad, you should wait till you've had the misfortune to walk through a factory where it's being stirred in with boiling herring and other fats. The whole mess is so repulsive, so clearly distasteful and unmarketable (it comes out colored grey on top of it all) that before anything else is done it has to be funneled into even larger deodorizing vats to try to get rid of the stink.*

What comes out of the deodorizer, while at least it can be approached without gagging, is still not quite the tempting substance commercial margarine is supposed to be. It's grey, it's sticky, and it's far, far too chunky. The grey gloop is poured into another vat, metal shavings are clunked in before it, then the vat is screwed shut and high-pressure hydrogen gas is sprayed in. The fats are boiled and compressed in there, they react with the nickel and hydrogen, and when finally the ordeal is over and the top taken off, the lumps are gone.

There's more. Beef dripping, lard and herring fat don't cost very much, but if at this stage they could be diluted with something even cheaper, even more easy to get in quantity than pig's fat, then the cost of producing the margarine would drop even lower. This extra substance is waiting in another vat in the factory, right next to the one where the de-lumping took place. It's milk -- of a sort.

By government regulations there are two main grades of milk in most countries: Grade A, which is fresh, checked and suitable for drinking; and a lesser Grade B, which ordinary consumers don't usually see, but which being slightly older, or having a bit more bacteria in it than is best, is used for condensed milk, commercial cakes, and baby milk mixtures. The milk that's waiting to be mixed in with the fat in the margarine factory is the second kind, or even one grade below that. It's not fresh; in fact it's going sour. Even though it's already been pasteurized once, the factory engineers have to give it another pasteurizing heat treatment to get some of the worst stuff out of it. After that it's strained, filtered and poured in with the waiting fat.

It seems it would take a genius to make a palatable product out of this soapy and starch-full mixture of grey sour milk and animal fat. First some color is added, something to cover over the vile grey. Normal yellow dyes wouldn't work, because the grey is so deep that it would keep on poking through. Extra-strong dyes based on sulfur-refined coal tars are used instead.

Then a stifling strong flavorer is mixed in to make it taste like something other than the miscellaneous lard, other fats and old milk it is. Then vitamins-because all this processing has made it nutritiously almost valueless. The result of all these labors is then compressed, cooled, scraped, cut into long blocks, cut into smaller blocks, and finally dropped into plastic tubs.

There's something else. Back at the beginning a little sunflower oil is sometimes mixed in. That's not because it's especially needed, and usually not because there's enough to make any difference, but rather so the designers can have something suggestive of sun-kissed meadows and open spaces to print on the cover. Even the French Academy of Sciences that sponsored the original stuff had their doubts. The award for the first margarine was granted in 1869, but eleven years later the Academy decreed that it couldn't be used in government cafeterias: it was, they said, too revolting on the palate.

That's margarine: the stuff you've probably been buying and eating for a couple of decades because the health experts said it was "good for you." The soybean industry loved to hear that, of course, since it is precisely soybean oil that is the cheapest source of vegetable oil that can be hydrogenated and formed into margarine-shaped containers.

So what can you do to protect yourself from margarines containing hydrogenated oils? Just follow the action item here:

Action Item:

Absolutely avoid purchasing any margarine product that contains any "partially hydrogenated" ingredient.

How much hydrogenated oil and trans fatty acids are you eating?

> Today, Americans are consuming from 5 to 10 percent of their calories as trans-fatty acids. Studies show that amounts greater than 5 percent of your calories can have negative health consequences. It is alarmingly easy to reach this level because any product that has the words "partially hydrogenated" on the label contains trans-fatty acids. This includes most types of margarine, shortening, artificial cheese, deep-fat fried foods, commercial baked goods, prepared mixes, snack food, and crackers. You can reach the 5 percent level simply by eating one doughnut for breakfast, a small order of fries with lunch, a teaspoon of margarine at lunch and dinner, and two cookies for dessert.
>
> **- Artemis P. Simopoulos, M.D., The Omega Diet**

If you eat manufactured foods, it is frighteningly easy to expose yourself to hydrogenated oils and trans fatty acids. Remember: the acceptable level of exposure is zero, so the only way to be safe is to utterly and completely avoid hydrogenated oils.

For many people, their primary source of trans fats is margarine. Making a change in your margarine is easy: just buy margarine products that have "no trans fats" and read the ingredients labels to make sure they have no hydrogenated oils.

But there's an even better solution that I highly recommend: buy yourself some extra virgin, cold-pressed, non-refined coconut oil and use that as a buttery spread. It's already the right texture, and it's both delicious and healthy. To add butter flavor, simply squeeze some Smart Squeeze butter-flavored liquid on top of the coconut oil.

This is, by far, my best recommendation on buttery spreads. People need more coconut oil in their diets, and you will find that coconut oil exhibits amazing properties when it comes to stabilizing blood sugar and satiating your hunger.

You are hopefully already avoiding all the baked cookies and crackers made with hydrogenated oils. But it can be difficult if you enjoy any significant portion of manufactured foods:

A person eating a doughnut for breakfast (3.19 g of trans fatty acids), a small order of French fries with lunch (3.43 g), two teaspoons of margarine on bread with dinner (1.24 g), and two cookies for a snack (1.72 g) would ingest a total of 9.58 g of trans fatty acids, enough to negate the serum cholesterol-lowering effects of a decrease in saturated fat of 10 percent of total energy intake.

- Joseph E. Pizzorno,N.D., and Michael T. Murray, N.D., The Textbook of Natural Medicine

In fact, the vast majority of consumers in our modern societies are consuming toxic levels of trans fats and hydrogenated oils on a daily basis. They get it at every meal! There's the hydrogenated oil margarine at breakfast, the baked crackers with vegetable oil shortening at lunch, the flaky pastry dessert at dinner, and of course potato chips, corn chips and toaster pastries during all the snacks in between. All of these foods contain hydrogenated oils.

As always, I strongly recommend you read the ingredients labels before purchasing any food item. That's the only way to be sure you're avoiding hydrogenated oils.

Of course, you'll also have to watch out at restaurants. This subject warrants a lengthy discussion on its own, but the short version is that practically every salad dressing, baked pastry, butter spread, and dessert is going to contain hydrogenated oils and trans fats. The restaurant industry loves hydrogenated oils: they're cheap, they add calories and "fill" to foods, and they have an extended shelf life. What more could a restaurant hope for?

Corruption and politics in the soybean oil industry

As with all industries, there's a push for self-survival in the soybean oil industry. By managing to convince the entire Western world that saturated animals fats were evil, they achieved a stunning economic success: 25+ years of heavy margarine consumption by an ignorant public. Their primary message? Tropical oils were bad for you, and hydrogenated soybean oil was good for you:

The ASA [American Soybean Association] succeeded in producing a health crisis where none had existed. The general ignorance about nutrition by most people swayed them into siding with the soybean industry, which proves money and politics can override truth. Most major food companies, sensitive to consumer fear, reformulated hundreds of products, replacing tropical oils with hydrogenated oils. Since 1990, the fast food industry has been cooking french fries in hydrogenated vegetable oil instead of beef tallow and tropical oils. They made the change because of the prevailing opinion that vegetable oils were healthier than other oils. Nearly 80 percent of all the vegetable oil used in the United States today comes from soybeans. Three-fourths of that oil is hydrogenated (containing up to 50 percent trans fatty acids). This amounts to an awful lot of nasty trans fatty acids that are in our foods now that weren't there before. For example, a single restaurant meal, which in 1982 contained only 2.4 grams of trans fatty acids, contains a whopping 19.2 grams today. The food is the same; only the oil is different. Because hydrogenated oils are used everywhere, we are cursed with trans fatty acids just about anytime we eat (unless we prepare our food from scratch).

- Bruce Fife, The Healing Miracles of Coconut Oil

The coconut and palm oil industries were, of course, devastated by the coup pulled off by the soybean industry. Suddenly, consumers were running scared from all tropical oils. Even today, that view persists. When I recommend non-refined, extra virgin coconut oil to people, they look at me in amazement. “Doesn’t that cause heart disease?” Some myths live on, even if people who eat margarine don’t.

In reality, coconut oil prevents heart disease. It’s made of medium-chain triglycerides (MCTs) which boost metabolism and are metabolized like complex carbohydrates in the human body (rather than being easily stored in your own fat tissues like animal fats are). Coconut oil is, I’m convinced, a miracle-class food, and I eat it nearly every day. My breakfast isn’t complete without coconut oil, and I think it’s an ideal source of healthy fats.

The soybean industry suppresses studies and attacks tropical oils

But that’s not widely believed, even today. The propaganda efforts of the soybean industry were so effective -- even while lacking any real scientific evidence -- that the public bought into it. Yet under the table, the soybean industry was busy suppressing certain studies that showed hydrogenated oils to be promoters of disease:

> *The soybean industry’s attack on tropical oils was built on the accusation that these oils cause heart disease. This is ironic because replacing tropical oils with hydrogenated vegetable oils has actually increased heart disease deaths. And they know it. As far back as the 1950s hydrogenated oils were suspected of causing heart disease. The soybean industry, fully aware that hydrogenated oils caused health problems, attempted to discourage and even suppress studies which presented unfavorable results. In the book, What Your Doctor Won’t Tell You, author Jane Heimlich tells about one researcher who, after publishing the results of a study unfavorable to hydrogenated oils, found that she could no longer find funding. The purpose of her research, she thought, was to discover truth and increase knowledge, not promote a product, but this didn’t set well with the vegetable oil industry and they refused to fund any of her future studies.*
>
> *The truth about hydrogenated oils and trans fatty acids eventually emerged. Like the tobacco industry which denied for years that cigarette smoke caused cancer, the soybean industry has denied that trans fatty acids promote heart disease. They cunningly diverted the public’s attention to saturated fats and tropical oils, pointing a finger and calling them the troublemakers. In the 1980s and early 1990s, as the soybean industry’s campaign against tropical oils raged, study after study implicated hydrogenated oils in contributing to heart disease as well as a number of other health problems. Aware of the growing evidence against hydrogenated oils, the soybean industry conveniently avoided discussing this in their anti-tropical oil campaign. They always implied that tropical oils should be replaced by “’vegetable oils.” They didn’t say what type of vegetable oil, but they knew all along that it would be hydrogenated vegetable oil.*
>
> **- Bruce Fife, The Healing Miracles of Coconut Oil**

Fast food restaurants were also caught up in the “no palm oils” frenzy and they eventually switched to vegetable oils rather than lard as the ingredient in which to fry french fries and other fast foods. As a result, the trans fat content of fast foods skyrocketed, greatly increasing the risk of heart disease for fast food customers. The restaurants, meanwhile, claimed they were “protecting the health” of their customers by switching to these “healthful” vegetable oils.

Of course, the idea that fried foods could be healthful is rather ridiculous in the first place. Fast food restaurants use the same frying oil, over and over again, which multiplies the acrylamide content of fried foods (acrylamides are highly toxic, cancer-promoting chemicals that form when foods are cooked at very high temperatures) while simultaneously introducing dangerous levels of trans fats into these fried foods. These foods can only be accurate characterized as promoters of disease, not as any sort of healthful food.

In the end, of course, the soybean oil pushers are going to lose. The arrival of the Internet and companies like Truth Publishing (the publisher of this manual) are helping to spread the word about dangerous ingredients like hydrogenated oils. In fact, the ASA has already lost the war, as they are steeped in a defensive retreat even today. People in the know aren’t buying margarine products containing hydrogenated oils anymore. The tide is, indeed, turning.

Action Item:

Don’t eat anything made with hydrogenated oils or partially-hydrogenated oils, period.

You can read more about hydrogenated oils at:
http://www.newstarget.com/hydrogenated_oils.html

GROCERY WARNING - PART 3
Grocery Products That Are Dangerous To Your Health

Suffering from soft drinks

Now let's take a look at the next problem found in everyday foods and groceries consumed by most Americans: soft drinks.

Generally speaking, we are a nation of people hooked on soft drinks. As I know from personal experience -- and perhaps your own experience agrees with this -- many of us became overweight or obese in the first place by engaging in diets very high in soft drink consumption. As a result, we are "addicted" to these soft drinks and have a very hard time eliminating them from our diet.

This addiction operates at many levels. It's more than just a desire: it's a biochemical, multi-sensory addiction that can be exceedingly difficult for people to break. I know this very well: I grew up on a diet that was high in soft drink consumption. During most of my younger years, I hardly drank water at all and, instead, relied on soft drinks. It only took me six months to break the habit. And I'm happy to say today that I have been 100 percent free of soft drinks for nearly 10 years. And I don't miss it one bit.

Obviously, this is the goal you should shoot for: the complete and permanent elimination of soft drinks from your dietary patterns. Unfortunately, it isn't so easy to arrive at the goal, and many people attempting to lose weight inevitably turn to diet soft drinks to avoid the extraordinary amount of refined sugars contained in regular soft drinks.

The damaging health effects of soft drink consumption

While it's a smart decision to avoid refined sugars, especially when they are presented in liquid candy form as they are in soft drinks, there are characteristics of soft drinks that pose tremendous risks to your health that go way beyond corn syrup. People universally overlook these characteristics.

As an example, I'll show you an overwhelming amount of evidence that demonstrates soft drinks leach minerals from your bones, resulting in decreased bone mass and the onset of osteoporosis. There are many other problems associated with the frequent consumption of even diet soft drinks, as you will see.

Let's start by looking at a few statistics that show an alarming increase in the consumption of soft drinks over the years and the massive expenditures by the soft drinks manufacturers to market this disease-promoting substance:

Soft drink consumption and marketing statistics

- The Coca-Cola Company spends nearly $300 million per year on soft drink advertisements.
- The average American eats over 200 pounds of sugar and artificial sweeteners per year.
- The typical teenage male who drinks soda drinks over 42 ounces every day, and the habits of girls are only slightly better.
- The average American drinks more than 50 gallons of soft drinks per year.

Soft drink portions: Super size me!

At the same time advertising expenditures on soft drinks are skyrocketing, and fast food restaurants, movie theaters, quick stop convenience marts and other retail establishments that sell soft drinks are upsizing their portions to ridiculous levels:

> *The largest movie-theater soft drink contains 800 calories if not too diluted with ice. Larger portions can contribute to weight gain unless people compensate with diet and exercise. From an industry standpoint, however, larger portions make good marketing sense. The cost of food is low relative to labor and other factors that add value. Large portions attract customers who flock to all-you-can-eat restaurants and order double-scoop ice cream cones because the relative prices discourage the choice of smaller portions. It does not require much mathematical skill to understand that the larger portions of McDonald's french fries are a better buy than the "small" when they are 40 percent cheaper per ounce*
>
> **- Marion Nestle, Food Politics**

Diet soft drinks don't cause you to lose weight

Despite all of this increase in the consumption of soft drinks -- especially diet soft drinks -- it turns out **diet soft drinks don't help people lose weight in the first place**. If you haven't already experienced this yourself (you know, years and years of buying "diet" soft drinks without shedding a single pound), just walk into any grocery store and look at the people who are buying diet soft drinks. These are not thin people. From my own observations, the more diet soft drinks a person buys in line at the grocery store, the more overweight they tend to be.

There have been absolutely no scientific studies showing that "diet" soft drinks help people lose weight. In fact, the experience of most people is quite the opposite. Soft drink manufacturers certainly don't claim their products cause people to lose weight, because they know they couldn't get away with that kind of claim without some sort of proof -- and they have none.

Technically, then, **all diet soft drinks are mislabeled**. There's nothing about them that qualifies as "diet," and the FDA should require soft drink manufacturers to either prove their drinks help people lose weight or disallow the use of the word "diet" in the product names.

A closer look at the health problems linked to soft drink consumption

Now, let's take a look at the various problems and health risks associated with diet soft drinks. First, the most obvious: artificial chemical sweeteners:

Artificial chemical sweeteners

> *Factoid: One liter of most aspartame-sweetened soft drinks contains about 55 mg of methanol.*
>
> **- H. J. Roberts, M.D., Aspartame: Is It Safe?**

We've already covered artificial chemical sweeteners in some detail, so I'll limit my comments in this section. But allow me to summarize what we've learned so far:

- Most diet soft drinks are sweetened with aspartame. It is well known that aspartame breaks down into methanol (free methyl alcohol) which is a chemical regulated by the EPA and considered an environmental pollutant. This methanol, in turn, breaks down into formic acid and formaldehyde inside the human body.

- Formaldehyde is a potent nerve toxin, which may explain why so many users of aspartame complain of nerve-related symptoms such as blindness, dizziness, migraine headaches, and seizures. Aspartame alone is responsible for 75 percent of the food and beverage-related health complaints to the FDA.

- Aspartame remains legal solely due to the financial and political interests of those who profit from its sales and consumption. The FDA does not protect the public from aspartame because the FDA generally acts in collusion with private industry, rather than in the interests of the general public.

It is my belief that when the truth about aspartame becomes publicly known, this substance will join the artificial sweetener **cyclamate** on the list of highly toxic chemicals permanently banned from use in the food supply. When this ban is put in place, I predict the FDA will champion that ban, claiming they are "protecting the public!" Sure they are, but only after tens of millions have been unnecessarily harmed.

As a reminder of the toxic nature of aspartame, here's a quote from the book **Aspartame: Is It Safe?**

> The unknowing consumption of aspartame, whether by ingestion or the chewing of gum, predictably triggered subsequent grand mal seizures. The amount of aspartame ingested in some patients was remarkably small. This is illustrated by (1) an infant who developed convulsions when his nursing mother drank an aspartame soft drink, and (2) a young woman believed to have aspartame-related epilepsy who convulsed within minutes after chewing one piece of "sugar-free" gum.
>
> **- H. J. Roberts, M.D., Aspartame: Is It Safe?**

Soft drinks, phosphorus, meat and osteoporosis

In addition to the significant health risks posed by the artificial chemical sweeteners found in diet soft drinks, another major health risk exists. This one is rarely discussed, however, and because few people know about it. They happily drink gallons and gallons of diet soft drinks each year, thinking they are "protecting themselves" from the ravages of refined sugars and high-fructose corn syrup.

What they don't realize is that while they may be avoiding the refined sugars, they are not at all avoiding another problem that's perhaps worse: the dangerous mineral imbalance.

To understand how this works, however, you'll first need a fundamental understanding of how minerals operate in the human body. Minerals like calcium and magnesium must be present **in a specific ratio** (2 to 1, in this case) in order to support healthy, balanced function in the human body. If this ratio is substantially altered, imbalances begin to occur. These mineral imbalances can create destructive health consequences.

One crucial mineral ratio in the human body is the calcium-to-phosphorus ratio. For optimum balance and healthy function throughout the body, calcium and phosphorus must exist in a ratio of around 1:1. In other words, for every 500mg of calcium you consume, you should ideally get 500mg of phosphorus as well.

The standard American diet is way too high in phosphorus due to its heavy reliance on foods and beverages with a high phosphorus content such as meats and dairy products. All by itself, this dietary pattern presents possible imbalances in the calcium-to-phosphorus ratio. Many people are simply not getting enough calcium in their bodies, but they are consuming an excess of phosphorus through meats and other high-protein foods (protein, in general, contains a high phosphorus content). Remember: phosphorus isn't a "bad" mineral, in fact it is essential to your health. What's bad here is the ratio of these minerals when phosphorus is consumed in excess.

There's also the issue of the acidity of soft drinks. When you consume these highly acidic beverages, your body must neutralize that acid by buffering it with alkaline minerals such as calcium. And where do you think your body might find stores of calcium? Your bones, of course, which are sort of like "calcium banks" as far as your body is concerned.

In this way, eating or drinking soft drinks results in your body tapping your bones in order to find the calcium needed to "balance" the phosphorus ratio in your body. This **calcium is stripped from your bones** and then eliminated through your urine.

When you drink soft drinks, you are peeing away your bones

To put it simply, if you frequently drink soft drinks, you are initiating a series of biochemical cause-and-effect events that result in you literally peeing your bones away.

As explained in **The Encyclopedia of Natural Medicine**:

> *Soft drinks have long been suspected of leading to lower calcium levels and higher phosphate levels in the blood. When phosphate levels are high and calcium levels are low, calcium is pulled out of the bones. The phosphate content of soft drinks is very high, and they contain virtually no calcium. It appears that increased soft-drink consumption is a major factor that contributes to osteoporosis. The link between soft-drink consumption and bone loss is going to become even more significant as children who were practically weaned on soft drinks reach adulthood. Soft-drink consumption in children poses a significant risk factor for impaired calcification of growing bones. Since there is such a strong correlation between maximum bone-mineral density and the risk of osteoporosis, the rate of osteoporosis may reach even greater epidemic proportions.*
>
> *The severe negative impact that soft drinks exert on bone formation in children was clearly demonstrated in a study that compared fifty-seven children with low blood calcium levels, aged eighteen months to fourteen years, to 171 matched controls (children with normal calcium levels). The goal of the study was to assess whether the intake of at least 1.5 quarts per week of phosphate-containing soft drinks is a risk factor for the development of low blood calcium levels. Not surprisingly, a strong association was found. Of the fifty-seven children who had low blood calcium levels, thirty-eight (66.7 percent) drank more than four bottles (12 to 16 ounces per bottle) of soft drinks per week, but only forty-eight (28 percent) of the 171 children with normal serum calcium levels consumed as much soft drink. For all 228 children, a significant correlation between serum calcium level and the number of bottles of soft drink consumed each week was found. The more soft drinks consumed, the lower the calcium level.*
>
> *These results more than support the contention that soft-drink consumption leads to lower calcium levels in children. This situation that ultimately leads to poor bone mineralization, which explains the greater risk of broken bones in children who consume soft drinks.*

Although this study focused on children, the same is true for adults: the more soft drinks you consume (diet or otherwise), the lower your levels of calcium. These soft drinks literally leach calcium right out of your bones. Loss of calcium and bone mass, not surprisingly, leads directly to osteoporosis and other bone disorders:

> *The skeletal system suffers most from calcium deficiency. Teeth minerals are more stable, though there is a possibility of poor dentition with insufficient calcium. Tooth loss, periodontal disease, and gingivitis can be problems, especially with a high phosphorus intake, particularly from soft drinks. All kinds of bone problems can occur with prolonged calcium deficiency, which causes a decrease in bone mass. Rickets in children, osteomalacia (decreased bone calcium) in adults, and osteoporosis (porous and fragile bones) can occur when calcium is withdrawn from bones faster than it is deposited. Fractures are more common with osteoporosis -- almost eight million yearly in the United States are related to this prevalent nutritional deficiency disease*

The typical American diet provides too much phosphorus and not enough calcium, leading to reduced body storage of calcium; thus, many of the problems of calcium deficiency discussed earlier may develop. Phosphorus and calcium can compete for absorption in the intestines. High consumption of meats or soft drinks increases phosphorus intake and may contribute to this imbalance. The ideal ratio of calcium to phosphorus in the diet is 1:1.

In recent years, the increased consumption of soft drinks, which are buffered with phosphates, has been a concern. There may be up to 500 mg. of phosphorus per serving of a soft drink, with essentially no calcium.

- Elson Haas M.D., Staying Healthy With Nutrition

High phosphorus content combines with high meat consumption to spell disaster

As the statement above describes, most Americans' diets are too high in phosphorus to begin with. If you add diet soft drinks, your phosphorus consumption skyrockets. This only accelerates the loss of calcium from bones and the subsequent bone disorders that naturally result.

...one of the leading contributors to osteoporosis in the U.S. is carbonated soft drinks containing phosphorus. Research has shown a direct link between too much phosphorus and calcium loss. If you're guzzling down a couple of fizzy soft drinks a day, you're most likely creating bone loss. Our other source of excessive phosphorus in the U.S. is eating too much meat. The average American gets more than enough protein, so for most of us it can only help to cut down on our meat consumption.

- Earl Mindell, Ph.D., Prescription Alternatives

Dr. James Balch, author of the A to Z Guide To Supplements, supports the same line of thinking:

The average American diet of meats, refined grains, and soft drinks (which are high in phosphorus) leads to increased excretion of calcium. Consuming alcoholic beverages, coffee, junk foods, excess salt, and/or white flour also leads to the loss of calcium by the body

- James F. Balch, M.D., A to Z Guide To Supplements

The meat connection to excess dietary phosphorus is also well explained in **The Doctor's Complete Guide to Vitamins and Minerals**:

Excess dietary phosphorus, found in meat, soft drinks, grains, and potatoes, may promote bone loss by interfering with calcium balance. In theory, the higher your phosphorus intake, the greater your tendency to leech calcium out of bones, which could weaken the bony foundation beneath your gums. Recommendation: ...try not to drink carbonated soft drinks, diet or otherwise.

As you can see, high-protein diets and soft drink consumption multiply each other's mineral imbalances. While avoiding refined carbohydrates is a very healthy way to lose weight, if people don't pay attention to their calcium / phosphorus ratios, **some of their weight loss may actually be due to their loss of bone mass!**

Calcium supplements alone won't solve this problem

You might think you could solve this problem by simply taking calcium supplements. But think again: the high consumption of phosphorus actually makes it difficult for your body to absorb calcium. Phosphorus competes with calcium for absorption in the intestines, meaning that the more phosphorus you have in your diet, the less calcium you can actually absorb.

In this way, taking calcium supplements in order to "balance" the consumption of diet soft drinks may not be nearly as effective as you hoped:

> *If your diet contains an excess of phosphorus, from too much animal protein or too many carbonated soft drinks, you may fail to absorb calcium from your food as well as lose more calcium from your urine. Americans tend to eat more phosphorus than calcium, which looms large if you are at risk for bone thinning. ...Avoid carbonated soft drinks and yeast products.*
>
> **- Mary Dan Eades, M.D., The Doctor's Complete Guide to Vitamins and Minerals**

Eventually, with enough bone loss and depleted calcium stores, bone fractures start to occur at an accelerated rate. This has been well demonstrated in clinical studies of soft drink consumption, even in young adults who typically have stronger bones than those who are older:

> *Significant calcium imbalance can come about as a result of high intakes of phosphorus. Phosphorus is present in high quantities in protein-containing foods and soft drinks. There is some evidence that due to the large increase in soft drinks in the last decade that this factor alone may contribute to poor peak bone mass in younger individuals. Based on data from more than 4,000 children aged 2-17 years, soda consumption among children and adolescents rose 41 percent in the time period of 1989-1991 compared to 1994-1995. A 1994 study of 127 children aged 8-16 found that 39 percent of the girls and 41 percent of the boys had a history of bone fracture. Girls who consumed greater amounts of cola beverages had a higher incidence of fractures than those who consumed low amounts. A high calcium intake was found to protect against fractures, particularly among girls who had high physical activity (Ballew et al. 2000).*
>
> **- Disease Prevention and Treatment by the Life Extension Foundation**

(If you noticed, this study also showed that high physical activity helped protect against bone fractures -- something I've advocated for years. The more physical you get on a daily basis, the stronger your bones.)

This study showed that calcium supplementation helped prevent bone fractures. It only makes sense: if you get more calcium, you will help balance out the ratios. But as the earlier quotes mentioned, the absorption of that calcium may be seriously impaired by the excessive phosphorus. This is why the best strategy is to reduce phosphorus intake in order to balance the calcium / phosphorus ratio in your body. And the easiest way to do that is to simply avoid soft drinks for life.

Milk is not the answer to calcium deficiency

Many people think they are getting "plenty of calcium" from all the milk they consume, and therefore, they think they can drink diet soft drinks without worrying about the imbalance. The more milk they drink, they say, the more soft drinks they can safely consume.

This position is sadly misinformed. Milk doesn't have much calcium in it to begin with, regardless of the hype and promotional efforts of the dairy industry (which will be discussed in greater detail later). A cup of broccoli juice, for example, has more calcium than a cup of milk. An ounce of spirulina (a micro-algae superfood) has far more calcium than milk, along with magnesium and zinc as well.

Secondly, the calcium in milk isn't well utilized by the human body unless magnesium and vitamin D are also present -- and both of these are typically lacking in the American diet. Milk also contributes to the phosphorus mineral imbalance due to its own high phosphorus and protein content:

> *Too much protein -- milk again, as well as meat -- increases calcium loss. Also, phosphates (in processed foods and soft drinks, common in the average child's diet) can cause calcium loss or excretion.*
>
> **- Robyn Landis, Herbal Defense**

Supplementing with magnesium would help your body absorb more supplementary calcium, and increased exposure to healthy, natural sunlight would increase vitamin D stores, but even then, there are far better places to get calcium. Namely: whole food complexes and **superfoods** like chlorella and spirulina. Plant sources of calcium are clearly your best choice:

> *Obtain as much calcium and magnesium and other trace minerals from your diet as possible by ...eating dark green leafy vegetables, broccoli, nuts, and seeds; eliminate or reduce the use of colas and other soft drinks in order to decrease phosphorus intake. Postmenopausal women should probably supplement with calcium/magnesium capsules. Calcium citrate is generally better absorbed and utilized than calcium carbonate. Daily intakes should reach at least 1,000 mg of calcium and 500 mg of magnesium, along with sufficient trace minerals including zinc, boron, and copper.*
>
> **- Disease Prevention and Treatment**

Soft drinks make you ugly by altering your facial bone structure

Consuming soft drinks can even alter your physical appearance by slowly destroying the bone structure of your face and jaw. Much of the calcium loss that impacts bones affects the dominant jawbone, which makes a person's face look old, weak and sunken:

> *The differences between people who had eaten their ancestral diet from birth and people who had feasted on sugar, white flour products, and soft drinks are astonishing. The traditional wholesome diet produced wide faces with jaws wide enough to accommodate all thirty-two teeth with proper spacing, high cheekbones, few to no cavitations, and wide foreheads to house their brains. The facial structures of the people who enjoyed a more "civilized" diet are not so beautiful. Their jaws are narrow with so little room that the teeth crowd together in two crooked rows. Cavities are common, and in cultures where dental care is inadequate, the pain and suffering are intolerable. Their foreheads are also narrow, or misshapen, with scarcely enough room for a growing brain.*
>
> **- Carol Simontacchi, The Crazy Makers**

The solution to everything presented here is deceptively simple: drink water, not soft drinks. It's the only liquid I consume: no soft drinks, no juices, no milk. And yet so many people simply refuse to drink water:

> *Americans don't drink very much water. We drink coffee, a beverage that pulls even more minerals out of the tissues and excretes them in the urine. Americans drink soft drinks that are often loaded with more sodium and which further unbalance the mineral stores. We drink V8, loaded with sodium. We drink everything but water, which would pull the excess sodium out of the blood and out of the brain. We defeat the body's own mechanism of balancing the critical sodium-to-potassium ratios by overindulging in these entrees and beverages that contain so much sodium, and then by not drinking water to flush it out of the system.*
>
> **- Carol Simontacchi, The Crazy Makers**

So just how serious is this problem of calcium depletion and bone mass loss in the first place? It's a hidden, destructive health consequence that comes from drinking any kind of soft drinks, and very few people are aware of this. Here's an extended collection of additional quotes from doctors and authors on this subject:

> *Diets high in sugar alter calcium uptake; coffee, alcoholic beverages, and phosphorous-rich soft drinks also promote increased calcium excretion.*
>
> **- Disease Prevention and Treatment by The Life Extension Foundation**

Many general dietary factors have been suggested as a cause of osteoporosis, including: low calcium-high phosphorus intake, high-protein diet, high-acid-ash diet, high salt intake, and trace mineral deficiencies. It appears that increased soft-drink consumption is a major factor that contributes to osteoporosis.

- Michael T. Murray, N.D., The Encyclopedia of Natural Medicine

Avoid soft drinks. One study of 460 young, very active girls found that those who drank colas were five times more likely to suffer fractures than girls of equal activity who avoided soft drinks. It is suspected that because phosphorus draws calcium from bone, it is the culprit in such cases. Cows' milk is also high in phosphorus, as well as protein. Avoid all soft drinks, especially those sweetened with aspartame. Carbonated soft drinks deplete the body's magnesium.

- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life

Phase out soft drinks. Canned soda contains excess phosphorus, a mineral that could lead to the leaching of calcium from your bones, a potential cause of osteoporosis. Some researchers believe that calcium is first robbed not from your hips or spine but from your jaw, leading to tooth loss, says Ken Wical, D.D.S., professor of restorative dentistry at Loma Linda University in California.

- Healing With Vitamins by Prevention Magazine

Action Item:

Avoid soft drinks for life. Drink water or tea, but no "acidic" drinks like fruit juices or nutritionally imbalanced drinks like cows' milk.

The truth about caffeine, a highly addictive, psychoactive drug

> *About sixty-five percent of all soft drinks sold contain caffeine, and the average American drinks over 576 twelve-ounce cans of soft drinks per year.*
>
> **- Carol Simontacchi, The Crazy Makers**

Beyond the bone disorders, mineral imbalances and osteoporosis problems mentioned in the section above, soft drinks manage to serve up yet another dangerous ingredient: caffeine.

It is arguably the lesser of the evils when consideration everything that goes into soft drinks, but caffeine also presents serious problems when consumed to excess. For one thing, it is acidic and accelerates the mineral imbalances detailed in the previous section.

Most notably, however, caffeine is highly addictive. Soft drink manufacturers, in fact, depend on caffeine to keep people hooked on their products in much the same way that cigarette manufacturers rely on nicotine for repeat sales. Caffeine makes it hard to "quit" soft drinks because your nervous system keeps telling you, "You need caffeine!"

But in fact, you don't need caffeine, especially if you are battling mineral depletion problems or osteoporosis. This situation is especially crucial for women:

> *If you are at risk for osteoporosis, reduce your intake of caffeine to less than two servings of coffee, tea, or caffeinated soft drinks per day. If you already have osteoporosis, you should totally eliminate caffeine from your diet. This includes regular coffee and tea, chocolate, and many soft drinks (although carbonated beverages will already be on your list of things to avoid, as just noted). Women who consume four to 15 caffeine-containing drinks per day (coffee, tea, soft drinks, or chocolate) suffer PMS at higher rates than women who drink little caffeine. Recommendation: Reduce your daily caffeine consumption to fewer than four caffeinated drinks per day. Reduce your intake of caffeine even more strictly (to no more than two caffeine-containing drinks) at least three days prior to the usual time of symptoms each month*
>
> **- Mary Dan Eades, M.D., The Doctor's Complete Guide to Vitamins and Minerals**

There are, in fact, many health problems associated with the excess consumption of caffeine:

> *Caffeine is a problem for people with heart disease, as it heightens the blood pressure and puts stress on the circulatory system. I tell my patients with angina to limit themselves to no more than one caffeinated drink per day. Most people opt for a cup of coffee in the morning and cut out all additional coffee or caffeinated sodas or teas. I might mention here that some of the bottled iced teas and soft drinks (even "un-colas" like Mountain Dew) have a great deal of caffeine in them.*
>
> **- Robert M. Giller, M.D., Natural Prescriptions**

When it comes to caffeine, soft drinks aren't the only concern, either. Most people are getting an overdose of caffeine from other sources regardless of whether they consume soft drinks:

> *Caffeine is clearly the most prevalently used stimulant in the world. Coffee, tea, chocolate, cocoa, many soft drinks, diet pills, aspirin, various analgesics used for migraine headache and vascular pain, and even some herbal preparations contain either caffeine or very closely related substances. Examples of such caffeine-like substances are theobromine in chocolate and cocoa and theophylline in tea. When caffeine and similar compounds are taken in excess, any of several symptoms usually result: anxiety and nervousness, insomnia or light sleep patterns, various types of heart disease, stomach and intestinal maladies, and moodiness. When consumed regularly, as little as two cups of coffee can initiate these symptoms. Children who exhibit hyper activity are often victims of diets rich in chocolates and cola drinks.*
>
> **- Paul Pitchford, Healing With Whole Foods**

Elson Haas, M.D., describes caffeine as a "lifetime drug" for many, and puts it in the category of the most frequently abused drug in our modern society:

> *Caffeine can be a lifetime drug for many. We begin with hot chocolate or chocolate bars, which contain some caffeine, move into colas or other soft drinks with caffeine, and then add coffee and tea. Many adults use caffeine daily, but this is slowly changing with education and experience revealing the long-range problems resulting from caffeine abuse.*
>
> *Physiologically, caffeine is a central nervous system (CNS) stimulant. The amount needed to produce the wake-up and stimulation effect increases with regular use, as is typical of addictive drugs. Larger and more frequent doses are needed for the same effect, and symptoms can develop if we do not get our "fix." Eventually, we need the drug to function; without it, fatigue and drowsiness occur. So caffeine is a natural stimulant with both physical and psychological addiction potential and withdrawal symptoms similar to the symptoms of its abuse.*
>
> **- Elson Haas M.D., Staying Healthy With Nutrition**

Caffeine consumption results in even more calcium loss

Even mild caffeine consumption has been linked to serious health disorders such as miscarriages, in addition to promoting yet more calcium loss. From **Food Additives**:

> Caffeine is the number one psychoactive drug. Obtained as a byproduct of caffeine-free coffee. It is a central nervous system, heart, and respiratory system stimulant. Caffeine can alter blood sugar release and cross the placental barrier. It can cause nervousness, insomnia, irregular heartbeat, noises in ears, and, in high doses, convulsions. It has been linked to spontaneous panic attacks in persons sensitive to caffeine. It has been found to be addictive. It also **causes increases in calcium excretion**. Because of its capability to cause birth defects in rats, the FDA proposed regulations to request new safety studies and to encourage the manufacture and sale of caffeine-free colas. A University of Montreal study published in the Journal of the American Medical Association, December 22, 1993, said that women who consume the amount of caffeine in one and a half to three cups of coffee a day may nearly double their risk of miscarriage.

In summary, caffeine is not only the most frequently-abused psychoactive drug in America, it carries significant a significant negative health risk as well. Dr. Elson Haas jokes about honest labeling requirements for products containing caffeine:

> *All products containing caffeine should carry a warning saying something like, "Caffeine can be hazardous to your health. Regular use may be addicting and injurious." The problem here is less with the drug itself and more with the amounts consumed and the constant stimulation on which people depend many times daily. The caffeine creates an addiction to the drink.*
>
> **- Elson Haas M.D., Staying Healthy With Nutrition**

What hasn't been mentioned in any of this literature is caffeine's ability to also deplete the adrenal glands. This causes long-term exhaustion, a condition that most caffeine drinkers solve by, of course, drinking more caffeine!

Aluminum cans may present yet another health danger for soft drinks

The news on soft drinks keeps getting worse, it seems, and another toxin present in soft drinks isn't something added by manufacturers: it's something leaching out of the containers in which soft drinks are stored and shipped: aluminum cans.

No educated person in their right mind would eat or drink aluminum, and yet nearly everyone will gladly drink highly acidic substances that have been rubbing molecules with aluminum for any number of days, weeks or months. No metal is "100 percent solid," as any physicist knows. Some of the aluminum inevitably leeches into the soft drink itself.

> *Although aluminum is not a heavy metal, environmental exposure is frequent, leading to concerns about accumulative effects and a possible connection with Alzheimer's disease. In the home, we are in constant contact with aluminum in foods and in water; from cookware and soft drink cans; from consuming items with high levels of aluminum (e.g., antacids, buffered aspirin, or treated drinking water; or even by using nasal sprays, toothpaste, and antiperspirants).*
>
> **- Disease Prevention and Treatment by The Life Extension Foundation**

The ability of aluminum to contaminate beverages stored in aluminum cans is well explained by Elson Haas:

> *One of the most common sources of aluminum fluoride complexes is in liquids packaged in aluminum cans, a combination that is especially hazardous with acidic fruit juices and diet drinks. Acidic juices leach aluminum from the wall of the can and disperse it throughout the juice. Soft drinks also present special hazards. While all soft drinks containing fluoride will leach aluminum from the can, diet sodas may be worse than regular sodas because the fluoride content, at least in one study, was higher in the diet drinks. Although most aluminum cans now have inner linings, the coating may be defective and can also be fractured during shipping.*
>
> *Furthermore, the longer a canned drink sits, especially at higher temperatures, the more aluminofluoride compound will be created in the drink. This would be a major consideration, for example, in the millions of diet soft drinks donated to soldiers in the Persian Gulf. These drinks sat in the blazing heat, over 105° F, for weeks. In addition, the drinks contained the toxic sweetener, aspartame, which in the heat breaks down very quickly into the carcinogenic compound, diketopiperizine, as well as formaldehyde and formic acid.*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**

Soft drink manufacturers, of course, claim that their aluminum cans are perfectly safe. But they also claim that their high-sugar products don't cause obesity, either, and they staunchly defend the safety of aspartame. So it's difficult to lend credibility to anything stated by soft drink manufacturers. Clearly, they are primarily interested in selling products, not in protecting the health of their customers. After all, **sick customers don't demand reimbursements from soft drinks companies for their medical bills**. Making people sick and promoting diseases like osteoporosis **has absolutely financial consequences** to soft drink companies themselves. The medical costs of dealing with these diseases are fully shouldered by the customer.

Soft drink companies spin the science to claim their products are harmless

There's a tremendous amount of spin coming out of the public relations departments of soft drink companies. Not surprisingly, the soft drink spin machine has infected all sorts of scientific-sounding groups and organizations whose employees unabashedly defend the soft drink manufacturers:

> *Corporations also fund ''nonprofit research institutes" which provide "third party experts" to advocate on their behalf. The American Council on Science and Health (ACSH), for example, is a commonly-used industry front group that produces PR ammunition for the food processing and chemical industries. Headed by Elizabeth Whelan, ACSH routinely presents itself as an "independent," "objective" science institute. This claim was dissected by Howard Kurtz of the Washington Post in the March 1990 Columbia Journalism Review, which studied the special interests that fund ACSH. Kurtz reported that Whelan praises the nutritional virtues of fast food and receives money from Burger King. She downplays the link between a high fat diet and heart disease, while receiving funding from Oscar Mayer, Frito Lay and Land O'Lakes. She defends saccharin and receives money from Coca-Cola, Pepsi, NutraSweet and the National Soft Drink Association.*
>
> **- John Stauber, Toxic Sludge Is Good For You**

Despite all the spin efforts, it is generally recognized that soft drinks are unhealthy and certainly not “wholesome beverages” as claimed by soft drink makers. Yet, every time a lawmaker attempts to ban soft drinks in schools, for example, or pass new “junk food taxes” that would help dissuade consumers from buying so many soft drinks, they are steamrolled by a seemingly unstoppable political influence machine.

The combined industries of food producers, media owners, and pharmaceutical companies, when taken as a whole, simply aren’t interested in making people healthy since that would destroy their profits. This phenomenon is described by Marion Nestle in **Food Politics:**

> *Ethical or not, a message to eat less meat, dairy, and processed foods is not going to be popular among the producers of such foods. The message will not be popular with cattle ranchers, meat packers, dairy producers, or milk bottlers; oil seed growers, processors, or transporters; grain producers (most grain is used to feed cattle); makers of soft drinks, candy bars, and snack foods; owners of fast-food outlets and franchise restaurants; media corporations and advertising agencies; manufacturers and marketers of television sets and computers (where advertising takes place); and, eventually,* **drug and health care industries likely to lose business if people stay healthier longer**. *The range of economic sectors that would be affected if people changed their diets, avoided obesity, and prevented chronic diseases surely rivals the range of industries that would be affected if people stopped smoking cigarettes. Perhaps for this reason,* **USDA officials believe that really encouraging people to follow dietary guidelines would be so expensive and disruptive to the agricultural economy as to create impossible political barriers**. *Rather than accepting the challenge and organizing a concerted national campaign to encourage more healthful eating patterns, they propose a more politically expedient solution: the industry should work to improve the food supply through nutrient fortification and the development of functional foods with added nutritional value. [Emphasis added.]*
>
> **- Marion Nestle, Food Politics**

To get an idea of the power of this political / economic machine, take a look at the influence of just one player: big sugar companies.

> In 1991, 1,700 farms raised sugarcane and 13,700 raised sugar beets in the United States, but 42 percent of the sugar subsidies went to just 1 percent of these growers. The owners of these few farms give generously to both political parties. The Fanjul family, for example, controls about one-third of Florida’s sugarcane production and collects at least $60 million annually in subsidies. The Fanjuls contributed more than $350,000 to the two political parties -- more to Democrats than to Republicans -- through their Flo-Sun companies in 1997-1998. Alfonso Fanjul hosted a dinner attended by President Bill Clinton that raised more than a million dollars for the Florida Democratic party.
>
> **- Marion Nestle, Food Politics**

Five simple steps to rebalance the mineral content of your body

As you can see from all this, the risks to your health from consuming diet soft drinks extends far beyond the artificial chemical sweetener contained in those drinks. You may have avoided the sugar, but you haven't avoided the acidity of the beverage. If you continue to drink these beverages, you will undoubtedly suffer additional health consequences in the long term that you never intended.

Now that you know about the dangers of consuming soft drinks, you are hopefully considering giving them up for good. In order to finally rid yourself of soft drinks forever, be sure to check out the report, "The Five Soft Drink Monsters" offered by Truth Publishing at **http://www.TruthPublishing.com.**

You may also wish to take the following steps to rebalance the mineral content of your diet:

1. Supplement with calcium. Coral calcium is a good choice, but plant-derived calcium from dark green vegetables is even better. The best source? Chlorella. In addition to assisting with your calcium / phosphorus ratio, supplemental calcium provides a long list of additional health benefits.

2. Supplement with magnesium to help your body better assimilate the additional calcium you're eating. Most Americans are deficient in magnesium. Best source? Once again, chlorella.

3. Get more natural sunlight. By exposing your skin to natural sunlight, without sunscreens (in moderation, of course), your body will naturally produce vast stores of Vitamin D, which is critical for the construction and maintenance of healthy bones. Without adequate Vitamin D, your body cannot efficiently use the extra calcium you're taking. Also, by the way, the darker your skin, the more sunlight you need to generate Vitamin D. This is one reason why most American males of African descent are highly deficient in Vitamin D and suffer from skyrocketing rates of prostate cancer. To learn more about this, read my free downloadable report at http://www.TruthPublishing.com, called "The Healing Sun: an interview with Dr. Michael Holick."

4. Engage in physical exercise: both cardiovascular and strength training. These activities promote healthy bone mass and actually increase your bone mass density, regardless of your age or gender. Older women especially need to engage in strength training activities to combat the hormone-related and age-related bone mineral deficiencies so common in modern society.

If you're interested in chlorella, my recommended source is Jenny Lee Naturals (http://www.jennyleenaturals.com), which also sells spirulina and various superfood nutritional supplement products.

Learn more about soft drinks at: http://www.newstarget.com/soft_drinks.html

Heavy bacon consumption

> *All meats and dairy products are laden with chemicals that one way or another are going to end up in our system. The only natural and abundant thing about meat and dairy products is fat (60 percent of it). The combination of fat and toxic chemicals does sound a bit inconvenient, doesn't it? It seriously increases our chances of developing problems like obesity, hypertension, cardiovascular diseases, hyperthyroidism, candidiasis and cancer. According to the General Accounting Office,* ***143 chemical substances*** *have been detected in commercial meats,* ***42 are carcinogens and 20 can cause birth defects*** *- none are beneficial!*
>
> **- Francisco Contreras, M.D., Health in the 21st Century**

Bacon is a mainstay in the standard American diet. In this section, I'll discuss the dangers of eating bacon. But before we dive in, here are two important points to disclose up front:

Point #1: There is no such thing as healthy bacon. All bacon is bad for your health. But if you can find organic bacon, processed without nitrates and grown on small family farms, that's far healthier than commercially-produced bacon. The information I present here, though, is talking about mass-produced bacon -- the kind produced in non-organic environments and laced with a variety of chemical toxins.

Point #2: I'm not going to talk about saturated fats in bacon. I believe the scientific literature clearly shows a link between excess saturated animal fat consumption and a variety of health problems, most notably cardiovascular disease. But I also believe that a bit of animal fat is probably a healthy thing if consumed in very small quantities and as part of a plant-based diet. However, unless it's organic, free-range or kosher, I wouldn't touch it.

With those two points in mind, let's take a look at what we'll find in bacon:

Toxic chemicals found in bacon and processed meats

Unless they are produced from organic farms, virtually all processed meats have chemical contaminants as a result of unclean feed practices, the meat processing environment, the use of pesticides on grains fed to cattle and pigs, the contamination of soils with heavy metals like cadmium, arsenic and lead, meat product packaging, contaminated well water that ranch animals drink, and many other sources. These chemical contaminants tend to collect in the animals' fats where they quickly attain much higher concentrations than those found in the environment.

None of these contaminants are required to be listed on the label of processed meat products such as bacon.

When you eat bacon fat, you are consuming highly-concentrated stores of these chemical contaminants. All those chemical toxins, heavy metals, pesticides, hormones and other substances found in the fat tissues of the original animal now become your problem. As mentioned in the quote above, **143 chemical substances have been detected in commercial meats**, 42 are carcinogens and 20 can cause birth defects.

Various defenders of the meat industry, of course, strongly resist any efforts to identify or regulate the various chemicals contaminating their products:

> *The pesticide, plastics, pulp and paper, household products, oil, and cosmetics industries have all mobilized to defend chlorine chemistry against its environmentalist critics. The food industry has also weighed in, mindful that dioxin accumulates in fatty tissue and is therefore omnipresent in meat and dairy products. Coordinated by the National Cattlemen's Beef Association, the food industry's "Dioxin Working Group" includes the National Milk Producers' Federation, American Society of Animal Science, National Broiler Council, National Turkey Federation, International Dairy Foods Association, American Sheep Industry Association, National Pork Producers Council, American Meat Institute, National Renderers Association, American Farm Bureau Federation, and the National Food Processors Association. In his report to the Chlorine Chemistry Council (CCC), Jack Mongoven noted that these groups "have a history of strong relations with the Agriculture Department, and it's certain they will use these solid ties to put pressure on EPA through Agriculture."*
>
> **- Sheldon Rampton and John Stauber, Trust Us We're Experts**

The sodium nitrite found in bacon and processed meats

Most of the chemicals mentioned in this section are accidental chemicals that neither farmers nor food producers intend to put into their meat products. But sodium nitrite is another matter altogether: it is intentionally added to meats primarily for cosmetic reasons (to turn the meats an appetizing red color, since most of the meats on the shelves at grocery stores would have long since turned a putrid gray).

I've already covered a considerable amount of information about sodium nitrite earlier in this manual. Hopefully by now, you realize that sodium nitrite results in the formation of highly carcinogenic nitrosamines in the human digestive tract. These nitrosamines are so toxic and so strongly tied to the formation of cancerous tumors that lab researchers actually inject nitrosamines into rats when they want to give them tumors to study. (And if you choose to keep eating sodium nitrite, you are similarly treating yourself like a lab rat, too...)

> *Cured meats such as bacon, ham, beef jerky, salami, and luncheon meats contain nitrites. These substances inhibit the growth of dangerous botulism-causing bacteria, and maintain the meat's red color. Although nitrite itself is not carcinogenic, it combines with naturally-occurring chemicals called secondary or tertiary amines to form carcinogenic nitrosamines. This reaction ...occurs within the stomach once the food is ingested. Nitrite-contaminated food is thought to be a cause of stomach cancer in the United States, Japan, and other nations.*
>
> **- Samuel S. Epstein, M.D., The Politics of Cancer**

And yet the meat packing industry refuses to remove this substance from our nation's food supply:

> *Meat packing, like the packing of other products, plays an important role in the livestock industry. Nitrites are another pillar of this industry. They not only preserve meat longer, but give it a cosmetic appeal by intensifying the red color. I already mentioned that when heated, nitrites become carcinogenic. These nitrites are widely used in lunch meats, hot dogs and bacon. It was recently published that children who eat 12 or more hot dogs a month are 7.5 times more prone to get leukemia. When mothers consume hot dogs during pregnancy, the incidence of brain cancer in their offspring is greatly increased.*
>
> **- Francisco Contreras, M.D., Health in the 21st Century**

Clinical evidence shows sodium nitrite to be carcinogenic

If you're interested in a clinical analysis of the risk of dietary nitrosamines, look no further than the tome, Carcinogens and Anti-carcinogens in the Human Diet, which presents some fairly technical reading on the subject.

Here's what it has to say about nitrosamines: (I bold the important sections):

> *N-nitrosodimethylamine has been identified by IARC (1978) and NTP (1994) as an animal carcinogen.* ***There is sufficient evidence to indicate the carcinogenicity of N-nitrosodimethylamine in several experimental animal species*** *(IARC 1978). When administered orally, it induced* ***liver*** *hemangiosarcomas, hepatocellular* ***carcinomas, and kidney and lung tumors*** *in mice (Takayama and Oota 1963, 1965; Terracini et al. 1966; Toth et al. 1964; Clapp et al. 1968, 1971; Den Engelse et al. 1969, 1970; Clapp and Toya 1970; Otsuka and Kuwahara 1971; Shabad and Savluchinskaya 1971; Zwicker et al. 1972). The chemical also induced* **kidney and bile duct tumors** *in rats and hepatocellular carcinomas and bile duct tumors in hamsters, rabbits, and guinea pigs when orally administered (Magee and Barnes 1956, 1959, 1962; Schmahl and Preuss-mann 1959; Zak et al. 1960; Tomatis et al. 1964; Terracini et al. 1967, 1969; Geil et al. 1968; Le Page and Christie 1969a,b; Riopelle and Jasmin 1969; Kowalewski and Todd 1971; Hadjiolov and Markow 1973; Taylor et al. 1974; Shinohara et al. 1976). N-nitrosodimethylamine is also* ***carcinogenic when it is administered prenatally*** *and in single doses. In several of the studies,* **dose-response relationships were established**.
>
> *Therefore, IARC (1978) concludes that N-nitrosodimethylamine "should be regarded for practical purposes as if it were carcinogenic in humans" and has classified it as a Group 2A carcinogen.*

The phrase "dose-response relationships" is especially intriguing. What it means, simply stated, is that the more nitrosamines were given to the test animals, the higher the rates of cancers that developed. **More chemicals = more cancer**. This is generally considered to be a strong indicator that the cancers observed in these experiments were not just "spontaneous" cancers that would have occurred anyway.

You would think that the food processing companies would have read these studies by now. But they seem to act as if they had no clue (or don't really care), because its use by food processing companies continues to be widespread:

> *Nitrates are the next-most dangerous, because they can cause cancer. Nitrite is added to 60 to 65 percent of all pork produced in the United States, as well as some other meats, poultry, fish, and cheese. It is especially prevalent in processed meats, such as bacon, sausage, luncheon meats, and hot dogs, to preserve the pink color and inhibit the growth of the bacteria that cause botulism food poisoning.*
>
> **- Debra Lynn Dadd, Home Safe Home**

If you eat bacon, check the package of bacon in your refrigerator right now. Do you find sodium nitrite listed on the label?

Of all the processed meats you can buy, bacon has by far the highest levels of sodium nitrite:

> *Levels of nitrosamines tend to be particularly high in bacon, and they are present in lower quantities in sandwich meats, salami and bologna, hot dogs, and smoked meats and fish. All of these should be avoided, especially bacon. While this may sound like drastic advice, it is well founded.*
>
> **- Samuel S. Epstein, M.D., The Politics of Cancer**

Carcinogens caused by high heat cooking

Sodium nitrite isn't the only problem found in bacon, by the way. The very process of cooking the bacon can also result in the formation of dangerous carcinogens:

> *It is well-known that foods cooked at high temperatures inflict massive damage to the genes. A research group at the University of Minnesota reported that women who eat very well done hamburgers have a 50 percent greater risk of breast cancer than women who eat hamburgers rare or medium. The researchers conducted a nested, case-control study among 41,836 cohort members of the famous Iowa Women's Health Study. They found that women who consistently consumed well done beef steak, hamburgers, and bacon had a 4.62-fold increased risk of breast cancer (Zheng et al. 1998). Cooking foods at high temperatures causes the formation of gene-mutating heterocyclic amines. That is one reason why eating deep-fried foods is so dangerous. Heterocyclic amines have been linked to prostate, breast, colorectal, esophageal, lung, liver, and other cancers. While health-conscious people try to avoid foods that are known carcinogens, even grilled salmon contains a potent dose of gene-mutating heterocyclic amines (Madrigal-Bujaidar et al. 1997).*
>
> **- Disease Prevention and Treatment by The Life Extension Foundation**

In other words, even if you have 100 percent organic, ethically-raised bacon on your plate, the very process of frying it up in a pan results in the creation of other cancer-causing chemicals. Foods cooked at very high temperatures, like bacon, are simply not healthy:

> *Fried foods are subjected to high temperatures, and they contain considerably more compounds that are damaging to DNA than non-fried foods. Studies have shown that people who consume too many fried foods such as bacon show* ***pulverized products of their DNA*** *in their urine.*
>
> **- J. Robert Hatherill, Ph.D., Eat To Beat Cancer**

How to protect yourself from the sodium nitrite found in bacon and other processed meats

The good news to all of this, by the way, is that you can protect yourself from many of the chemicals either found present in the bacon you purchase or created by high-temperature cooking processes.

There are essentially three ways to do this:

1. Take green tea tincture or capsules when you eat bacon. Green tea has been shown to inhibit the formation of nitrosamines:

> *Green tea consumption with meals may inhibit the formation of nitrosamines. Nitrosamines are formed when nitrites, such as those used in the curing of bacon and ham, bind to amino acids. Numerous studies show that green tea (including green tea polyphenols and extracts) exert significant inhibitory effects on the formation of nitrosamines in various animal and human models. For example, when human volunteers ingested green tea along with 300 milligrams sodium nitrate and 300 milligrams proline, nitrosoproline formation was strongly inhibited. The popular custom of drinking green tea with meals in Japan may be a major reason for the low cancer rates there. With the cancer rate in the United States rising, more Americans might want to start drinking green tea with their meals.*
>
> **- Michael T. Murray, N.D., The Encyclopedia of Nutritional Supplements**

Personally, I recommend green tea tincture, since it offers the most quickly available form of green tea compounds and is likely to start protecting you sooner than green tea capsules. As with many of the supplements mentioned here, you can find a high-quality tincture at http://www.JennyLeeNaturals.com. Green tea is also available at health food stores and vitamin suppliers.

2. Get plenty of antioxidants with your meals if you eat bacon or other processed meats. Studies show that the isolated vitamins C and E both protect against nitrosamine formation, but as you know, I always recommend superfood supplements over isolated vitamins. Just make sure you get plenty of vitamins C and E from some natural source.

3. Remove the sodium nitrite from the bacon before cooking it, then add your own healthy sea salt. This is an excellent solution described by Blaylock in **Health and Nutrition Secrets**:

> *If you feel you cannot live without bacon, do this first. Fill a bowl with distilled water, place the strips of bacon loosely in the water and cook in a microwave for forty-five seconds, or on the stove for two minutes. Stir the water and let it sit for about two more minutes. Then pour off the water and repeat the process. You'll notice the bacon has become very bland after all this cooking. This is because sodium nitrite has a salty taste and is water-soluble. All you have to do is add a little sea salt (don't use commercial salt, as it may contain aluminum) to bring back the taste.*
>
> *I also advise cooking bacon in extra virgin olive oil. Just pour a thin layer over the bottom of the pan and sprinkle with turmeric, which will dissolve in the oil and give your bacon a nice bright yellow color. Better still, the flavonoid, curcumin, in the turmeric is a powerful cancer-inhibiting substance, and will protect the meat from forming dangerous heterocyclic amines (cancer-causing chemicals formed when meat is seared) in your body. In addition, curcumin is an antibacterial substance and a powerful antioxidant.*

Summing up the health risks of eating bacon

When it comes to bacon, the thing to remember is that you're dealing with a potent substance. By the time it works its way from the contaminated animal feed given to pigs, through the pork processing plants where sodium nitrite is added, and put through the high-heat cooking process on your stove, **your bacon is a food that's heavily laden with cancer-causing chemicals**.

But there's plenty you can do to protect yourself from these chemicals. You can remove the sodium nitrite by boiling, you can take green tea tincture and superfood supplements to minimize the production of nitrosamines, and you can pursue a healthy, fiber-rich diet that helps move these toxins through your system with minimal contact with your intestinal walls.

But make no mistake about it: the best solution is to simply avoid bacon entirely, which is what I do. Believe me, you can live very well without eating bacon. Just have eggs for breakfast and skip the bacon. Or eat bacon processed without nitrates and produced on organic farms. ("Uncured" bacon.)

The questionable safety of beef, chicken and pork products

Aside from the bacon products already discussed, most people also depend heavily on various meat products such as ground beef, steaks, chicken meat, and so on. A close examination of the practices of the beef and chicken industries, in particular, can only lead a reasonable person to conclude that organic meats are far more desirable than beef or chicken mass-produced by profit-focused megacorporations.

For starters, let's rewind a few years back to April 16, 1996, where we see Oprah Winfrey interviewing a former Montana cattle rancher who became a vegetarian activist after personally experiencing the corruption and deception in the beef industry. He was invited to the Oprah show to share his views about the risk of mad cow disease in the United States. His name? Howard Lyman. Here's the interaction that was broadcast to millions of viewers:

> *Lyman: ...we're following exactly the same path that they followed in England... One hundred thousand cows per year in the United States are fine at night, dead in the morning. The majority of those cows are rounded up, ground up, fed back to other cows. If only one of them has mad cow disease, [it] has the potential to infect thousands...*
>
> *Winfrey: ...How do you know for sure that the cows are ground up and fed back to the other cows?*
>
> *Lyman: Oh, I've seen it. These are USD A statistics. They're not something we're making up.*
>
> *Winfrey: ...It has just stopped me cold from eating another burger! I'm stopped!*

To read more about Howard Lyman and what has happened since the discovery of mad cow disease in the U.S., read my own analysis at: http://www.newstarget.com/000850.html

In response to Oprah's comments about beef on the public airwaves, the beef industry went into full-scale assault:

> *Prices for cattle futures were said to have fallen by more than 10 percent in the moments following the broadcast and to have taken weeks to recover. One Texas cattleman told a reporter that his company lost $7 million as a result of the show and that "We're taking the Israeli action on this thing . . . Get in there and just blow the hell out of somebody." He and other Texas cattle ranchers instituted a $10.3 million class-action suit against Ms. Winfrey for inciting fear of beef in the minds of consumers. Commentators, however, considered the suit to be "mad litigation disease." Attacking one of the most popular television performers in America seemed so unproductive a way to challenge First Amendment rights that it suggested lawyers had been given "a bum steer."*
>
> **- Marion Nestle, Food Politics**

Oprah was acquitted, but not without having to spend nearly $1 million on legal fees to defend her comments.

To get a real look at what goes on in the beef industry, you have to examine the illegal use of growth-promoting hormones, antibiotics and other substances used in cattle in the U.S., as well as the international community's response to that abuse.

Illegal use of carcinogenic hormones in cattle

This subject has been tackled quite well by author Samuel S. Epstein, M.D., who is one of the most well-informed, well-respected doctors on the subject of environmental and food toxins. Below, I reprint sections of his 1990 article published in The International Journal of Health entitled, "The Chemical Jungle: Today's Beef Industry." It's a fairly long article (although I've shortened it here), so if you just want the main points, the first paragraph is shocking enough:

> *In the absence of effective federal regulation, the meat industry uses hundreds of animal feed additives, including antibiotics, tranquilizers, pesticides, animal drugs, artificial flavors, industrial wastes, and growth-promoting hormones, with little or no concern about the carcinogenic and other toxic effects of dietary residues of these additives. Illustratively, after decades of misleading assurances of the safety of diethylstilbestrol (DES) and its use as a growth-promoting animal-feed additive, the United States finally banned its use in 1979, some 40 years after it was first shown to be carcinogenic. The meat industry then promptly switched to other carcinogenic additives, particularly the natural sex hormones estradiol, progesterone, and testosterone, which are implanted in the ears of more than 90 percent of commercially raised feedlot cattle. The relationship between recently increasing cancer rates and the lifetime exposure of the U.S. population to dietary residues of these and other unlabeled carcinogenic feed additives is a matter of critical public health concern.*
>
> *The United States is isolated among meat-exporting countries, such as Argentina and Australia, in having threatened retaliatory sanctions against the European Economic Community (EEC) and accusing it of unfair trade practices because of its January 1, 1989, ban on hormone-treated U.S. meat. The accusations ignore serious questions about the carcinogenic and other risks of hormonally contaminated meat that are of major concern to European consumers who, over two years ago, pressured the EEC into banning the use of all hormone additives.*
>
> *Growth-promoting hormone additives, fed, implanted, or injected in more than* ***95 percent of U.S. cattle****, are mostly synthetic non-steroids such as Zeranol, natural sex steroids such as estrogens, or synthetic pituitary hormones such as bovine growth hormone. Although the carcinogenicity of the synthetic diethylstilbestrol (DES) in test animals was known as early as 1938, its use as a feed additive was approved by the U.S. Department of Agriculture (USDA) and the Food and Drug Administration (FDA) in 1947. By 1971, DES was being used* ***in 75 percent of U.S. cattle****. In spite of infrequent federal sampling and insensitive monitoring, DES residues were found in cattle and sheep at levels in excess of those inducing cancer experimentally. Based on these findings,* ***DES-treated meat was subsequently banned in more than 20 foreign countries****, mostly European. However, misleading assurances of safety and stonewalling by the FDA and USDA, including the* ***deliberate suppression of residue data****, managed to delay a U.S. ban on DES until 1979.*

The meat industry then promptly switched to other carcinogenic additives, particularly natural sex hormones, which are implanted in the ears of commercially raised feedlot cattle. Since 1983, the FDA has allowed virtually unregulated use of these natural additives right up to the time of slaughter.

More than a decade ago, Roy Hertz, then director of endocrinology of the National Cancer Institute and a world authority on hormonal cancer, warned of the ***carcinogenic risks of estrogenic feed additives****, particularly for hormonally sensitive tissues such as breast tissue, because they could increase normal body hormonal levels and disturb delicately poised hormonal balances. Hertz pointed to evidence from innumerable animal tests and human clinical experience that such imbalance can be carcinogenic. Hertz also warned of the essentially uncontrolled and unregulated use of these extremely potent biological agents, no dietary levels of which can be regarded as safe. Even a* ***dime-sized piece of meat contains billions or trillions of molecules*** *of these carcinogens.*

Virtually the entire U.S. population consumes, without any warning, labeling, or information, unknown and unpredictable amounts of hormonal residues in meat products over a lifetime. In 1986, as many as half of all cattle sampled in feedlots as large as 600 animals were found to have ***hormones illegally implanted in muscle*** *rather than the ear skin, to induce further increased growth. This practice results in very high residues in meat, which even the FDA has admitted could produce "adverse effects."*

Hormonal feed contamination in the United States is only part of a much larger problem caused by the use of thousands of feed additives. ***These include antibiotics, tranquilizers, pesticides, animal drugs, artificial flavors, and industrial wastes****, many of which are carcinogenic in addition to their other harmful effects. The runaway technologies of the meat-product and pharmaceutical industries are supported by an eager cadre of academic consultants, contractees and apologists, tremendous lobbying pressures, and a revolving door between senior personnel in industry and regulatory agencies.*

*As clearly evidenced in a series of General Accounting Office investigations and Congressional hearings, USDA inspection and FDA registration and residue-tolerance programs are in near total disarray, aggravated by brazen denials and cover-ups by these agencies. A January 1986 report, "Human Food Safety and the Regulation of Animal Drugs," unanimously approved by the House Committee on Government Operations, concluded that the "****FDA has consistently disregarded its responsibility*** *-- has repeatedly put what it perceives are interests of veterinarians and the livestock industry ahead of its legal obligation to protect consumers --* ***jeopardizing the health and safety of consumers of meat, milk, and poultry****." The great majority of feed additives are used in the absence of evidence of efficacy, practical and sensitive monitoring methods, and minimal if any safety test data, apart from the widespread use of illegal and unapproved drugs.*

The feeding of dead, ground up diseased cows to other cows

If you are what you eat, then many U.S. consumers are second-generation ground up dead, diseased cow parts. Because that's exactly what gets fed to many cows that are later consumed by human beings. The practice is called "rendering," and it's a way for cattle ranchers to make sure they use every bit of animal protein available.

To get a sense of what I'm talking about here, it helps to have visited Greeley, Colorado. I once visited the Hewlett-Packard offices in Greeley and, upon opening the car door in the HP parking lot, I was nearly floored by the enormous stench wafting through the air. I asked an HP employee, "What on Earth is that smell?" He replied, "It's the cattle slaughter houses. You're smelling cow blood."

Here's a (shortened) description of Greeley, as printed in **Fast Food Nation**:

> *You can smell Greeley, Colorado, long before you can see it. The smell is hard to forget but not easy to describe, a combination of live animals, manure, and dead animals being rendered into dog food. The smell is worst during the summer months, blanketing Greeley day and night like an invisible fog. Many people who live there no longer notice the smell; it recedes into the background, present but not present, like the sound of traffic for New Yorkers. Others can't stop thinking about the smell, even after years; it permeates everything, gives them headaches, makes them nauseous, interferes with their sleep. Greeley is a modern-day factory town where cattle are the main units of production, where workers and machines turn large steer into small, vacuum-sealed packages of meat. The billions of fast food hamburgers that Americans now eat every year come from places like Greeley. The industrialization of cattle-raising and meatpacking over the past two decades has completely altered how beef is produced -- and the towns that produce it.*
>
> *The ConAgra Beef Company runs the nation's biggest meatpacking complex just a few miles north of downtown Greeley. Weld County, which includes Greeley, earns more money every year from livestock products than any other county in the United States. ConAgra is the largest private employer in Weld County, running a beef slaughterhouse and a sheep slaughterhouse, as well as rendering and processing facilities.*
>
> *To supply the beef slaughterhouse, ConAgra operates a pair of enormous feedlots. Each of them can hold up to one hundred thousand head of cattle. At times the animals are crowded so closely together it looks like a sea of cattle, a mooing, moving mass of brown and white fur that goes on for acres. These cattle don't eat blue **grama** and buffalo grass off the prairie. During the three months before slaughter, they eat grain dumped into long concrete troughs that resemble highway dividers. The grain fattens the cattle quickly, aided by the anabolic steroids implanted in their ear. A typical steer will consume more than three thousand pounds of grain during its stay at a feedlot, just to gain four hundred pounds in weight. Each steer deposits about fifty pounds of urine and manure every day. Unlike human waste, the manure is not sent to a treatment plant. It is dumped into pits, huge pools of excrement that the industry calls "lagoons." The amount of waste left by the cattle that pass through Weld County is staggering. The two Monfort feedlots outside Greeley produce more excrement than the cities of Denver, Boston, Atlanta, and St. Louis -- combined.*

Cows are fed chicken litter

The bottom line? Cows are mass-produced under highly questionable conditions. They are doped up with hormones and antibiotics and fed a diet that includes -- believe it or not -- chicken litter. As printed in January, 2004, in **USA Today**:

> *Since August 1997, FDA has banned the use of cattle remains as an ingredient in feed for other cows, goats and sheep. But there are plenty of loopholes. The FDA has been considering ways to close them since 2002 but has not done so.*
>
> *Poultry can't get mad-cow-like diseases, so feeding them protein meal made from rendered cattle has been considered safe. But poultry litter -- food they drop while eating, along with their excrement, feathers and bedding -- can legally be fed to cattle.*
>
> *Also, outdated pet food can be used in ruminant (cow, sheep and goat) feed. Retail dry pet food frequently contains ruminant meat and bone meal. Out-of-date dry cat and dog food is sometimes sold as salvage and ends up in cattle feed.*

My own comments on the feeding of chicken litter to cattle, which are posted at http://www.madcownews.org, are as follows:

> *This is fascinating news for several reasons, not the least of which is the fact that chicken litter is being fed to cattle in the U.S. and, therefore, cows are ingesting highly toxic arsenic that's contained in the chicken litter.*
>
> *But don't put it past meat growers to use any chemical necessary to generate more profits. We've already seen how the beef industry feeds diseased, dead cow parts, including spinal cord tissue, to chickens, and then takes that chicken litter and feeds it back to cows. Is it any surprise that the poultry industry is any less inhumane in their operations? To them, it's just a factory after all. Chickens are kept in tiny cages for the duration of their miserable lives. Their beaks are cut off so they can't injure other chickens when they go mad from the conditions under which they are forced to live. And their bodies are pumped full of chemicals to make sure they stay alive just long enough to make it to the slaughterhouse. It's a cruel industry, and every time you eat chicken at a restaurant or buy chicken at the grocery store, you support it.*
>
> *The solution is to buy only free range chicken, organically farmed by responsible families who allow their chickens to run free and eat bugs and weeds, just like chickens are supposed to do.*

Machinery squeezes the meat out of a cow carcass

On top of everything presented here so far, meat processing factories use “Advanced Meat Recovery” equipment, or “AMR” equipment to literally squeeze every ounce of marketable meat product out of the carcass of a dead cow.

Advanced Meat Recovery (AMR) equipment is ghastly: it stuffs a cow carcass into a wringer machine, squeezes the bones until they leak, and packages the meaty liquid that comes out as “beef” for hot dogs, packaged meats, and other “beef” products. And, of course, it reclaims quite a bit of spinal material in the process -- precisely the material that carries mad cow disease.

It’s the meat packing industry’s way of literally squeezing every last penny out of a dead cow, but it’s also potentially deadly to U.S. consumers who eat beef, since a dead cow contaminated with mad cow disease that’s put through the AMR wringer would potentially infect the meat products sold by the packing plant.

The more we learn about how the beef industry really operates, the more grotesque it appears. I’d bet that when most Americans read, “100 percent beef” on the label of some packaged food product, they weren’t imagining the runoff juices of cow bones squeezed through a wringer machine. What most people consider “beef” is altogether different from what the beef industry considers “beef.” And if you’ve been eating hot dogs, bologna or other packaged meats over the years, you’ve probably already had your fill of cow parts.

Thanks to AMR equipment combined with bizarre feed practices like feeding chicken litter to cows -- and the reluctance of the USDA to require mandatory testing of cows for mad cow disease -- this disease could be in your freezer right now, says Professor Ira Krull from Northeastern University:

“The American public should be concerned, at this moment, there is contaminated beef sitting in grocery stores and personal freezers across the country,” says Krull.

From a write-up on Krull’s statement published by **ScienceDaily.com**:

> *Krull, a strong advocate for mandatory mad cow testing of all slaughtered cows intended for market, suggests the United States follow the lead of countries such as England and Japan. England, in response to their mad cow disease epidemic in the 1980s and 1990s, instated mandatory testing of all slaughtered cows intended for market, keep detailed records of all cows within their borders, and banned the use of all ruminant feed. Currently, the United States and Canada lag on all accounts, says Krull.*
>
> *“It’s disturbing that, even with a confirmed case of mad cow disease, slaughtered cows are not tested for the disease before they are sent to market,” said Krull. Approximately 0.03 percent of U.S. slaughtered cattle are randomly tested for mad cow disease by the United States Department of Agriculture each year. For the USDA to mandate regular testing of every cow for mad cow disease would cost an additional $20 to $25 per cow, which translates into an increase of six cents per pound of beef.*

Krull says the issue of testing for mad cow disease is highly political. The more cattle tested, the more likely it is that some will be found with the disease. "They don't want to find it," says Krull. "The USDA really should be funding this like crazy, but it's not."

The practice of providing ruminant feed to farm animals has been acknowledged to be extremely dangerous, says Krull. The high concentration of nerve and brain tissue in ruminant feed is thought to greatly increase the risk of transmission of mad cow disease. In the 1990s, the U.S., along with most other beef-producing nations, introduced a ban on ruminant feed, but Krull points out the problem of regulation remains. "Currently, there is no way to prevent small farmers from making and using ruminant feed" said Krull.

http://www.sciencedaily.com/releases/2004/01/040115074059.htm

The beef industry pressures government agencies to back off

In 1996, the FDA actually tried to limit the use of certain animal proteins (dead cows, for example) in animal feed. The meat industry and its related groups pulled out all the stops to make sure tighter safety regulations were never passed.

As you read the following passage, take special note of all the animal parts mentioned here. These are the parts over which the FDA and meat industry leaders are arguing! (Remember this section next time you even think about reaching for a hot dog...)

As related in **Fast Food Nation**:

The FDA's vow to act quickly soon encountered resistance from the American cattle, meatpacking, meat-processing, feed-manufacturing, and rendering industries. Animal protein was an inexpensive feed additive that promoted growth, and slaughterhouses produced huge volumes of waste that needed to go somewhere. At the time, American cattle were eating about 2 billion pounds of animal protein every year -- mainly the remains of other cattle. About three-quarters of all American cattle were being fed animal protein, and dairy cattle were the most likely to eat it in significant amounts. They were also the most likely to wind up as fast food hamburgers one day.

Spokesmen for the rendering industry asserted that the link between mad cow disease and human illness was "totally unsupported by any scientific evidence." They said that a ban on feeding dead cattle to cattle would be "unfeasible, impractical, and unenforceable." The National Cattlemen's Beef Association opposed a total ban on animal proteins, suggesting instead that feed restrictions should be limited to certain organs known to transmit mad cow: ***brains, spinal cords, eyeballs****. The American Meat Institute called for muscle meat to be exempted from any FDA ban, along with* ***fats, blood, blood products, and intestinal material****. The National Pork Producers Council said there was absolutely no harm in* ***allowing cattle to continue eating dead pigs****.*

Consumer groups and public health officials wanted strict controls on what livestock could be fed. The Consumers Union demanded a total ban on the feeding of "all mammal remains to all food animals." Prohibited material intended for poultry and hogs had, one way or another, still wound up being fed to cattle. The Centers for Disease Control and Prevention

advised that, at a bare minimum, the feeding of ruminants to ruminants had to be outlawed in order to prevent an outbreak of BSE.

On August 4, 1997, almost a year and a half after the FDA promised a speedy response to the threat of mad cow, new animal feed restrictions took effect. "The United States has no BSE," the agency declared, "and the final rule provides the necessary feed controls . . . should BSE occur here." The FDA described its new ban as "mammalian-to-ruminant, with exceptions." Dead sheep, goats, cattle, deer, mink, elk, dogs, and cats could no longer be fed to cattle. Rendering plants and feed mills would have to prevent these banned ingredients from mingling with feedstuffs that cattle were still allowed to eat: ***dead horses, pigs, and poultry; cattle blood, gelatin, and tallow; and plate waste collected from restaurants, regardless of what kind of meat those leftovers contained****. There were no new restrictions, however, on what could be fed to poultry, hogs, zoo animals, or pets. Indeed, the Grocery Manufacturers of America, the National Food Processors Association, and the Pet Food Institute successfully lobbied against any new labeling requirement for pet foods. These industry groups rightly worried that the FDA's proposed warning label -- "Do not feed to ruminants" -- might alarm consumers about* ***what their pets were actually being fed****.*

Think about that section, too, next time you're purchasing bagged food for Fido. Chances are, Fido is chewing on ruminant cow parts.

Most American consumers are exposing themselves to too much beef

The very discussion over what used to be allowed vs. what is now allowed is enough to bring on a rather intense bout of nausea. Personally, my knowledge of what really goes on in the beef industry is one of the many reasons why I simply don't buy any meat products made from cows, pigs or chickens. By the time you factor in all the hormones, pesticides, chemical toxins, bizarre food sources and advanced recovery machinery, you're left with a meat product that, in my opinion, isn't safe for long-term human consumption.

And yet most Americans gobble it up by the plateful, thinking they are now "healthier" than when they consumed grains. I don't know about you, but I'll take a bowl of boiled grains or a serving of tofu over a plate of U.S. beef any day.

My conclusion to all of this is that when it comes to saturated fats in animal products, you are probably fine if you consume these fats when they come from certified organic sources. Meat isn't unhealthy, in my opinion, if it comes from small farms where cows can roam free, eat raw grass, and aren't doped up with a chemical cocktail or fed chicken litter.

Action Item:

If you choose to eat animal products, buy exclusively from organic farms and ranches.

Organic beef makes a difference in your health

To make this long story short, then, if you're going to eat beef, pork or poultry, eat organic. It's worth it. Here's a brief look at what an organic ranch looks like:

> *Dale Lasater stands in a corral full of huge bulls, feeding them treats from his hand. Behind him on this warm spring day, the Rockies are still white with snow. Lasater is in his early fifties, with a handlebar mustache and wire-rimmed glasses. He wears worn-out jeans and boots, and a well-ironed, button-down shirt, looking part-cowboy, part-Ivy Leaguer. The bulls that crowd around him seem almost sweet, acting more like a bunch of Ferdinands than like fierce symbols of machismo. They were bred to be gentle, never dehorned, and never roped. The Lasater Ranch occupies about 30,000 acres of shortgrass prairie near the town of Matheson, Colorado. It is a profitable, working ranch that for half a century has not used pesticides, herbicides, poisons, or commercial fertilizers on the land, has not killed local predators such as coyotes, has not administered growth hormones, anabolic steroids, or antibiotics to the cattle. The Lasaters are by no means typical, but have worked hard to change how American beef is produced. Their philosophy of cattle ranching is based upon a simple tenet: "Nature is smart as hell."*
>
> *Dale Lasater recently set up a company to sell organic, free-range, grass-fed beef. None of the cattle used in Lasater Grasslands Beef spent any time at a feedlot. The meat is much lower in fat than grain-fed beef, and has a much stronger, more distinctive flavor. Lasater says that most Americans have forgotten what real beef tastes like. Argentine beef is considered a gourmet item, served at expensive restaurants, and almost all of the cattle in Argentina are grass-fed. Along with a number of other innovative ranchers in Colorado, he is trying to raise cattle in a way that does not harm consumers or the land. Lasater doesn't think that his little company will revolutionize the American beef industry; but it's a start.*

Wouldn't you rather get your beef from a farm like this?

The Problem With Dairy Products

> *The "dairy" problem comes in when adults continue to use milk and its products as a regular part of their diet. Lifelong use of milk is one of the biggest misconceptions and mistakes in nutrition. Consumption of dairy products should be greatly curtailed by the adult population, and by those children and teenagers sensitive to milk.*
>
> **- Elson Haas M.D., Staying Healthy With Nutrition**

The vast majority of Americans are heavy milk consumers. I've done it in the past, too: drinking a gallon of milk each day, adding milk to dinner recipes, using milk in baking... I've been a big-time milk consumer, just like you, probably.

But as you're about to learn, milk represents a very poor food choice from a nutritional point of view. The information you're about to read here may not be to your liking, but it's valuable information about the milk you've been drinking.

Even if you don't plan to stop drinking milk, I encourage you to read this anyway, if for no other reason than to have a deeper understanding of what you're drinking. The choice is always up to you!

> *Only a small percentage of the world's population drinks mammals' milk, but it dominates the U.S. agriculture and diet. For example, milk represents 44 percent of beverages consumed by children under 18, according to the USDA.*
>
> **- Robyn Landis, Herbal Defense**

Cows' milk is great nutrition for baby cows

Let's take a look at some of the facts on cows' milk:

- Cows' milk is nutritionally very different from human milk.
- Cows' milk is baby food for calves.
- No species on Earth drinks the milk of another species -- except humans who drink cows' milk.
- Only babies should drink mothers' milk. Adults are supposed to be weaned off of mothers' milk, which is why the majority of adults cannot properly digest cows' milk.
- One cup of cows' milk contains less calcium than one cup of broccoli juice.
- Cows' milk is deficient in magnesium and vitamin D -- and both are required for strong bones.

A critical look at cows' milk reveals the undeniable fact that cows' milk is baby food. And it isn't even meant for baby human beings, either: it's baby food for calves. I've been dairy-free for many years, and when I see friends drinking milk, I jokingly tell them, "Grow up! That's baby food!"

> *Science is now validating what mothers have known since the beginning of time: Human breast milk was designed for human babies, and cows' milk was designed for calves. The balance of nutrients in bovine milk is designed to grow a hundred-pound newborn calf to several hundred pounds within twenty-four months.*
>
> **- Carol Simontacchi, The Crazy Makers**

And yet the vast majority of human adults, spurred on by advertising from the dairy industry, continue to pump their bodies full of this nutritionally-imbalanced substance (imbalanced for humans, of course, but not for cows).

I find it truly bizarre that so many people think that a grown, healthy, 180-pound adult man should be sucking baby food from the teat of a bovine animal. Seems truly strange, doesn't it? As this quote from **Herbal Defense** says, humans are the only animals that engage in cross-species consumption of mothers' milk:

> *Indeed, there is not a lot that milk has to recommend it for human consumption. Cows' milk is baby food for calves. No species on earth besides us drinks the milk of another species. Furthermore, no other species drinks milk after infancy. Milk appears to be baby food, created specifically for the needs of babies, and it has been noted that humans are the only species that is never really "weaned."*
>
> *Thus it makes sense that, after weaning, a large majority of people simply don't have the enzyme that breaks down lactose (milk sugar). "Lactose intolerance" is treated as if something is wrong with the person who suffers from it. But most of the population can't digest milk properly, and it's likely that's because we're not supposed to be digesting it. If the majority of the population reacts negatively to a food, perhaps there's not something wrong with the population; perhaps there's something wrong with the food.*
>
> **- Robyn Landis, Herbal Defense**

But even beyond the fundamental concept that cows' milk is baby food, there are a great many additional hazards present when it comes to drinking "bovine extract." These will be discussed in some detail in the sections that follow.

> *If we were pouring large glasses of ice-cold raw, organic milk into our children's glasses, we might not see as many problems. Pasteurized, homogenized, bovine-growth hormone, and antibiotic-laced milk is not the equivalent. The advertisements, especially the ones with our favorite TV and movie stars sporting the familiar white mustache, say, "Yes, milk does a body good." My response is, "If you are a calf, yes. If you're a person, no." Especially if the milk is pasteurized and homogenized.*
>
> **- Carol Simontacchi, The Crazy Makers**

Let's start by taking a look at the homogenization of milk.

The homogenization of milk alters the structure of the milk fats

> *Homogenized milk is not recommended; it allows the enzyme xanthine oxidase to enter the vascular system and scar it, setting up ideal conditions for fatty deposits in the arteries.*
>
> **- Paul Pitchford, Healing With Whole Foods**

The milk you purchase in the grocery store is processed in a way that dramatically alters the fats that are naturally present in cows' milk. If you milk a cow into an empty pail, and then let the pail set for a few hours, the fat molecules will accumulate and rise to the top. The same would be true of milk sold in grocery stores if it wasn't for the fact that **milk is physically altered to force the fat molecules to stay in suspension** so that they don't rise to the top of the container and make the milk look spoiled. This process is called homogenization, and practically every milk product sold at every grocery store is homogenized. In fact, it's proclaimed right on the label!

This may make the milk appear nicer, but there are serious questions about the health impact of these homogenized fats. Clearly, dairy fats in nature aren't homogenized, and it is only through an artificial physical process that this is accomplished with cows' milk. This alters the way milk is handled in the digestive systems of humans, and an increasing number of doctors and researchers believe that homogenized fats pose a risk to the cardiovascular health of human beings. It seems that when you drink homogenized cows milk, you're actually harming your cardiovascular health:

> *Milks are also processed products. This natural white substance that comes from cows is heated, treated, and diluted to make even the "normal" homogenized, pasteurized milk. It loses some vitamin E, biotin, B12, and other vitamins with pasteurization; often, vitamin A and irradiated vitamin D are then added to "fortify" this food, which some erroneously consider a "drink." Homogenization is possibly the biggest concern in milk. It basically involves the blending of the milk fat into small globules so that it does not separate as it normally will do when it sits. It is possible that this process interferes with the body's ability to digest and utilize this fat in homogenized milk.*
>
> *The increased consumption of homogenized milk fat in milk appears to be linked with cardiovascular problems. An article by Wayne Martin in the November 1989 Townsend Newsletter for Doctors provides a great deal of support for the theory that cholesterol itself is not the culprit it is thought to be in the atherosclerotic process, but it is the hydrogenated and homogenized fats used and consumed in so many foods that are the disease-causing factors.*
>
> *In my clinical experience, homogenized, pasteurized milk and dairy fats seem to drive cholesterol to high levels.*
>
> **- Elson Haas M.D., Staying Healthy With Nutrition**

Homogenized milk fats blamed for cardiovascular disease

With each passing year, more doctors, researchers and authors are realizing that homogenized fats are the culprit behind an increase in arterial scarring and cardiovascular disease. Even the **Life Extension Foundation**, which focuses on the dietary precursors of either disease or longevity, weighs in on homogenized milk fats:

> *Milk and dairy products are frequently criticized, particularly those that are homogenized. During homogenization, an enzyme appearing in milk (xanthine oxidase) is broken down to a smaller size. The enzyme's altered state allows entry into the bloodstream and a reaction to occur on arterial walls. As a protective gesture, atheromatous materials are laid down at the site of contact. In addition, milk is often challenged as a worthy source of calcium. Its high phosphorous content and magnesium shortfall are thought to impede calcium absorption.*
>
> **- Disease Prevention and Treatment by The Life Extension Foundation**

In fact, the more you read about milk, the more the dairy industry's slogan of "Milk: It Does A Body Good" seems like hogwash. Time and time again, evidence surfaces that links the consumption of homogenized milk fats to cardiovascular disease:

> *During the years of the Korean conflict, medical personnel were shocked to discover that autopsies of some young American soldiers revealed arterial deposits and deterioration, a condition previously thought to exist only in the elderly. More recently, children as young as three years of age are exhibiting varying degrees of fatty deposits in their arteries. Some researchers now feel that homogenized milk may play a role in this vascular degeneration.*
>
> **- Paul Pitchford, Healing With Whole Foods**

So what causes the problem? In naturally occurring milk fats, the size of the fat molecules prevents them from being so easily absorbed into the bloodstream. But when those fat molecules are physically and artificially broken down into smaller molecules (like tearing down a giant snowman and making two hundred snowballs instead), they allow the enzyme **xanthine oxidase** to directly enter the bloodstream instead of passing through the digestive tract. *"When this enzyme enters the heart and arteries,"* says Paul Pitchford of **Healing With Whole Foods**, *"...it damages the membranes, creating scar tissue. Cholesterol accumulates on the scars and gradually clogs the arteries."*

> *There is evidence that the process of homogenizing milk, wherein a substance called xanthine oxidase is released, may contribute to heart disease in humans. When humans consume the milk, xanthine oxidase passes through the intestine into the circulatory system, where it deposits in the artery lining and destroys a substance called plasmalogen. People who have heart attacks or serious arteriosclerosis have a marked decrease in plasmalogen, and the increased incidence of heart attacks in the United States and other countries very closely parallels the increased use of homogenized milk.*
>
> **- Debra Lynn Dadd, Home Safe Home**

Homogenized milk fats are metabolic disruptors

This is why homogenized milk fats earn the label of **Metabolic Disruptor** in my book: they clearly interfere with the normal digestion of milk fats and appear to directly contribute to cardiovascular disease. Even Ayurvedic medicine sees the same thing:

> *An Ayurvedic insight is that homogenization makes the fat in milk nearly indigestible; when consumed, toxic residues form in the body.*
>
> **- Paul Pitchford, Healing With Whole Foods**

To best understand how homogenization works, it's easiest to take a microscopic journey through a glass of milk, courtesy of author David Bodanis writing in **The Secret House** (a highly recommended read):

> *To our eyes milk is an unimpressive white fluid, but seen from the inside it is very different. Seen perhaps as a greatly miniaturized diver would see it, an enchanted living seascape is there to behold. The first thing noticed on this scale is that the milk is not white. It's not even milky. All that registers at first is a volume of crystal-clear water (milk is 88 percent water), extending up, down, and to all sides. It's dazzling. Then more details become clear. Bobbing in the milk like some shipwrecked and sunken cabinet, is a hollow box-like container of casein. It is a pure and miraculous white. Through its translucent cover several hundred even smaller cabinets can be seen nesting within.*
>
> *These are the milk proteins themselves. They were packed in there at the moment of being produced in the cow. Most are just filtered nutrients from the cow's blood, but a few of these inner cabinets are the compacted corpses of bacteria and protozoa which lived in the cow's first stomach (it has four) and helped it ferment grass.*
>
> *The packed container of casein is not so heavy as to sink, and it's not so light as to pop up to the surface. It hovers at a constant depth, but it does not get to hover alone for long. Off to one side, the first speck of fat bulges up from the deep. It's a hideous yellow boulder, the size of a truck on this scale, but it's so full of grease, and so much lighter than the water around it, that foaming bubbles stream off from the disturbance it makes as it rises.*
>
> *In raw milk the surging fat boulders would be even larger than this -- more like the size of small office blocks on our scale. Their massed arrival on the surface is what gives that milk a top coating of cream. Homogenized milk as in this pint however has only smaller fat globs -- the big ones are jammed through a microscopic sieve till they splay apart.*
>
> *The danger of homogenized milk is that it can make users think they're having some sort of non-fat healthier food. This of course is not the case; forcing the fat into smaller blobs does not make it go away. Even "low-fat" milk has hundreds of these unpleasant yellow boulders in every drop poured into the coffee or tea.*
>
> **- David Bodanis, The Secret House**

Homogenized milk fats, then, are the result of product marketing efforts to help sell milk! The fats that you might normally find in unprocessed cows' milk would float to the top. But by breaking these fats into microscopic fat particles (homogenizing the fats), milk producers are able to keep the milk fats "in suspension" so that they don't rise to the top.

The unfortunate consequence of all this is that the human body was not designed to handle these microscopic milk fats. Because the fat molecules are now small enough to allow dangerous substances to enter the bloodstream, it directly accelerates arterial scarring and therefore promotes cardiovascular disease.

There's no lack of scientific evidence backing this position, there's only a lack of public knowledge. Milk is sacred, it seems, and the dairy industry has effectively influenced most people into believing that milk is good for you.

Cows' milk, human milk, and cross-species consumption

Based on a rigorous nutritional analysis, it is quite evident that cows' milk and human milk demonstrate sharp differences in nutritional content. Human milk is primarily designed to feed and grow baby brains with fatty acids such as DHA and GLA. Cows' milk, on the other hand, is primarily designed to energize and fatten a baby calf so that it can walk. In this way, human breast milk focuses on building brains, while cows' milk focuses on building body tissue and gaining weight.

> *There is a marked difference between human milk and cows' milk. Cows' milk is more concentrated and has more fat and proteins than human milk. Cows' milk is designed for the needs of a calf that stands and begins to move and runs around in the first hour of life. The newborn child is immobile for the first several months of life. Herein lies the reason for the difference between the natural consistency and design of human milk and those of cows' milk. When cows' milk is formulated and given to infants as their only source of water -- often parents are told not to give infants water -- the metabolic system of the infant is burdened by digestion of the concentrated milk. Concentrated milk can have detrimental effects.*
>
> **- Fereydoon Batmanghelidj, M.D., Water for Health, for Healing, for Life**

The nutritional differences between cows' milk and human breast milk are substantial. If you think about it, this makes perfect sense: cows' milk is designed to provide the nutrition that a baby cow needs to stand on its own four feet (and perhaps run from predators).

A human baby, on the other hand, has a very different strategy for survival and, hence, a very different nutritional journey. The most important thing for a baby to build is a brain, because a brain is important for observing and understanding events in the immediate environment and, eventually, succeeding in that environment. Babies need to start comprehending language and facial expressions. Babies need brain function to survive, and brain function is far more important than running from predators when it comes to human babies. (Human mothers can carry their babies if they need to flee, while bovine mothers cannot.)

Human breast milk is rich in brain-building substances

With all this in mind, it's no surprise that human breast milk is rich in brain-building substances such as GLA (gamma-linolenic acid), the amino acid tryptophan, and DHA, all of which are essential for building nerve cells and brain mass:

> *Nearly 80 percent of the dry weight of the human brain is fat. Each one of those fat molecules that form the cell membrane and the myelin sheath, and perform many of the other functions needed for the brain, is derived from either the maternal or the infant diet.*
>
> *Human milk also contains types of fatty acids not found in any other species, animal or plant, such as GLA (gamma-linolenic acid), one of the critical precursors of the anti-inflammatory prostaglandin 1 (PGE1) variety. One of these fats, called DGLA, or dihomogammalinolenic acid, is converted in the body to arachidonic acid, from which the prostaglandin 2 (PGE2) hormones and other brain structures are made.*
>
> **- Carol Simontacchi, The Crazy Makers**

To put it simply, cows' milk builds strong calves, but human breast milk builds strong brains. Humans who rely on cows' milk for their dietary needs (especially infants) are missing out on brain-building nutrition.

In a very real way, then, **infants raised on cows' milk are simply not as intelligent as those raised on breast milk**. It only makes sense: only human breast milk contains the ingredients needed to build brain matter. Cows' milk = less brain matter = lower intelligence.

If you think this is preposterous, consider the following:

> *One [research] team compared a group of prematurely born infants bottle-fed breast milk to a set of prematurely born infants fed formula; when tested for IQ at age eight, the breast milk group scored on average 8.3 points higher than the group given cows' milk-based formula.*
>
> **- Andrew L. Stoll, M.D., The Omega-3 Connection**

In adult human beings, the same dynamics are at work. If you aren't getting enough GLA, DHA, and Omega-3 fatty acids in your diet, you may very well experience less-than-optimal mental function. Does that mean you should start drinking human breast milk? Of course not, that would be ridiculous. The only thing even more ridiculous would be drinking bovine breast milk. Instead, consume foods that naturally contain these healthy brain-boosting oils. Or get them with the help of nutritional supplements. (I do. Not a day goes by that I don't eat DHA in some form.)

Cows' milk results in higher mortality rates in infants

Getting back to the research, however, would you be surprised to learn that cows' milk actually results in higher mortality rates in infants when compared to human breast milk? Consider:

> *Compared to cows' milk, human breast milk contains ten times the amount of an iron-binding protein called lactoferrin and about one-half the amount of iron. The iron binding of lactoferrin coupled with the reduced iron content of breast milk wards off infections by denying the bacteria their crucial iron supply. As a consequence,* ***breast-fed babies have a lower incidence of infection*** *than do bottle-fed babies, particularly those placed on iron-fortified formulas, both because of the lower iron content and added iron-binding capacity of breast milk and the protective antibodies and essential fats that pass to the infant in the mother's milk. And studies have shown that babies living under conditions of poor sanitation who are fed* ***cows' milk*** *from a bottle have a* ***five times greater rate of mortality*** *than breast-fed babies living under the same conditions. Even bottle-fed infants raised in areas with good sanitation have greater rates of mortality than those fed at the breast.*
>
> **- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

There's even a link between cows' milk and multiple sclerosis, as described in the same book:

> *The circumstantial evidence connecting MS and essential-fat deficiency is pretty strong. For example, there's evidence to suggest that MS arises more often in adults who were fed with DHA-deficient cows' milk or formula instead of breast milk.*
>
> **- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

Let's take a look at a chart describing some of the nutritional differences between cows' milk and human breast milk:

Differences between cows' milk and human milk

	Cows' Milk	Human Milk
Copper	low	High
Iron-binding lactoferrin	low	10 times the amount
GLA (fatty acid)	none	High
DHA (fatty acid)	none	High
Vitamin B1	low	High
Vitamin C	low	High
Vitamin E	low	High
Vitamin A	low	High
Calcium: Phosphorus ration	1:1	2.5:1
Whey protein ratio (easier to digest)	1 unit	4 units
Casein protein ratio (harder to digest)	1 unit	1/2 unit
Tryptophan	low	High
Selenium	low	High
Total protein	3.3	1.5
Total fat	4	4
Total carbohydrate	5	7
Primary purpose	Growing furry creatures	Growing brain mass

Human breast milk also contains an ample supply of all-important **cholesterol**, which is, despite what you may have heard, essential for human health and especially for growing brain mass:

> *Human milk is high in cholesterol, with about four mg per fluid ounce. The cholesterol in breast milk is used to provide structural strength to the neurons so that they do not collapse in upon themselves from the pressure of the surrounding cells and fluid. Cholesterol is particularly important in the myelin sheath, which surrounds the axon of the neuron. Although several types of fatty acids comprise the insulating myelin sheath, it contains more than twice as much cholesterol as any other fat.*
>
> **- Carol Simontacchi, The Crazy Makers**

Babies fed infant formulas based on cows' milk or unhealthy vegetable oils may have their brain growth seriously impaired by these nutritional deficiencies:

> *Cows' milk-based formulas do not contain cholesterol, a fatty acid that is used to myelinate the nerve cell sheath and provide a solid structure to the cell membrane. The structurally and functionally important Omega-3 fatty acids, used to enhance the conductivity of the nerve signal, are also essentially absent. ...The fats provided in artificial formulas, usually from a vegetable source like coconut, corn, safflower, or soybean oil, differ substantially from the oils found in human milk in that they provide only minuscule amounts of the Omega-3 and Omega-6 fatty acids.*
>
> **- Carol Simontacchi, The Crazy Makers**

Overall, then, the nutritional differences between cows' milk and human breast milk clearly make cows' milk a poor choice for growing babies, not to mention fully-grown adults. And for adults, they should have been weaned off this baby food years ago, for cows' milk is truly "baby food" provided by nature for a specific purpose: to grow baby calves into quarter-ton cows.

That human beings continue to consume such vast quantities of milk is truly a freak of nature. And the health consequences of that consumption will become apparent in the sections that follow. There are a great many negative health consequences resulting from the regular consumption of cows' milk.

Cows' milk and asthma / sinus congestion

> *Milk is the second most common food allergy. Some sources say two-thirds of all Americans have some allergy to cows' milk.*
>
> **- Robyn Landis, Herbal Defense**

The vast majority of adult human beings are technically allergic to cows' milk. This is no surprise given that cows' milk was never intended to be consumed by adults of any species -- and certainly not adults of an entirely different species.

It is not this allergy itself that interests us in this section, however: it is the result of that allergy. What happens in the human body when it is exposed, day after day, to a dietary allergen?

The answer is that the body tries to shield itself from the dietary allergen. The body's mechanism for doing this is the secretion of mucous in the lungs, the sinuses, and the digestive tract. This secretion of mucous is an attempt to create a protecting layer of slime (to put it bluntly) that insulates the inner tissues of the human body from the offending allergen.

Doctors give these mucous secretions names and label them as "diseases" when, in fact, they aren't diseases at all -- they are deliberate responses to a dietary allergen. Yet the medical community calls these responses **asthma** or **sinus congestion** or **constipation**.

But these three symptomatic diagnoses are frequently nothing more than the body's natural response to a dietary allergen: cows' milk.

For those who have a lot of mucus in general, are overweight, have dampness, are prone to cysts, have chronic coughs or runny noses or experience such obvious problems as asthma or allergies, dairy will only aggravate these conditions. Often children's asthma, coughs, runny noses, diarrhea or constipation will disappear by simply eliminating dairy and juices from the diet.

- Lesley Tierra, The Herbs of Life

Milk is best avoided by those with sinus problems. It suppresses the helpful thinning of mucosal secretions, and causes or aggravates symptoms in many allergic people.

- Robyn Landis, Herbal Defense

Most conventional doctors don't consider cows' milk to be a cause of asthma

Of course, the vast majority of conventional medical doctors consider the idea to be complete nonsense. Most Western-trained doctors are, as a general, rule, quite uninformed of the cause-and-effect links between diet and disease (or diet and health, for that matter):

When I was in medical school, I read a book by a physician who had had good results in treating asthma in children by eliminating all milk and dairy products. When I discussed the book with my professors, they said it was nonsense. I guess there are still people around who discredit the idea, but I've found that eliminating milk and cheese from the diet can be helpful for both asthmatic adults and children. This is not because dairy products stimulate mucus production but because they're very common causes of allergy, upper-respiratory allergies, and asthma.

- Robert M. Giller, M.D., Natural Prescriptions

Milk seems to be one of the hardest things for most people to give up. It's something they were raised on, and a food that they've integrated into their lives at many different levels. I know, I've been there too. I couldn't imagine starting my day without a bowl of high-sugar breakfast cereal soaked in a bowl of ice-cold milk. These days, of course, I eat quinoa in soy milk sweetened with stevia, and I feel in no way deprived by the experience.

But, without question, milk is considered practically a "sacred" food by many people, and it can be difficult to give up:

When you look at the many foods that are made with some type of dairy product, being allergic can seem like a major handicap. Refraining from dairy in one form or another is difficult for most people. We grow up eating dairy products and if we suddenly are told not to have them we feel greatly deprived. We love the creamy taste so much it's like asking us to cut off an arm to quit eating it completely. Even if eating dairy causes headaches, stomach cramps, sinus congestion, or skin rashes, the temptation is often too great. Those with allergies often eat dairy even though they know they will pay for it later.

- Bruce Fife, N.D., The Healing Miracles of Coconut Oil

My take on all this, then, is not to try to force anybody to give up cows' milk or to judge anybody for continuing to drink it. My aim is to simply help you become aware of what it's doing to you, and to help you conduct a 30-day "no dairy" test to see how much better you may feel.

Once you become aware of the dietary influences of cows' milk, then at least you can make a well informed decision about whether those effects are worth it. But what I truly detest is people who trudge along through life with all sorts of dairy-related disorders like asthma, constipation and sinus problems, and who won't even try a 30-day dairy free diet to see if it might help. It's as if they don't even want to get better. Somehow, they actually enjoy the asthma, the difficulty breathing, the sinus headaches and everything else that goes with it. They don't want to change, and they don't want to know anything more about cows' milk because, dang it, they want that glass of milk each morning.

It is these people who are truly doomed to a life of suffering. But I know you're different, because anybody who would have ordered this material is clearly interested in being healthier and in learning more about the links between diet and health. That's the kind of attitude I truly admire, and whether or not you find dairy to be something you want to take out of your own diet is entirely up to you. What I respect is your willingness to inform yourself, regardless of what you decide to do with that information.

With that said, let's get moving with constipation (pun intended).

Cows' milk and constipation

> *Overconsumption of poor-quality milk products is a primary cause of constipation; however, a moderate amount of milk which has not been pasteurized, homogenized, skimmed, or denatured in other ways can benefit those suffering with constipation from dryness, if they are not allergic to dairy products.*
>
> **- Paul Pitchford, Healing With Whole Foods**

With what you know about cows' milk so far, you probably aren't at all surprised to learn that cows' milk is a leading cause of constipation. This is primarily due to three reasons:

First, there's the mucous response by the body, which results in digestive stagnation and a lack of healthy movement in the bowels.

Second, cows' milk has no fiber, and since fiber is needed for the healthy movement of substances through the digestive tract, cows' milk contributes more to stagnation (constipation) than movement.

Third, many people drink milk in place of water, and water is precisely the liquid they need in order to promote healthier bowel movements. Water lubricates, milk stagnates. And when they're drinking milk, they're avoiding water.

It is for these three reasons that hundreds of millions of people around the world suffer so much constipation. And yet the vast majority of those constipation sufferers can experience perfectly normal bowel function if they would simply remove cows' milk from their diets:

> *An Italian study showed that 21 out of 27 children under the age of three had a significant increase in bowel function (number of stools, softening, and lack of discomfort and anal fissures, among other factors) within three days of having cows' milk removed from the diet. A "cows' milk challenge" caused rapid return of symptoms. If your child is constipated, eliminate cows' milk in the diet as the first step.*
>
> **- Robyn Landis, Herbal Defense**

Many people don't know they're constipated

It's bewildering that many people who are constipated don't know they are. Because I'm so curious about health and nutrition when it comes to real people, I often ask people how frequently they have bowel movements and whether they think that's normal. It doesn't make for appetizing social talk, but it does provide some fascinating information:

Many people think that, "Two bowel movements a week" is perfectly normal. "I'm not constipated," they say. "I've always had two bowel movements a week."

Not constipated? They truly have no idea. At minimum, a healthy digestive tract and adequate consumption of dietary fiber should result in one bowel movement every day, if not two. Any person with fewer than one bowel movement each day is, indeed, constipated, whether they recognize it or not.

If you are reading this and thinking, gee, I don't have one bowel movement each day either, then this is especially valuable information for you! Your doctor would probably never talk to you about this subject, and I'm willing to bet you don't go around asking other people, either. But the answer is that if you aren't crowned Queen (or King) of the porcelain throne at least once a day, you have a serious dietary problem. That problem, as you've seen here, may be nothing more than the cows' milk in your diet. Remove the cows' milk and your bowel movements will usually improve within a matter of days.

The other thing about constipation and cows' milk is that a tremendous amount of medical resources are wasted trying to treat constipation as some sort of "disease" when, in fact, it's just a response to poor dietary choice:

> *Lactose-intolerance symptoms are often misdiagnosed as much more serious bowel diseases, with great suffering and many healthcare dollars spent testing and treating conditions that often disappear with the elimination of dairy products.*
>
> **- Robyn Landis, Herbal Defense**

It is a sad, but true, commentary on conventional medicine to realize that the vast majority of so-called “diseases” are truly nothing more than the natural results of lifestyle choices. Diet is the #1 cause of all modern disease, and a person can radically alter their health outcome, including reversing serious disease, by making radical alterations to their diet. One such alteration is, of course, the removal of cows’ milk from the diet.

Beyond constipation, by the way, there are yet other reasons to avoid cows’ milk. The next we’ll explore is the link between cows’ milk consumption and diabetes.

Cows’ milk and diabetes

> *Cows’ milk should never be given to a newborn or young child since it has a much higher level of glutamate than human milk and also is strongly associated with juvenile diabetes*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**

Here’s a dietary / disease link that most people have never heard of: cows’ milk and diabetes. And yet the evidence is quite strong in this area, especially for children:

> *Bovine serum albumin (BSA, a cows’ milk protein) has been strongly linked to insulin-dependent diabetes mellitus in children. Studies have found, for example, that every one of 142 diabetic children had large amounts of antibodies to BSA, that diabetic children had eight times as many of these antibodies as nondiabetic children, that insulin-dependent diabetics were 50 percent more likely to have been given cows’ milk before three months of age, and that high-risk children who drank cows’ milk in the first three months were **11 times more likely to get diabetes** than high-risk children who didn’t.*
>
> **- Robyn Landis, Herbal Defense**

This news comes as quite a shock to most people, especially parents who have been told to “feed your children cows’ milk to give them strong bones!” -- yet another nutritional myth.

As it turns out, cows’ milk triggers diabetes by exposing the child body to specific proteins that are perceived by the body as foreign invaders or allergens. In response, the body attacks these proteins in order to destroy them. But it turns out that these proteins are quite similar to beta cells in the pancreas that are responsible for manufacturing insulin, and in response to the presence of these proteins in cows’ milk, the body mistakenly starts attacking its own beta cells in the pancreas. When those are destroyed, the result is type 1 diabetes.

> *We know that in juvenile diabetes (type 1), genetic susceptibility is a major catalyst in those who develop the disease, but diabetes only occurs following early childhood exposure to particular environmental or infectious triggers. Exposure to a virus, cows’ milk, or MSG all act to turn on the diabetes gene switch, allowing the disease to fully manifest itself. Without these triggering exposures, the disease may never manifest.*

Several studies have demonstrated that a protein in cows' milk closely resembles the molecular structure of the cells in the pancreas that produce insulin, called islet cells. Because the immune system confuses the two, it begins to attack the islet cells by mistake, leading to their destruction.

- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life

A critical review and analysis of all relevant citations in the medical literature indicated that early cows' milk exposure may, in fact, be an important determinant of subsequent type 1 diabetes and may increase the risk about 1.5 times. In case-controlled studies, patients with type1 diabetes were more likely to have been breast-fed for less than three months and to have been exposed to cows' milk or solid foods before four months.

- Michael T. Murray, N.D., The Textbook of Natural Medicine

...There is clear evidence that feeding cows' milk to an infant sets him up for a greater risk of developing juvenile-onset diabetes, either due to a type of protein called bovine serum albumin (BSA) that can be found in cows' milk -- based infant formulas or other milk products, or because cows' milk often stimulates the production of other antibodies that may destroy portions of the pancreas.

- Carol Simontacchi, The Crazy Makers

The media avoid talking about cows' milk and diabetes to protect advertising revenues

And yet, despite all of the evidence showing that cows' milk results in a greatly heightened risk of juvenile diabetes, most people have never heard of this link. Why is that? The answer, of course, is food politics:

Although proof of this connection appeared in one of the most prestigious diabetes journals, the general public is still not aware of the risk. Why? Because of the power of the milk producers. It seems the media would rather have tens of thousands of children suffer a life of diabetes than anger one of their biggest financial contributors.

- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life

When it comes to cows' milk and diabetes, the bottom line is that the scientific evidence clearly shows a causal relationship between the two. It offers yet another reason why consumers should consider avoiding cows' milk entirely. But there are still other reasons discussed below.

Before we get to the hormones and chemicals used in the production of cows' milk, it is useful to examine the heavy use of cows' milk in human babies. Although this may not directly apply to you as an adult, it is a worthwhile discussion for two reasons: 1) Many readers have babies, and 2) The health problems experienced by babies on cows' milk are a strong indicator of the unhealthful nature of the substance on human adults.

The problem with feeding cows' milk to human babies

> *The abuse of dairy food in the modern diet and its degenerating artificial quality are major factors in the rise of breast cancer, heart disease, and other serious illnesses. The quality of our food determines the quality of our blood. The quality of blood, in turn, determines the quality of mother's milk and the biological strength of the next generation.*
>
> **- The Cancer Prevention Diet by Michio Kushi**

Human babies depend on their mother's breast milk for 100 percent of their nutritional needs. There is no substitute: not cows' milk and certainly not "formula" baby foods, which contain high-fructose corn syrup, corn oil, and represent a horrifying distortion of what a human baby really needs to be healthy.

> *The newborn infant is almost entirely dependent on external sources of carnitine. Breast-fed infants have the best chance of achieving optimal carnitine concentrations. The bioavailability of carnitine from breast milk is significantly greater than that in cows' milk-based formulas, and soy-based infant formulas contain no detectable carnitine. Formula feeding may necessitate supplemental carnitine to achieve normal carnitine concentrations in these infants.*
>
> **- Michael T. Murray, N.D., The Textbook of Natural Medicine**

Beyond the discussion of what's missing from cows' milk when it comes to the nutritional needs of human babies, there's an even greater topic at hand: the diseases and disorders that naturally result from feeding cows' milk to human infants:

> *Whole bovine milk should not be fed to infants during the first year of life because of its association with occult gastrointestinal bleeding, iron deficiency anemia, and cows' milk allergy. The consumption of whole milk after the first year of life should be discouraged because of its potential role in a variety of disorders including atherosclerosis, recurrent abdominal pain of childhood, cataracts, milk-borne infections, and juvenile delinquency.*
>
> **- Frank A. Oski, Don't Drink Your Milk**

Cows' milk contributes to cardiovascular disease in infants

Amazingly, cows' milk appears to contribute to cardiovascular disease in infants by clogging their arteries:

> *"...Autopsies of infants who had died in car accidents showed an obvious partial blockage of the coronary arteries of those on formula milk, and not of those who were breast-fed. This is a significant revelation that has not been dealt with publicly and openly. I am of the opinion that the coronary arteries of infants on formula get blocked because the formulated milk composition is more concentrated than the mother's milk.*
>
> **- Fereydoon Batmanghelidj, M.D., Water for Health, For Healing, For Life**

In children, some doctors even believe that the consumption of cows' milk causes behavioral disorders (ADD) and learning disabilities:

> *Dr. Lendon Smith, M.D., pediatrician and author of Hyper Kids, Feed Your Kids Right, and other books, is a leading spokesperson for natural healing for kids. He believes that 90 percent of all generally sickly children will show improvement in all areas when you just take away cows' milk. He told Karta Purkh that in his clinical experience a similar percentage of ADD and learning-disability cases improve with removal of milk products. Milk is especially implicated in that commonest of childhood ailments, the middle ear infection*
>
> **- Robyn Landis, Herbal Defense**

But perhaps the worst health impact comes from the iron deficiencies caused in infants by the consumption of cows' milk. This deficiency is so pronounced that in 1992, the American Academy of Pediatric actually announced that parents shouldn't feed cows' milk to infants less than one year old!

There are other negative health effects from feeding cows' milk to babies that go beyond iron deficiency, autoimmune disorders, and the nutritional deficiencies of cows' milk, however. There is also colic and dehydration, as explained in the following two passages:

> *Colic is a buildup of trapped gas in the baby's colon. It is extremely treatable. It is also believed to be -- once again -- the result of milk allergy in a large percentage of babies. Milk is the most common culprit in colic by a wide margin. In studies all over the world, removing cows' milk consistently cures colic in approximately 70 percent of the test samples, returning in every single subject when the milk is returned to their diets. (Note: Removing cows' milk means not drinking any if you're nursing.)*
>
> **- Robyn Landis, Herbal Defense**
>
> *The normal practice is that the infant is given concentrated milk and bundled to sleep. While asleep, much water, in comparison to the weight of the infant, is lost from the lungs during the exhalation phase of the breathing process. This water loss from the lungs, on top of the fact that the milk contained possibly only just enough water for the digestion of the milk itself, leaves the infant's body short of water and forces it into physiological events for drought management.*
>
> **- Fereydoon Batmanghelidj, M.D., Water for Health, for Healing, for Life**

Although the information in this section just scratched the surface, it should be rather obvious to any critical thinker familiar with the science and research on this topic that cows' milk is an extremely poor dietary choice for human babies. It is nutritionally imbalanced, increases rates of fatality, causes iron deficiencies, lacks the all-important "healthy" oils needed for building brain mass, causes colic, and contributes to an increased risk of diabetes.

Is this really the kind of food you want to be feeding to your children?

Yet there's more! Everything we've discussed so far hasn't even mentioned the contamination and exploitation of dairy cows using dangerous growth hormones, and that's the topic of the next section:

The use of dangerous hormones in cows' milk

> *A new additive of questionable safety in milk is bovine growth hormone (BGH, also known as BST, rbGH, and rbST). It is one of the first products of bioengineering that the FDA has approved to enter our food supply. BGH is a hormone naturally produced by cows. Four companies have learned how to isolate the strand of cow DNA that codes this hormone, insert it into the DNA of bacteria, grow the bacteria in vats, and then extract large quantities of BGH from those vats. Dairy cows that are injected with BGH can produce milk for nearly twice as long after calving.*
>
> **- Debra Lynn Dadd, Home Safe Home**

Leave it to the mad scientists behind the scenes at the world's largest dairy companies to come up with yet another way to squeeze more profits from the glands of a cow: they've synthesized Bovine Growth Hormone (BGH) as a way to induce dairy cows to give more milk than nature intended.

Although BGH might arguably be neutral or perhaps even helpful to the health of the cows (Human Growth Hormone, or HGH, is generally considered rather helpful in adult human beings), the real problems begin to occur when BGH-laden dairy products get consumed by humans, and they start to induce a variety of hormone-related health disorders in humans:

> *Although many synthetic estrogens like DES are now outlawed, many livestock and poultry are still hormonally manipulated, especially dairy cows. Cows' milk contains substantial amounts of estrogen due to modern farming techniques. The rise in dairy consumption since the 1940s inversely parallels the drop in sperm counts. Avoidance of hormone-fed animal products and milk products are important for male sexual vitality, especially in men with low sperm counts or low testosterone levels.*
>
> **- Michael T. Murray, N.D., The Textbook of Natural Medicine**

But the negative effect on the sperm count of men may be just the beginning. Many doctors also believe BGH accelerates the growth of tumor cells in humans. Here's an account of one such doctor, as mentioned in **Herbal Defense**:

> *Also, in February 1994 the FDA approved the use of rBGH (recombinant bovine growth hormone) to increase milk production. The FDA refuses to implement a test for rBGH levels in all dairy products, insisting there is no need because it is safe. Not everyone is so sure, however.*
>
> *Dr. George Tritsch, a cancer researcher recently retired from the Roswell Park Cancer Institute in Buffalo, New York, says that drinking milk from rBGH-supplemented cows increases insulin growth factor (IGF-1), which may enhance tumor cell growth. Tritsch believes that minute levels of IGF-1 could enter the bloodstream of those who drink hormone-laced milk and create tumor cells in the breast, ovary, or prostate as people age,*

which would grow slowly and manifest as clinical cancer in old age. He also feels that such hormones could stimulate the progression of childhood leukemias.

Tritsch concludes that "the widespread consumption of BGH-supplemented milk is, therefore, an experiment on an unsuspecting population that could have horrendous consequences," adding that "it would be difficult to dismantle a well-entrenched BGH industry."

Use of rBGH is also known to increase the amount of pus, bacteria, and antibiotic contamination in milk, since cows given rBGH are more susceptible to disease.

- Robyn Landis, Herbal Defense

Government regulatory agencies refuse to test cows for hormone effects

The use of BGH is fully supported by the FDA and USDA, both of which refuse to actually test all milk for the presence of BGH before it is consumed by humans. (Similar to the way in which these two agencies also refuse to test all cows for mad cow disease.) And yet, it is well known that BGH increases inflammation of the udder of cows, which can lead to an increase in the amount of pus in dairy milk (see below for more on pus).

Here's the definition of BGH from **Food Additives**:

BOVINE SOMATOTROPIN (BST) • Bovine growth hormone (BGH) is a natural protein produced by the pituitary gland of all cattle. It is a protein hormone and is not structurally or functionally related to steroid hormones. Introduced on the market in 1994, the producers of the hormone, the FDA, and some other experts claim that there is no difference in the milk of cows given the hormone since cows' milk naturally contains the hormone anyway. Consumer groups, some scientists, small farmers, and a number of dairy product producers are against the use of the hormone. Among the reasons: it increases inflammation of the udder in cows, has unknown potential effects on humans, and is unnecessary because the U.S. government already support milk prices because there is an overabundance of milk on the market.

- Ruth Winter, M.S., Food Additives

It is strange, indeed: why is the U.S. government supporting the use of BGH when taxpayer money is being spent to subsidize milk production in the first place? There's a bit of a politically-motivated money shell game at work here, no doubt. And as with virtually every large food producing industry group, there's more than a hint of corruption at work when it comes to hormones for cows:

Monsanto corporation gave large research grants to the University of Florida. The ensuing positive research data led to FDA approval for the company's controversial bovine growth hormone (to increase a cows' milk production). However, the studies failed to acknowledge farmers' disturbing reports of adverse reactions, which the company later admitted. Two investigative reporters followed the trail, documenting how Monsanto spent millions in grants to the University of Florida, whose studies led to the drug's approval. They then detailed a revolving door between Monsanto executives and the FDA. The reporters went on to interview two Canadian regulators who charged Monsanto with offering them a $1 to

$2 million bribe for approving the drug without further testing. Fox Television news killed the story after the station received aggressive threat letters from Monsanto attorneys. When the reporters were then fired, they pointed out that Monsanto was a client of a major advertising company owned by Fox chief Rupert Murdoch, whose stations advertise Monsanto products nationally

- Kenny Ausubel, When Healing Becomes A Crime

Monsanto harasses organic milk producers who state their milk is made without hormones

Monsanto has gone out of its way to legally harass small dairy producers who produce hormone-free milk, by the way. Monsanto has actually sued them for claiming that their milk "contains no hormones" right on the front label of their milk products. If the milk contains no hormones, then they should be able to say it contains no hormones, right?

Not according to Monsanto and the FDA. Monsanto claims that the statement somehow implies that hormone-free milk is "better" than milk made with injected hormones. And since the FDA claims all milk is equal, whether treated with hormones or not, they say the package claim is misleading. Hence the politically-motivated lawsuit from Monsanto. You see, not only does Monsanto want everybody to buy their bovine growth hormones, they also want to legally harass milk producers who avoid the use of hormones. That's called "protecting the racket."

Author Peter Hardin of **The Milkweed** (http://www.themilkweed.com) which provides "insider" information to dairy farmers, has nothing but criticism for Monsanto and the FDA when it comes to BGH. The following is excerpted from an editorial published at **The Capital Times**:

This biotech cow hormone has rocked the dairy industry and consumers since the mid-1980s. The U.S. Food and Drug Administration admits the hormone has been its biggest-ever consumer food safety controversy. Monsanto's rbGH was the first major biotech food production "tool" approved by the FDA.

Three potential problem areas come to mind: human safety, animal safety and quality control. In my opinion, the FDA's human safety oversight of rbGH has been flawed from the beginning. In the mid-1980s, the FDA failed to require a mandatory residue test for rbGH. Yet Monsanto and government officials claim there is "no difference" in the milk from untreated and rbGH-injected cows.

To counter intense public skepticism about rbGH, the FDA published a 10-page summary of its human safety determinations in the journal Science in August 1990. Among the findings, the agency said that the rbGH in the milk of injected cows was degraded by commercial pasteurization. The sole research cited for this claim was that of a Canadian graduate student, whose master's thesis studied the feeding of rbGH-derived milk to calves (not humans). This study erroneously heated milk for 30 minutes at the 15-second pasteurization temperature.

Data suggest higher IGF-1 levels are found in rbGH-injected cows' milk, compared to normal milk. Thousands of research studies probing potential links between IGF-1 and cancer development have been published in scientific and medical journals.

With regard to animal safety, injections of rbGH spur dairy cow metabolism. One-third more blood is pumped through injected cows' hearts. This synthetic hormone is so powerful it kills muscle tissue at injection sites.

In early 1990, my newspaper, The Milkweed, published stolen Monsanto animal health research files. Those files showed dramatic increases in weights of many key organs and glands of treated cows, compared to control groups.

What's gone wrong with Monsanto's rbGH? Synthetic hormones used in our food-producing livestock pose risks too serious to cover up. If a serious problem exists, why has only 50 percent of rbGH sales been curtailed, instead of 100 percent? Consumers and dairy farmers deserve a complete and honest explanation of why the FDA has restricted this drug.

Of course, when there's money to be made, you're unlikely to hear the truth from anyone standing in line to receive some of that money -- and that certainly includes the majority of magazine publishers, newspaper publishers, cable companies and media outlets. They all benefit from milk advertising ("milk money"). Hence, they are unlikely to make public information that would earn the wrath of the dairy industry.\

When it comes to hormones, however, there is one thing you can do to protect yourself: **buy organic milk** made without the use of hormones. Even though you'll still be subject to the other negative health effects of drinking cows' milk, you will at least avoid the synthetic hormones.

The contamination of cows' milk with pus

Beyond the BGH in cows' milk, there's also the issue of pus in cows' milk. Did I say pus? Indeed, I did. From **NotMilk.com** by Robert Cohen:

Pus in milk? A dairy cow filters ten-thousand quarts of blood through her udder each day and uses dead white blood cells (somatic cells) to manufacture her milk. These dead cells are pus cells. Dairy scientists are aware that when one quart of milk is tainted with 400 million or more pus cells, some 35 percent of the milking cows in the herd are infected with mastitis. Udders bleed, discharges, including bacteria and blood drip into the milk.

- NotMilk.com

The full report on pus, found at **http://www.notmilk.com/lawbreakers.html** shows how federal standards allow 200,000 pus cells per milliliter of milk (about the size of a thimbleful). Any amount of pus over 200,000 cells per milliliter is a violation of federal milk safety laws. And yet the number of pus cells in milk has been found to consistently violate these safety limits. A 2001 analysis shows the following pus counts in milk sold in the United States, broken down by state:

AL	444,000	**ME**	290,000	**OH**	327,000
AZ	360,000	**MD**	351,000	**OK**	483,000
AR	486,000	**MA**	308,000	**OR**	286,000
CA	298,000	**MI**	287,000	**PA**	317,000
CO	312,000	**MN**	420,000	**RI**	206,000
CT	310,000	**MS**	442,000	**SC**	404,000
DE	386,000	**MO**	437,000	**SD**	459,000
FL	548,000	**MT**	248,000	**TN**	413,000
GA	407,000	**NE**	443,000	**TX**	342,000
ID	320,000	**NV**	330,000	**UT**	284,000
IL	322,000	**NH**	299,000	**VT**	302,000
IN	343,000	**NJ**	339,000	**VA**	333,000
IA	333,000	**NM**	311,000	**WA**	275,000
KS	476,000	**NY**	280,000	**WV**	422,000
KY	413,000	**NC**	364,000	**WI**	297,000
LA	479,000	**ND**	344,000	**WY**	341,000

All you people in Florida really have it great! You're getting almost triple the pus factor in dairy milk that is allowed by law. If you think about it, pus is very easy to hide in milk since pus, by itself, appears sort of milky white. So how would you know if pus was in your milk in the first place? You wouldn't. And you probably didn't. But it's there, and it's present in quantities that would downright shock most milk drinkers. Is pus the perfect food? Probably not.

The information you've read here is just a taste of the ugly truth behind the dairy industry. Keep in mind that it may take you some time to "clean up" your system after ditching milk, too:

> *According to our observations, dairy products prevent the cleansing of residues of meat consumption from earlier in one's life. In order to discharge these residues, one must stay completely free of dairy for a minimum of six months -- some health practitioners estimate several times this long.*
>
> **- Paul Pitchford, Healing With Whole Foods**

What's wrong with organic milk

It is worth noting that most of the problems inherent to cows' milk as described in this section are not necessarily avoided by purchasing organic milk. Organic cows' milk contains homogenized milk fats, just like regular milk. It also has basically the same nutritional makeup, which I have shown to be deficient in the minerals and healthy oils needed to support healthy human nervous systems. Organic milk is also just as difficult to digest as regular milk, and therefore initiates the very same allergic responses: asthma, constipation, and sinus problems, to name three.

While organic milk does avoid the dangerous hormones and antibiotics used in the production of conventional milk, organic cows' milk is still just organic baby food for cows and in no way qualifies as food for healthy, adult, mature human beings. Although I frequently recommend organic products and groceries over non-organic ones, this is one case where both varieties appear to do more harm than good. I recommend avoiding them both.

The 30-day no-dairy diet

Try the 30-day no-dairy diet and see how you feel. That is, take a 30-day period and eliminate dairy products from your diet completely. Gauge how you feel, and especially note changes in your bowel movements, ease of breathing, and the state of your sinuses if you have experienced sinus congestion in the past. It's best if you document 30 days on dairy products and compare it to 30 days off the products.

Few people are actually willing to engage in such an experiment, but every single person I've met who has been willing to complete the experiment has reported a tremendous difference when avoiding dairy products. They experienced far higher levels of energy, stronger immune systems, and a greater feeling of clarity throughout their bodies. They had healthier and more regular bowel movements, an easier time breathing, and typically their sinus congestion problems either lessened or disappeared altogether. This is no surprise, since as I stated earlier, cows' milk is the perfect food for baby cows but hardly a good nutritional choice for adult human beings. A better choice would be human breast milk, but even that is only appropriate for infants. Why we, as adult human beings, think we need to be drinking a liquid produced primarily to support the nutritional needs of young cows, seems rather bizarre.

Action Item:

Take the 30-day no-dairy diet test by removing all dairy products from your diet for 30 days to see how you feel.

Read more about milk and dairy products at:
http://www.newstarget.com/dairy_products.html

Monosodium Glutamate

> *I have spoken with far too many people who have been emotionally shattered, financially devastated, and had their life paths altered by adverse reactions to monosodium glutamate. I believe that the current epidemic of diseases, such as fibromyalgia, attention deficit hyperactive disorder (ADHD), and chronic fatigue syndrome, and huge rises in reported cases of neurodegenerative diseases, migraine symptoms, asthma, and gastrointestinal diseases are all directly related to the rise in MSG consumption.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Here's another dangerous ingredient to avoid: monosodium glutamate, otherwise known as MSG. You may think you already know everything there is to know about MSG, but I bet you had no idea of the neurological damage caused by MSG that will be revealed in this section. You probably also didn't know that this dangerous chemical is frequently hidden in other ingredients. I'll also reveal a massive cover-up involving MSG manufacturers, industry groups and the FDA that's designed to conceal the truth about this dangerous ingredient while protecting food industry profits.

But before we get there, let's cover the basics of MSG and why you should avoid it in your diet.

There are two books I highly recommend on the subject of MSG:

- **In Bad Taste: The MSG Syndrome: How Living Without MSG Can Reduce Headache, Depression and Asthma, and Help You Get Control of Your Life** by George Schwartz, M.D.

- **Excitotoxins: The Taste That Kills** by Russell Blaylock

Both books are highly informative and go far beyond the information I present here. I will be quoting from both, but I strongly recommend that if you want to learn more about the toxicity of MSG, get these books yourself and read them cover to cover.

What is MSG?

> *MSG is a drug added to our foods that causes widespread toxicity.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

MSG is a chemical flavor enhancer. It adds a sweetness and depth to virtually any food or beverage, and it is widely used throughout the food industry to enhance the flavors of processed foods that would otherwise taste flat and bland. And herein lays the problem: processed food is typically so "dead" that most people wouldn't buy it if the taste wasn't somehow chemically enhanced. So food processors depend on MSG to make their foods appealing. That's why food manufacturers continue to deny any health risk associated with the consumption of MSG -- because if they had to stop using this chemical, their foods would taste terrible!

The problem is that MSG is also classified as an excitotoxin, which means it belongs to a class of chemicals that damage nerve cells by overexciting them. It enhances taste by penetrating the taste bud cells on your tongue and overexciting those cells to create a sensory taste experience. The problem is that MSG doesn't stop at the tongue. It continues through the bloodstream and can overexcite nerve cells throughout your nervous system. MSG was given the name "excitotoxin" when these effects were noticed by researchers decades ago:

> *While MSG has been used as a flavor enhancer for a very long time, the discovery of its adverse physiological effects can be attributed to a chance discovery in 1957 by two British ophthalmologists, Lucas and Newhouse, who were studying a rare eye disorder. They were attempting to improve the condition in test animals by feeding monosodium glutamate, aspartate and other metabolic products to mice, based on the idea that these substances can be used as fuel by some nerve cells. What they found was that the mice who received glutamate and aspartate suffered severe destruction of the cells in the retina, and that the damage was worse in newborn animals than adult animals. The greatest damage occurred with exposure to glutamate. Their report went virtually unnoticed, even though monosodium glutamate had been added to processed foods in massive quantities since the late 1940s. In 1968 another research scientist, John Olney, repeated the experiment hoping to use the ability of MSG to destroy retinal cells to study neural connections dying within deep brain structures, a common technique in neuroscience. What he found shocked him: the MSG not only destroyed retinal cells, it also killed vital neurons within the brain itself. On further study, Dr. Olney recognized that the MSG was killing neurons by exciting them to death. Based on this observation he named the process "excitotoxicity."*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

The name "excitotoxin" now applies to a class of chemicals that overexcite nerve cells in the human body, causing damage or death to those cells. One of the side effects of excitotoxins is they also enhance the flavor of foods by overexciting the sensory cells on the tongue:

> *Excitotoxins are taste or flavor enhancers that release glutamate and other brain-active amino acids, such as aspartate and cysteine. The best known example of an excitotoxin is monosodium glutamate (MSG). High blood levels of MSG can cross the normally protective blood-brain barrier. If glutamine levels are inappropriately raised, neurons fire abnormally and at higher levels, brain cells begin to die (Shefrin 1999; Dodd 2002). Both oxygen deficiency and lack of fuel (hypoglycemia) interfere with the energy production of brain cells and make them susceptible to excitotoxin damage. As noted in a review article by Blaylock (1999) in Medical Sentinel, and other articles, excitotoxin damage may be an important factor in the development of neurological diseases, including Parkinson's disease (Shefrin 1999; Merims et al. 2001).*
>
> **- Disease Prevention and Treatment by The Life Extension Foundation**

Many people associate MSG with Chinese food, and it's true that many Chinese restaurants add ridiculous amounts of MSG to their dishes in order to make them taste more appealing. But MSG is also frequently used in many food products found at your local grocery store. Many meat products, such as bacon and especially breakfast sausages, are made with MSG as a flavor enhancer. Beef jerky products almost always contain MSG. Salad dressings usually have it as well, and many instant meal mixes and powders use MSG.

In the sections that follow, I will discuss and reveal the food products that contain MSG. I'll show you the list of diseases and disorders that appear to be caused by MSG, and I'll reveal the "dirty politics" behind the MSG industry and the FDA's reluctance to ban this ingredient or even require its accurate labeling on food products. I'll also show you how food manufacturers "hide" MSG in natural-sounding ingredients in order to mislead consumers.

Let's begin by looking at the use of MSG by the food industry.

The food industry, politics, profits, and MSG

> *MSG is a popular additive that gained widespread use as a flavor enhancer before its healthfulness came into question. However, many users probably wondered privately about the safety of this additive, since its most well-known side effect is Chinese Restaurant Syndrome -- a condition characterized by numbness, weakness, heart palpitations, cold sweat, and headache. In addition, animal studies show that MSG can cause brain damage, stunted skeletal development, obesity, and female sterility. It is on the FDA list of additives that need further study for mutagenic and reproductive effects.*
>
> **- Debra Lynn Dadd, Home Safe Home**

After MSG was first discovered to enhance the taste of foods, the Ajinomoto Company was formed. This Japanese company now supplies the majority of MSG to food producers around the world.

Following World War II, virtually all the major food manufacturers in the United States started adding millions of pounds of MSG each year to their processed, refined foods. It was originally thought to be perfectly safe, of course, and it certainly made their processed foods taste better.

The use of MSG has since doubled every decade to the point where 262,000 metric tons were produced by 1972. It wasn't until the 1960s when doctors and researchers finally began to conduct experiments with laboratory animals and MSG. The results of that research were rather disturbing. (See the next section for details.)

By the late 1960s, food manufacturers voluntarily removed MSG from baby foods following a public outcry, but since then, they have fought a defensive battle, claiming that MSG is perfectly safe, funding "scientific" studies that distort research results to "prove" no harm is caused by MSG, and forming "independent" industry groups to push pro-MSG propaganda.

You see, at this point, the food producers couldn't go back to producing bland, tasteless foods. The American public had gotten used to chemically enhanced foods, and as a result, the food industry had to aggressively defend the only ingredient (MSG) that kept them in business:

> *When MSG was first being added to foods as a taste-enhancing substance, glutamate receptors had not been discovered, and no one knew that excess glutamate could cause brain cell death. The food industry invested millions of dollars in developing the use of MSG and hydrolyzed protein. It was only after tons of these "taste enhancers" were being added to our foods and beverages that scientists had their first hint that excitotoxins carried a serious side effect.*
>
> *They were so toxic, in fact, that researchers renamed them excitotoxins. Abundant research had demonstrated that these excitotoxins not only damaged the cells of the retina of the eye, but also that they were extremely toxic to the nerve cells in the hypothalamus and other vital areas of the brain.*
>
> *It was only through the diligent efforts of Dr. John Olney that the food industry was forced to halt the obvious use of excitotoxin food additives in baby foods. But, as we have seen, no one warned pregnant mothers that the MSG laced food they were eating could endanger the developing babies still in their womb. And more and more excitotoxin "taste enhancers" were being added to adult foods and even toddler foods all the time. Again, this was despite the rapid accumulation of research data demonstrating these previously known dangers and even new dangers associated with using excitotoxins in food. But by this time MSG was not only being added to virtually every processed food, it was being promoted in cookbook recipes as well.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

It didn't matter what dangers were discovered by scientific researchers: food producers needed their MSG to make their food products appealing:

> *Because MSG alters a sensory modality -- the taste buds -- and the overall gustatory apparatus of the mouth, it modifies reality and produces or intensifies sensations. MSG may be used to mask unpleasant flavors, disguise spoilage, and provide a sense of freshness to food that is old.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

In this way, food manufacturing companies were economically addicted to MSG and couldn't let it go. Yet all this time, researchers were conducting animal experiments on MSG that were showing alarming toxicity effects. What began as a small set of research papers began to grow...

The toxicity of MSG

> *Within 15 to 30 minutes after being exposed to high doses of MSG, neurons suspended in tissue culture are seen to swell like balloons. Under the microscope you can see degeneration of the small structures within the cell, called organelles, and also clumping of the chromatin of the nucleus. Within three hours* ***these neurons are not only dead****, but the body's defense mechanisms begin to haul away the debris. Under experimental conditions using animals, this* ***degenerative reaction*** *is seen when MSG is either ingested in the diet, injected into the abdominal cavity, or applied directly to the neurons in tissue culture or into the brain by way of cannula or tube. But when lower doses of MSG were used, scientists discovered something very strange and different. Most of the neurons after thirty minutes appeared to be not only unharmed, but perfectly normal in every way. Then, suddenly, two hours following the exposure, long after the MSG had been removed,* ***the neurons began to die****. It was as if a clock had been set so that the neurons would all commit suicide at the same time. Within 18 to 24 hours* ***after exposure to MSG all of the neurons were dead****. But during that initial two hour period the cells appeared to be perfectly healthy*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

The more researchers looked into the toxicity of MSG, the more evidence they uncovered. MSG was "exciting nerve cells to death," and its effects could be clearly seen under a microscope.

On the street, in the real world, an increasing number of people were starting to complain of nervous system disorders and symptoms following the consumption of MSG. As we later discovered, these symptoms were biochemical reactions to MSG:

> *Reactions range from mild to very severe. Indeed, the symptoms that Dr. Ho Man Kwok reported in the first published study in the New England Journal of Medicine in 1968 -- for example, headache and flushing of the skin -- were relatively mild. However, later studies have documented more serious and sustained physical problems, such as* ***asthma, acute headaches, and life-threatening heart irregularities****. Even* ***deaths*** *have been reported. Other symptoms that might seem to be* ***psychological*** *in origin also have been traced to MSG consumption:* ***extreme mood swings, irritability, depression, rage reactions, and even paranoia****. In addition,* ***suicide increases*** *are likely related to this neurotropic drug*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

MSG shown to damage the liver, the brain, the circulatory system and more

With increased use of MSG by food producers, more and more people were beginning to show these symptoms. At least 50 million people in the United States show reactions to MSG, with varying degrees. But even those people who don't show an immediate reaction to MSG may be suffering long-term brain damage as a result of this ingredient, according to researchers:

> *In a study where MSG was fed to infant mice, one single dose increased free-radical damage to the brain by 60 percent, an effect that lasted all the way to adolescence. This one dose also produced* ***damage to the liver, endothelial cells, the circulatory system****, and cells throughout the body. ...The mice exposed to MSG during pregnancy and early childhood did fine, but* ***later in life*** *they had more* ***difficulty performing mental tasks*** *requiring logical thinking or memory. Scientists also found lowered levels of acetylcholine, a neurotransmitter that plays a large role in memory and learning, and of norepinephrine, a neurotransmitter that plays a role in attention.*
>
> **- Carol Simontacchi, The Crazy Makers**

Further research revealed even more frightening toxic effects caused by MSG as well as the difficulty in getting the FDA to actually do anything about protecting the public from this dangerous chemical:

> *Despite this frightening discovery, MSG continued to be added to food in enormous amounts and cookbooks continued to recommend it as a taste enhancing additive for recipes. But the worst was yet to be disclosed about this compound. Some ten years [after the experiments performed by Lucas and Newhouse which showed that MSG destroys nerve cells of animal retinas,] John W. Olney, MD, a neuroscientist working at the Department of Psychiatry at Washington University in St. Louis, repeated Lucas and Newhouse's experiment in infant mice.*
>
> *His findings indicated that MSG was not only toxic to the retina,* ***but also to the brain****. When he examined the animals' brains he discovered that specialized cells in a critical area of the animals' brain,* ***the hypothalamus, were destroyed****, after a* ***single dose of MSG****.*
>
> *The implications of Dr. Olney's findings should have been earth-shaking to say the least. Why? Because millions of babies all over the world were eating* ***baby foods*** *containing large amounts of MSG and hydrolyzed vegetable protein. In feet, the concentrations of MSG found in baby foods was equal to that used to* ***create brain lesions in experimental animals****.*
>
> *Yet, food manufacturers continued to add tons of this excitotoxic additive to foods of all kinds, including baby foods. Even the government's public health watch-dog agency, the* ***Food and Drug Administration, refused to take action****. Dr. Olney ...informed the FDA of the real danger to human infants and encouraged them to take action. But they refused. His only recourse was to go public with what he knew to be true -- that* ***MSG was a dangerous compound*** *that should not be added to infant foods. It was only after his testimony before a Congressional committee that the food manufacturers agreed to* ***remove MSG from baby foods****. Instead of adding pure MSG they added a substance known as hydrolyzed vegetable protein that contains three known excitotoxins and has added MSG.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

If MSG is found in seaweed, why is it so dangerous to your health?

The demonstrated toxicity of MSG was, at first, difficult to explain. Glutamates are naturally occurring proteins in foods like beets, tomatoes and seaweed, so what was the problem? The problem, it turns out, was that MSG was a highly concentrated chemical form extracted from plants. Nowhere in nature did MSG exist in isolation and in such high concentrations.

> *It might appear that MSG should not be a problem. After all, it is found naturally in foods such as soybeans, beets, and seaweeds. However, glutamic acid seems to affect brain chemistry, and certain tests in rats suggest that high amounts of MSG can cause brain damage.*
>
> **- Elson Haas M.D., Staying Healthy With Nutrition**

But detailed studies that attempted to follow the path of MSG in the body showed a fascinating pattern. By using radioactively marked MSG in animal experiments, researchers were able to determine that under certain circumstances, MSG passes through the blood / brain barrier that normally keeps nerve-damaging chemicals safely away from the brain:

> *The brain is quite picky about what it lets in and what it keeps out. Surrounding virtually the entire brain, a structure called the blood-brain barrier shields the brain from direct bloodstream access, allowing only certain ions and nutrients to pass. In the bare area, however, the barrier skips a spot, and here the brain can be vulnerable to entry of unwanted substances that once inside may stimulate the brain abnormally, an effect called excitotoxicity. Such is the case for aspartame; this sweetener -- along with other similar molecules, most notably MSG (monosodium glutamate), the food additive and flavor enhancer so pervasive in processed foods -- behaves as a* ***brain excitotoxin****. Its chemical structure allows it to fit into a receptor within the brain called the NMDA (N-methyl-d-aspartate) receptor, triggering such overstimulation in the nerve cell that it dies. In other words,* ***the brain cell literally becomes excited to death****.*
>
> **- Michael Eades, M.D., and Mary Dan Eades, M.D., The Protein Power Lifeplan**

And:

> *The brain receives the same blood that flows through the body. Therefore, it is exposed to high concentrations of chemicals in the blood, both from metabolism and from the diet. Some of these chemicals are quite toxic to the brain. For example, glutamate can cause widespread destruction of certain brain cells in concentrations normally found in the diet. This is especially so when we consider the enormous amounts of glutamate added to our food in the form of the taste enhancer, monosodium glutamate or MSG.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

MSG damages your health with small doses, taken over time

Also, the research was showing that it wasn't necessarily one large dose of MSG that would kill nerve cells: it was the frequent exposure to smaller doses over time:

> *It has been shown that when using lower doses of excitotoxins many of these cells are severely damaged without actually dying. But, as a result of this damage, they operate at a much reduced level of efficiency. Certainly, we want our brains to operate at peak efficiency. Also,* ***repeated injury to these damaged neurons will eventually kill them****. Unfortunately, the only experiments to demonstrate these long termed effects in humans are being conducted on you, and me, and our families, by the food industry and the producers of aspartame and MSG*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

The extreme toxicity of MSG combined with its widespread use in the food supply resulted in virtually every consumer in the United State being exposed to it. Some 30 percent of the population demonstrate observable symptoms from MSG (see below for a complete list of symptoms associated with "MSG syndrome,") although the research suggests the other 70 percent may be suffering some degree of permanent nerve cell damage as well. In any case, the problems caused by MSG are undoubtedly widespread:

> *The evidence points to MSG sensitivity of* ***epidemic proportions*** *throughout the general population. The symptoms may be severe or vague: depression, headache, mild nausea, pressure around the eyes, tingling of the face, behavioral disturbances in children, and mood swings, accentuating those already present in adolescents and also in adults.*
>
> ***- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex***

MSG isn't the entire picture, either. When MSG is combined with other excitotoxins -- namely, aspartame -- the destructive results can be compounded:

> *Unfortunately, MSG is not the only taste enhancing food additive known to cause damage to the nervous system. In fact, there is a whole class of chemicals that can produce very similar damage -- they all share one important property. When neurons are exposed to these substances, they become very excited and fire their impulses very rapidly until they reach a state of extreme exhaustion. Several hours later these neurons suddenly die, as if the cells were excited to death. As a result, neuroscientists have dubbed this class of chemicals "excitotoxins".*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

With MSG shown to be toxic to the nerve cells in both animals and humans, it's little wonder that it can be a causative factor in a wide variety of diseases and disorders. MSG is implicated in a long list of serious diseases such as asthma, hyperactivity, violent behavior, obesity, diabetes, reproductive problems and endocrine disorders.

In the following sections, we'll explore the links between each of these diseases and MSG.

MSG and asthma

> *Asthma may be precipitated by MSG. Dr. David H. Allen and Dr. Gary J. Baker from Australia published a report in the New England Journal of Medicine about two young women who developed severe asthma episodes after ingestion of MSG at Chinese restaurants. Originally, these doctors were skeptical about MSG being the precipitating factor. They gave capsules containing 2.5 grams of MSG to the young women (a bowl of wonton soup contains approximately 3 grams). In both cases there were asthmatic reactions. The first case responded to simple treatment. The other young woman had severe unresponsive asthma, requiring that she be placed on a ventilator.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Because MSG is an excitotoxin, and because the very process of breathing requires the proper functioning of nerve cells in the brain, it's little surprise that the consumption of MSG has been frequently documented to cause asthmatic attacks. As in the case presented above, these are clearly more than mere coincidence, since the patients typically respond with repeated attacks when given "challenge doses" of MSG. (The case shown above is just one example. The book **In Bad Taste** reprints personal accounts detailing many more.)

Based on the observation that MSG consumption was contributing to bouts of asthma, research was conducted and published in the **Journal of Allergy and Clinical Immunology** in 1987 which provided further evidence of the causal link between MSG consumption and asthma attacks:

> *The severity of this asthma attack following the MSG challenge surprised and worried us. When another patient, whom we were currently investigating for food additive asthma, also reacted to a MSG challenge with a marked decrease in her air-flow rate, we wrote letters to alert the medical community of the potential dangers of MSG in asthmatic patients (New England Journal of Medicine, 1981, 305: 1154-1155; The MedicalJournal of Australia, 1981, 2: 576). Dr. Jack Delohery joined us to undertake a larger clinical study. These studies have supported and further characterized our initial observations of* ***MSG as a precipitant of asthma*** *in some asthma in some asthmatics, and have been reported in the Journal of Allergy and Clinical Immunology, 1987, 80: 530-537*
>
> **- Dr. Gary Baker**

It is worth noting that people who frequently consume both cows' milk and foods containing MSG (bacon, breakfast sausage, snack foods, canned soups, and others) is creating a multiplier effect when it comes to asthma. They are truly setting themselves up for chronic mucous production in the lungs combined with improper nerve function of the lungs. **By eliminating both cows' milk and MSG from the diet, a person can easily eliminate the top two dietary causes of asthma**.

MSG and seizures

> *The excitatory neurophysiological effect on the nerve cells is well established. Experimentally, MSG can produce convulsions in rats to the point of "status epilepticus," that is, continuous seizures. The animal studies and human case reports are an alarming association, and certainly those with epilepsy should avoid MSG in all forms.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Because MSG is a chemical that overexcites nerve cells in mammals, it should be little surprise that it is linked to the onset of seizures in both animals and humans. Although the "seizure effect" of MSG has not been clinically tested in humans (who would volunteer to be dosed with MSG until they had seizures, anyway?), reports from individuals and doctors indicate that seizures are apparently being caused by the consumption of MSG in some people, and that those seizures cease when MSG is removed from their diets.

MSG and violence

> *Excitotoxins like MSG could cause conditions such as autism, schizophrenia, seizures, and cerebral palsy; early exposure could cause a* ***tendency for episodic violence*** *and* ***criminal behavior*** *in later years. Experimental evidence in animals shows that such exposure can result in behavioral changes.*
>
> **- Carol Simontacchi, The Crazy Makers**

One of the more alarming long-term effects that may be due to frequent MSG consumption is behavioral changes that lead to violence and aggression. It isn't just a hypothesis, either: experiments in animals were able to produce rage simply by injecting MSG into their hypothalamus glands:

> *One of MSG's more alarming properties is its effect on anger. Researchers who injected MSG in microscopic concentrations into the hypothalami of test animals' brains were able to produce* ***intense rage reactions*** *in the subjects -- a not-unexpected effect since the hypothalamus is an integral part of the brain's limbic system, the complex of nuclei concerned with emotional elaboration. We are now witnessing the effects of a decades-long manipulation of the human brain. As more and more brain-altering drugs -- both legal and illegal -- come into use, especially combined with widespread exposure to food-based excitotoxins and Ritalin, we will witness a growing number of* ***neurological diseases and neuropsychiatric disorders****. Many of these drugs act on brain systems responsible for our highest level of thinking, especially as it relates to emotional sophistication. These drugs and* ***food additives can induce states of apathy, rage, disordered thinking, perceptional distortion and states of increased suggestibility****.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

With MSG shown to produce violent behavior in animals, and with MSG consumption so widespread among humans, this may be a contributing factor to the sharp increase in violence in the United States over the last several decades.

> *Reports of rage reactions induced by MSG become clearer with an understanding of the neuroexcitatory effects of MSG. The 1984 "McDonald's Massacre" in San Ysidro, California, had an MSG-sensitive killer. This situation was analyzed in a scientific journal, the International Journal of Biosocial Research. Dr. Robert Hall from Chaminade University of Honolulu received the data about the "MSG Massacre" and concluded that the data supported a* ***psychotic reaction to monosodium glutamate****. The amygdala section of the brain often has been linked to rage reactions and is stimulated by MSG as well.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

MSG and hyperactivity / Attention Deficit Hyperactivity Disorder

> *The rise in ADD -- Attention Deficit Disorder -- in children coupled with the increased use of the drug Ritalin directly parallels the rise in MSG use. Some symptoms of ADD are hyperactivity, lack of concentration, and behavioral volatility. It is likely that the performance of millions of schoolchildren in their ability to read, concentrate, and score high on tests is being altered by MSG intake.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

The list of behavioral disorders linked to MSG is lengthy, if not downright frightening. Hyperactivity and Attention Deficit Disorder (ADD) are both linked to MSG consumption. And rather than recognizing these "diseases" as the symptomatic side effects of the consumption of excitotoxins, our conventional medicine "experts" prescribe narcotics like Ritalin:

> *We are witnessing an astounding increase in Ritalin use for children diagnosed with ADD (attention deficit disorder), ADHD (attention deficit hyperactive disorder), and hyperactivity or behavioral disorders. By tracking the rise in MSG use, it is apparent that we are in the midst of a* ***societal experiment in treating MSG-induced neuroexcitatory effects in children****. There is little question that Ritalin works. Much like Prozac (fluoxetine) is effective for MSG-induced depressive symptoms, Ritalin is effective for a wide range of MSG-induced symptoms. Should we be using a potent drug ...just to treat another drug reaction from monosodium glutamate? The thousands of cases responding solely to MSG elimination indicate a likely widespread response.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

As Dr. Schwartz is saying, the rise in ADD and subsequent Ritalin prescriptions almost precisely mirrors the rise in the use of MSG (and processed foods in general) by the general public. We've already seen how refined sugars can create these behavioral effects in children. Now, by adding MSG to the diets of tens of millions of children across the country, we may be creating a generation of imbalanced youth prone to violent behavior. Meanwhile, our prison populations are soaring, and the only debate we hear in the media is about whether we should build 200 new prisons or 250.

MSG and heart problems / cardiovascular disease

> *The neuroexcitatory relationship of MSG and the heart has been noted for 30 years. Atrial fibrillation as a distinct symptom of MSG toxicity became clear with Dr. John Frost, professor of cytopathology at Johns Hopkins University School of Medicine. He noted the connection himself and provided the FDA with numerous letters and suggested mechanisms.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

As this example demonstrates, various doctors have made observations over the years of links between MSG consumption and erratic heart behavior. This is likely due, once again, to the nerve-disrupting effect of MSG. It probably affects the heart in much the same way it disrupts lung function.

In this case, the researcher -- a professor at John Hopkins University School of Medicine -- contacted the FDA with details about his observations. As always, the FDA ignored the reports and continued to support the financial interests of food producers.

MSG and cancer

> *Numerous studies have shown that MSG, free glutamate and other excitotoxins produce **enormous amounts of free radicals in tissues** -- which are a major **cause of cancer** induction in tissues and organs. By consuming foods on a daily basis that are high in excitotoxic additives, we would certainly expect high levels of free radicals and lipid peroxidation in numerous tissues.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

When discussing MSG and cancer, it is important to note there haven't been any clinical studies conducted to determine whether MSG actually causes cancer. At best, the observations available today indicate that MSG may contribute to cancer. But in no way is the MSG-cancer link as strong as, for example, MSG and Alzheimer's:

> *The issue of effects on cancer is still not clear -- either as a stimulant of cancer growth or as the initiator of cancer. Some scientists have wondered if the increase in esophageal cancer in Japanese populations might relate to MSG intake. Certainly, the scientific observation has been made that patients with advanced tumors have elevated plasma glutamate levels, including those with gastrointestinal tumors, bronchial carcinomas, lymphomas, breast cancer, and others. The possibility of glutamate damage to the immune system, particularly the lymphocytes, has been investigated and **appears to be linked**. The elevated plasma glutamate level was correlated with impaired immune responses.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Still, it's far too early to be able to say with confidence that "MSG causes cancer," and there's no overwhelming scientific evidence that says this is not the case. If such a link is ultimately established, it will likely be due to the ability of MSG to damage the hypothalamus gland, which is critical for proper immune system function:

> *Interestingly, a recent study indicates that MSG exposure during the suckling period of mice produces a severe defect in cell-mediated immunity when they reach adulthood. Cell-mediated immunity is important in fighting viruses, bacteria and cancer. It was suggested that this defect in immunity was caused by* ***damage to the hypothalamus*** *induced by neonatal exposure to MSG. It is known that the hypothalamus plays a vital role in immunity. If this effect also occurs in humans exposed to MSG at an early stage of development, it could mean that they would suffer similar immune deficiencies as adults, which would mean more infections and a* ***higher incidence of cancer****, since the immune system would not be as efficient in fighting these diseases.*
>
> ***- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills***

Still, it is clear that MSG does produce free radicals in tissues. These free radicals, in turn, promote the activation and growth of cancerous cells within the body:

> *Another food additive that has been shown to increase free-radical production is monosodium glutamate or MSG. This additive, used in the majority of processed foods, often in disguised names, has been shown to* ***significantly increase free-radical production****, not just in the brain but in many other tissues as well. What makes it particularly dangerous is that this increase in free-radical production persists for prolonged periods of time following even a single dose of MSG.*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**

Regardless of whether MSG consumption can initiate cancerous tumors, it is very likely able to accelerate the growth of existing tumors. Accordingly, people who are currently battling cancer must take extra precaution to avoid exposure to MSG:

> *MSG consumption, then, would pose a special danger to the cancer patient, since increased inflammation and free-radical production can promote tumor growth as well as invasiveness and metastasis of cancerous tumors.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

MSG and endocrine system disorders that lead to obesity

> *Dr. Olney's studies on various species of test animals disclosed that MSG, when fed in doses similar to those found in human diets,* ***destroys hypothalamic neurons****. This type of hypothalamic damage produces a particular syndrome in animals which caused them to be* ***short in stature, obese****, and to have* ***reproductive problems****. Later experiments demonstrated that MSG could cause the hypothalamus to secrete excessive amounts of a reproductive hormone (called luteinizing hormone) which is associated with an early onset of puberty. Many of these endocrine effects did not appear until the animal was much older.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

The endocrine system is responsible for regulating the production and circulation of hormones throughout the body. Is it a delicately-balanced system highly susceptible to influence via dietary or environmental factors. For example, the exposure of skin to sunlight causes a chain reaction of hormonal events that govern sleep patterns, signal the production of vitamin D, and even tell cells when to grow and differentiate. The endocrine system is also responsible for growth hormones, reproductive hormones, hormones that control the level of "energy" experienced by a person, hormones that help a person deal with stress, and many more.

In the early days of MSG usage by food producers, no one suspected that MSG could severely damage the endocrine systems of mammals. In fact, the earliest observation of hypothalamus damage from MSG was, in fact, a fluke:

> *In 1968 Dr. Olney, working out of the Department of Psychiatry at Washington University in St. Louis, repeated Dr. Lucas and Newhouse's experiment using the same kind of animals and the same doses of* ***MSG****. But what Dr. Olney found was even more shocking. He discovered that not only did MSG cause severe damage to the neurons in the retina of the eye, but that it also caused widespread destruction of neurons in the hypothalamus and other areas of the brain adjacent to the ventricular system, called the circumventricular organs. Again, this damage was most severe in the immature or newborn animals. He hypothesized that this area of the brain was affected most because it did not have a blood brain barrier system to protect it from toxic substances circulating in the blood.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

Over the years, dozens more studies were conducted by various researchers (and I'm not counting the studies conducted by the MSG industry groups, all of which showed MSG to be perfectly safe as you will see in a later section). Today, it is well demonstrated that MSG interferes with the endocrine system:

> *There is a long history of endocrine, particularly pituitary and hypothalamic, effects produced by MSG in experimental animals. One review in 1998 shows alterations in hypothalamic-pituitary-adrenal cortical function with likely genetic effects. The association with* ***thyroid abnormalities, fertility and obesity problems, cortisone abnormalities****, and other* ***glandular functions*** *has been suggested by many studies. Long-term human analysis will be necessary to confirm animal effects in humans. The stress-induced abnormalities in blood-brain barrier permeability suggest differing MSG effects dependent on existing states of relaxation or stresses. Another 1998 article demonstrates* ***growth hormone impairment*** *in rats that lasts throughout adulthood in experimental animals. The suggestive evidence for MSG-induced neuroendocrine effects is substantial, coupled with the observation of* ***increased obesity in children****.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Studies on animals show that the effects of MSG are widespread and complex:

> *Animals fed MSG not only produced less growth hormone, they also lacked the normal release pattern seen in all other mammals, including humans. ...Numerous studies using immature mice have shown that LH, FSH and prolactin (the reproductive hormones), HGH (growth hormone), ACTH (adrenal regulating hormone), and TSH (thyroid regulating hormone) were all decreased following exposure to MSG. These hormone deficiencies were reflected in the animals by* ***small size, low reproductive ability, gross obesity*** *and* ***low metabolism****.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

MSG shown to cause severe reproductive problems and endocrine disorders

That MSG interferes with the endocrine system is not in doubt. What is startling, however, is both the variety of hormonal problems that can be caused or aggravated by MSG and the tendency for these problems to remain hidden for years or even decades before surfacing:

> *Based on careful studies conducted in experimental animals, researchers are convinced that MSG, by causing a* ***abnormal development of the hypothalamus*** *and damage to specialized neurons, causes the ovaries to become atrophied (shrunken) thus leading to* ***severe problems with the reproductive cycle*** *in females. So it appears that MSG has both direct toxic effects on the nerve cells in the hypothalamus and can cause the organization of the developing brain centers to be miswired. Both of these effects can lead to* ***severe endocrine problems later in life****. This is why it is critical that you avoid MSG, aspartate and other excitotoxic food additives in both your food (especially if you are pregnant) and in your children's food.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

And:

> *MSG-induced injuries in a newborn's hypothalamus can result in profound* ***depression of the immune system that may last a lifetime****. The same is true for endocrine malfunction; that is, we see a loss of the normal flow of* ***growth hormone, reproductive hormones*** *and* ***adrenal hormones*** *with MSG-type hypothalamic injuries.*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**

All of the research conducted so far on the link between MSG and endocrine system damage has been on animals. An important question, of course, is, "Does this affect human beings in the same way?" We don't have answers to that question yet, but there have been attempts to extrapolate the existing knowledge:

> *One neuroscientists has done a hypothetical dose curve for excitotoxin exposure (glutamate plus aspartate) in a two-year-old child taking in 200 milligrams per kilogram of these excitotoxins in known food/beverage mixtures. (This is based on consuming a reasonable helping of soup and an aspartame-sweetened drink.) In this instance the child would receive an excitotoxin dose of 500 micromoles per deciliter which is six times the plasma concentration needed to cause neuron destruction in the hypo-thalamus of experimental animals.*
>
> ***- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills***

In all, what's clear is that MSG is highly toxic to the endocrine systems of laboratory animals (mammals), and the impact of MSG is not immediately obvious. In some cases, the effects don't appear until much later in life. Given that one of the frequently recorded effects of MSG on mammals has been a loss of reproductive capability, one can only wonder if the skyrocketing rates of infertility over the last few decades may be due, in part, to the parallel increase in the rates of consumption of MSG.

The link between MSG and obesity

> *Consistently, the animals exposed to MSG were found to be short, **grossly obese**, and had difficulty with sexual reproduction. One can only wonder if the large number of people having **difficulty with obesity** in the United States is related to **early exposure to food additive excitotoxins** since this obesity is one of the most consistent features of the syndrome. One characteristic of the obesity induced by excitotoxins is that **it doesn't appear to depend on food intake**. This could explain **why some people cannot diet away their obesity**. It is ironic that so many people drink soft drinks sweetened with NutraSweet® when aspartate can produce the exact same lesions as glutamate, resulting in gross obesity. The actual extent of MSG induced obesity in the human population is unknown.*
>
> ***- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills***

If you've often thought you were cursed to a life of obesity for no apparent reason, and that the body fat just won't go away no matter you eat, you may find yourself intrigued by the above statement. It explains that exposure to MSG in children results in lifelong obesity problems when those children grow up, and that the obesity experienced as adults may be particularly stubborn.

If this seems familiar to you, it may be due to your exposure to MSG in processed foods as a child. Remember, MSG went into heavy use following World War II. It wasn't removed from baby foods until 1969, and even then, babies, infants and children experienced heavy exposure to MSG thanks to the use of other ingredients that contain MSG but aren't called "monosodium glutamate." So unless you were born before World War II, chances are that your childhood involved at least some exposure to MSG.

But how was this MSG / obesity link established in the first place? It happened in 1968, as described below. The following passage also reveals a startling fact: that animals fed MSG soon after birth preferred high-carbohydrate foods when given a choice. It's almost as if early exposure to MSG rewires the brain to crave unhealthy foods:

> *Let us travel back to 1968 when Dr. Olney was conducting his experiments on mice using MSG. (Mice are frequently used as test animals because they react most like humans to MSG.) Obsessed with the microscopic changes in the brains of the mice he overlooked something quite dramatic first noticed by his assistant. She pointed out to him that all of the mice were grossly obese. At first he thought it was just a fluke, but as the experiment progressed he noticed that indeed **all the mice fed MSG became grossly obese**.*
>
> *Since his early observation, other studies have confirmed that **MSG causes gross obesity in animals**. At an international neuroscience meeting, Dr. Olney was asked if he thought the reason Americans were so obese was, in fact, due to their high consumption of MSG*

additives. Since that conference in the 1970s, America has undergone this virtual epidemic of gross obesity, especially among its youth. One study discovered that animals fed MSG soon after birth ***preferred foods that were high in carbohydrates*** *and low in nutritional value.*

Researchers also found that ***this fat could not be exercised off*** *and was extremely difficult to remove through dieting, no matter how stringent. Again, this is reminiscent of the problem in our population. Today, most processed foods contain significant amounts of glutamate, enough to produce injuries to our children's brains similar to those seen in experimental animals. This is extremely important when you consider that, of all the mammals, humans are the most susceptible to physical damage from ingested MSG. We possess a sensitivity five times greater than the mouse and twenty times greater than the rhesus monkey.*

With this enormous consumption of foods laced with MSG additives, it is no wonder that we have an obesity problem in this country, especially when you combine the hypothalamic lesion caused by MSG to the high-fat and -carbohydrate diets of young people. Of particular concern is the suggestion that ***MSG ingested by pregnant women may actually cause this lesion in children*** *while they are still in the womb. ...Our children have become lab rats.*

- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills

Why MSG may be what's preventing you from losing weight

This single ingredient -- MSG -- may in fact be the "missing link explanation" as to why America is currently experiencing skyrocketing rates of obesity. Chances are, you are affected by this as well, just as I was. Most people reading this manual were probably raised on a diet containing substantial quantities of MSG. That helps explain why we all got overweight and why we are now so desperate to find answers to weight loss.

What you've just read here is a big piece of the puzzle. We're fat because our endocrine systems have been damaged due to MSG consumption as infants and children. **We crave carbohydrates because our brains have been rewired by this excitotoxin**. And we have just as much trouble working off the body fat as those lab rats that just couldn't seem to get any thinner, no matter what they ate.

There's good news in all this, however: now that you know at least part of the source of the problem, you can do something about it. I'm here to tell you that even a damaged endocrine system can be retrained. By avoiding MSG and other excitotoxins (aspartame, namely), and by empowering your body with optimum nutrition (revealed in a later section of this manual), you can reverse decades of damage and start losing body fat, regardless of how much MSG you used to eat.

But to do that, you've got to give up MSG entirely. Keep reading, because in an upcoming section, I show you how to recognize and avoid MSG. (It's not as easy as just looking for "monosodium glutamate" on the label, unfortunately.)

MSG and diabetes

There is also a link between MSG consumption and juvenile-onset diabetes. This is not surprising, since insulin is yet another hormone regulated by the endocrine system. The pancreas -- the organ most affected by diabetes -- is, in fact, part of the endocrine system as well. If MSG attacks the hypothalamus and causes severe disruption in the production of growth hormone, reproductive hormones, and thyroid hormones, it's not a huge leap to suspect that it might also disrupt the normal functioning of the pancreas:

> *...Genetically susceptible mice exposed to MSG developed **juvenile-onset diabetes**. Several independent studies have shown that MSG causes significant increases in **insulin secretion**, just as we see in cases of type 2 diabetes. Yet, in studies, animals without the gene for type 1 (insulin-dependent) diabetes still became grossly obese. These experiments showed that damage occurred in the hypothalamus of the brain. As far back as 1940, it was known that stereotactic lesions to a particular part of the hypothalamus could produce grossly obese mice, exactly like those seen with MSG exposure. Because the FDA has refused to address this issue, we are more likely to see an unchecked increase in childhood obesity and type 2 diabetes.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

But if MSG induces diabetes, how does it actually provoke the disease? What biological mechanism is responsible? As Blaylock explains:

> *Also characteristic of MSG exposure is an increase in insulin release from the pancreas. As we have seen, **the pancreas contains numerous glutamate type receptors**, and glutamate in the diet can induce as much as a **threefold increase in insulin release** from the pancreas. In addition, experiments in animals have demonstrated that MSG can induce insulin resistance, exactly as we see in type 2 diabetes in humans.*
>
> ***- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills***

This observation has important ramifications for those seeking weight loss. As dieters well know, it is vital to avoid the production of insulin by the pancreas. Normally, this is accomplished by avoiding the consumption of refined carbohydrates and sugars. But if MSG can induce the pancreas to secrete insulin, then a dieter who avoids carbohydrates but eats MSG may be experiencing insulin spikes anyway!

This is profound, and herein lies one of the gems in this manual. If your diet has hit a brick wall and you don't know why, if your blood sugar remains out of control even though you've given up refined carbohydrates, the answer may very well be that you're still exposing yourself to MSG which is causing the pancreas to misbehave! Give up both processed carbohydrates and MSG and you're likely to experience a balanced, well-controlled level of blood sugar without the insulin spikes.

MSG, Parkinson's and Alzheimer's disease

> *When MSG is consumed in large doses or injected into the brain of experimental animals, we see that not all of the neurons are killed or damaged. The toxic effect is very specific. The most frequently killed cells are pyramid shaped neurons, cells in the nucleus basalis, certain neurons of the hypothalamus, and pyramidal neurons in the hippocampus of the temporal lobes. The distribution of cellular damage caused by large concentrations of MSG is* ***very similar to that seen in human cases of Alzheimer's disease****.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

As with other conditions, there is not yet clinical proof that MSG causes Alzheimer's in humans, but there is a substantial amount of evidence that would point to this link:

> *Other symptoms associated with MSG sensitivity include dizziness and balance difficulties, problems common to the elderly. In larger concentrations, MSG is* ***a potent nerve toxin****, and it is likely that chronic long-term ingestion may be involved with* ***Alzheimer's and Parkinson's disease****, as well as with other* ***nerve cell degenerative diseases****, such as amyotrophic lateral sclerosis (****Lou Gehrig's disease****).*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Even if the MSG / Alzheimer's link exists, what is not well understood is the mechanism by which MSG promotes this degenerative brain disease. The best guess is that strokes or other events compromise the blood-brain barrier and allow MSG and other excitotoxins to enter the brain and subsequently damage brain cells:

> *It may be that as these Parkinson's patients age and develop small strokes, hypertension, or other diseases of the brain,* ***their blood-brain barrier becomes more porous****, allowing excitotoxins in the blood to enter. By ingesting diets high in MSG, hydrolyzed vegetable protein, aspartame and other excitotoxins, these people would be exposing their brains to* ***damaging levels of this class of toxin****. Eventually other neurons would be damaged, possibly leading to* ***symptoms of Alzheimer's*** *type dementia and ALS.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

In experiments with animals, MSG has been clearly shown to produce damage to the hippocampus that is characteristic of Alzheimer's disease:

> *When experimental animals are given large doses of MSG, either by injection or in their diet, these same hippocampal cells degenerate. While most of the damage done in Alzheimer's disease appears to be to the NMDA type of glutamate receptor, we also see damage to the other two types of glutamate receptors (quisqualate and the kainate). It is important to recall that all three of these receptors are damaged by MSG and aspartate*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

Avoiding the apparent associated risk of these degenerative brain diseases is relatively straightforward: simply avoid MSG in the diet:

> *High levels of excitotoxins within the brain appear to play a major role in Alzheimer's disease. It is essential that individuals with a strong family history of Alzheimer's disease and those having had a stroke or high blood pressure avoid excitotoxin food additives. The simplest way to do this is to restrict foods from your diet that contain excitotoxin taste enhancers such as MSG, hydrolyzed vegetable protein, and aspartame (NutraSweet®).*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

From this, it seems reasonable to suspect MSG in the rising rates of Alzheimer's disease that have appeared in Western societies over the last several decades. Although no proof is yet available that MSG causes Alzheimer's in humans, there is little doubt that the world's largest MSG / Alzheimer's experiment is well under way -- and it is being conducted on the general public. Only an Alzheimer's epidemic, it seems, will generate the level of public awareness and political courage needed to even consider banning monosodium glutamate from the food supply.

MSG, child nutrition and baby foods

> *Most children today start life gorging on **junk foods filled with excitotoxins**. Unfortunately, many of their mothers also ate badly **during pregnancy**. And, junk foods have replaced the pacifier: many mothers will give their child a bag of MSG-laced chips and sit him on the couch to watch cartoons. Without fail, thirty minutes later he is screaming and throwing things all over the room. Why? Because the MSG in the unhealthy treat **intensely stimulates the child's brain**, which is four times more sensitive to the additive than an adult's brain.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

MSG poses a particular risk to infants and children. The younger the child, the weaker the blood-brain barrier and, hence, the more excitotoxins are able to invade the brain and start ravaging brain cells. This age relationship was clearly demonstrated in the majority of experiments conducted on animals: younger animals were more adversely affected than adult members of the species:

> *Remember, the protective enzymes in the baby's brain are still immature, and therefore are unable to detoxify the excitotoxins that enter its brain. This would mean that in the case of **pregnant women eating diets high in excitotoxin** taste enhancers, **the baby could possibly be exposed** to these high glutamate levels for many hours. It is not unreasonable to assume that mothers will eat several meals and snacks containing various forms of excitotoxins such as MSG, hydrolyzed vegetable protein, and aspartame. This could produce a **high concentration of glutamate exposure in the baby's brain** several times a day.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

The first concerns about MSG and young children emerged in the 1970s when doctors began to notice rather bizarre disorders (like seizures) in children and managed to link them to dietary intake of MSG:

> *Dr. Reif-Lehrer became especially concerned in 1976 when she encountered three children whose serious symptoms were traced to this food additive. The first case involved a child who developed "shudder" attacks at the age of six months when he was started on adult foods. The attacks continued and the child* ***was thought to have a form of epilepsy****. Yet the medications ordinarily used for seizures were ineffective in his case. These symptoms of "shudder-shiver" were finally* ***traced to MSG in the child's diet****. The symptoms soon stopped after the diet was changed. They returned during a period of trial feedings with food known to contain high amounts of MSG. I have since discovered several other cases such as this one, in addition to finding children with unexplained true seizures. Her next case, reported in the New England Journal of Medicine, involved a 16-month-old child who developed what were described as "shivers."* ***The symptoms disappeared when her diet was changed to eliminate MSG****. This case was confirmed by other physicians*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Observers also learned that children could be exposed to the dangers of MSG through breastfeeding:

> *...No one had warned pregnant women of the danger to their developing babies caused by the MSG found within their own food. This danger would exist if the glutamate from the mother's blood entered the blood of their unborn baby. In 1974 Dr. Olney demonstrated that MSG, when fed to pregnant Rhesus monkeys, could cause brain damage to their offspring. Other researchers found similar results when pregnant rats were fed MSG. Y****et millions of pregnant women continued to eat foods laced with MSG*** *and other equally potent excitotoxins while the* ***FDA remained silent****.*
>
> *Following weaning from bottled or breast milk, most mothers begin feeding their babies food from the table. These foods frequently contain* ***large amounts of MSG and hydrolyzed vegetable protein****. Dr. Olney found that these children were receiving doses of MSG from the table food that equaled the dose used experimentally to produce* ***severe brain cell destruction*** *in animal experiments. ...Humans develop higher blood levels of glutamate following ingestion of MSG than does any other animal species known. Dr. Olney noted that:*
>
> *The amount of* ***MSG in a single bowl of commercially available soup*** *is probably enough to cause blood glutamate levels to rise higher in a human child than levels that predictably* ***cause brain damage*** *in immature animals.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

As you know by now, MSG was voluntarily removed from baby foods in 1969 by food manufacturers. The FDA never required this, however. It was only the potential risk of a public relations disaster that resulted in food companies pulling MSG from baby foods. Yet MSG and food manufacturers claim their ingredient is "completely safe" for children and pregnant mothers. A critical thinker can only wonder: if this is so, then why did they remove the ingredient from baby food?

Regardless of the reason, MSG remains readily available to children through a variety of channels, most notably their schools:

> *[MSG] is also a common element in the diet of children who eat ordinary canned and processed meals, not to mention fast-foods and school lunches. There is no regulation whatsoever on the use of MSG in school cafeterias despite its possible ill effects. In fact, current trends allow fast-food pizza and hamburger chains to sell their MSG-laden products during the children's lunch hour.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

It is nothing short of astounding that 35 years after the discovery that MSG causes brain damage in mammals, the FDA has still refused to take any action whatsoever in banning this ingredient or, at the very least, warning that pregnant mothers and breastfeeding mothers should not consume this ingredient.

This just goes to demonstrate the unprecedented level of negligence of this government agency which is supposed to protect the public from unsafe foods and drugs, not promote toxic foods and sweep the evidence under the rug. I'll talk more about this in "MSG cover-up" later in this section.

MSG risks are even higher for low-carb dieters

One of the more startling facts about MSG has special relevance for those on low-carb diets: MSG has been shown to be more damaging in the absence of dietary glucose.

In other words, a diet high in carbohydrates and sugars helps moderate the negative effects of MSG. But **a diet low in carbohydrates apparently allows MSG to do its worst damage**:

> *When rats were fed glucose plus large amounts of MSG, the amount of* **brain damage seen was considerably less** *than when glucose was denied. This has also been shown in cell cultures. The cells are still damaged but much less so than when glucose is absent. What this means is that chronic exposure to high levels of glutamate or aspartate will cause less brain injury when one's diet contains* ***adequate levels of carbohydrates****, but the cumulative damage over many years can still be substantial.*

> *This energy protection also seems to exist in humans. The defenders of MSG safety frequently cite a study in which human volunteers were fed large doses of MSG combined with a mixed meal of protein and carbohydrates. Only 10 percent developed a headache. Most were unaffected. But when the study was repeated using 14 human volunteers, this time keeping the subjects without food overnight, all developed headaches, tightness in the chest, and other symptoms of neurological toxicity related to MSG. So merely going without food overnight can* ***greatly increase the toxicity of MSG****. In another study involving 1,529 persons, it was found that 25 percent developed adverse symptoms after eating foods containing MSG.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

In practical terms, this means that even if you never experienced MSG-like symptoms before going on a low-carb diet, you may be especially susceptible to them after adopting the diet. Did you experience any shifts in your mental function (clarity, moods, etc.) when shifting to a low-carb diet? Does your diet still contain MSG and other ingredients made with MSG?

If you answered "yes" to both questions, it may be due to the increased toxicity of MSG in a low-carb lifestyle. Once again, this is a "missing piece of the puzzle" that helps explain some of the mysterious side effects some people experience on a low-carb diet. It isn't the low-carb diet that's to blame: it's the MSG still in your diet!

Food manufacturers hide MSG in other ingredients

> *We've seen a food industry go from blatantly displaying the use of MSG in its food products to creating a "clean label industry" whose purpose is to design ingredient and food product labels that will appeal to consumers while hiding the presence of MSG. The use of the term "natural flavoring" has increased, as have the patented proprietary reaction flavors, such as beef, chicken, and pork, whose ingredients don't need to be labeled. Companies that create flavorings are extremely concerned with how these will ultimately have to be labeled. Still although the Food and Drug Administration (FDA) has made proposals about labeling changes disclosing glutamate content, nothing has happened in ten years' time.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Given the surprising toxicity of MSG and the increasing publicity surrounding this excitotoxin, it's no surprise that food producers are looking for ways to mislead consumers and "hide" this chemical taste enhancer in foods. Food companies, after all, depend heavily on MSG to make their otherwise tasteless foods pleasing to consumers. And they know an increasing number of consumers are looking for monosodium glutamate on the label and will avoid buying foods that contain it.

So they've managed to come up with all sorts of ways to sneak MSG into foods without listing "monosodium glutamate" on the label. The most prominent ingredient in this category is **hydrolyzed vegetable protein**, which may contain anywhere from 12 percent to 40 percent MSG. Another common MSG ingredient, especially in vegetarian foods, is **yeast extract**.

In fact, the following food additives always contain some amount of MSG:

- Monosodium Glutamate
- Hydrolyzed Vegetable Protein
- Hydrolyzed Protein
- Hydrolyzed Plant Protein
- Plant Protein Extract
- Sodium Caseinate
- Calcium Caseinate
- Yeast Extract
- Textured Protein
- Autolyzed Yeast
- Hydrolyzed Oat Flour

The primary keywords to look for are:

- Hydrolyzed
- Autolyzed
- Yeast Extract

I've examined the ingredients labels of thousands of foods, and these are the most common names for MSG-containing ingredients. So, as a rule, don't buy any foods listing these ingredients, and especially avoid foods that blatantly state they contain monosodium glutamate.

The following ingredients may contain MSG, but don't always:

- Textured protein
- Carrageenan or vegetable gum
- Seasonings or spices
- Flavorings or natural flavorings
- Chicken, beef, pork, smoke flavorings
- Bouillon, broth or stock

You read correctly: the ingredient "spices" can contain MSG! This makes it extremely difficult to acquire MSG-free foods. Since the FDA has allowed food companies to engage in this bizarre food labeling shell game, consumers are not able to accurately determine how much MSG is actually contained in food products.

Veggie burger manufacturers insist yeast extract is “100 percent natural!”

Shortly before writing this book, I wrote an essay discussing how many so-called “natural” or vegetarian foods actually contain MSG hidden in other ingredients. In this essay, I named a certain company (I won’t repeat the name here) and explained that their veggie burger product contained yeast extract even though the front of the box proudly proclaimed “100 percent natural!”

In response, their public relations person demanded a retraction of the essay, insisting that their product contained no MSG and was completely natural. Apparently no one at this company had told their public relations person that yeast extract was a chemical taste enhancer, so I educated her about MSG and yeast extract.

A day later, after reading my information on MSG and after apparently talking to her food scientists, she replied and admitted that, yes, the product contained “free glutamic acid” (MSG), but that it was a naturally occurring compound found in tomatoes, among other sources. So it was still “natural” according to her.

I replied by explaining that her argument was the same thing as saying that crack cocaine is perfectly safe to use because it occurs naturally in coca leaves. People drink coca leaf tea all the time without any problems. It’s when you take these chemicals and refine them into highly concentrated forms that they become a problem.

Yeast extract is a highly concentrated form of free glutamic acid used solely as a chemical taste enhancer in vegetarian foods. It has no other purpose whatsoever. It’s like “MSG cocaine.” Yet even the veggie burger manufacturers insist it’s a “100 percent natural” ingredient. It sort of makes you wonder what else they stuff into their veggie burgers and consider to be “100 percent natural” as well. I suppose by their definition, you could add heavy metals like mercury and lead to the recipe, because those occur “naturally” on the planet as well.

The most interesting part in all this, though, was in learning that **even the employees who work at food manufacturing companies have no clue what’s really in their foods**. They’ve been told their products are 100 percent natural, and they just parrot that line to the world, even though it is technically a deception.

So, which veggie burger manufacturer am I talking about? Take your pick: I haven’t found a single veggie burger yet that doesn’t contain MSG. They’re all made with chemical taste enhancers. So much for “100 percent natural,” huh? And just because a product claims to be natural doesn’t mean it is. Just because something’s “vegetarian” doesn’t mean it’s good for you. Vegetarian food manufacturers can be just as deceptive as everybody else, it seems.

Look, I’m no fan of meat products, and I don’t eat red meat, but I’d much prefer an honest free-range chicken sandwich over a deceptively manufactured veggie burger loaded with chemical taste enhancers.

Corruption at the FDA favors food companies, not the safety of consumers

When consumers are confused and the nutrition facts label can be used to obscure the facts, it is the food producers who win -- in terms of profits. By not requiring MSG to be clearly listed on food labels, the FDA has condoned the practice of hiding this proven excitotoxin in everyday foods, thus contributing to untold suffering in the human population.

Worse yet, the FDA still allows foods containing MSG to be labeled as "all natural" foods:

> *Few people are aware that products containing hydrolyzed vegetable protein frequently are advertised as "**all natural.**" While MSG must be specifically listed on food labels, hydrolyzed vegetable protein, which contains MSG, may be designated simply as "**natural flavorings**" or in some cases "spices" or "natural seasonings."*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

That's not exactly what you had in mind for the word "natural," was it? The fact that a potent nerve toxin can legally be labeled "natural flavorings" just goes to show you how twisted our food industry and regulatory agencies have become. The intention of all this is obvious: to mislead consumers and get people to buy products they wouldn't touch if those products were honestly and accurately labeled.

The FDA gets away with this by explaining that the ingredient listed isn't pure MSG and, therefore, doesn't have to be listed as MSG:

> *If MSG is added to a food product during its processing it will be listed on the label. However, it is permitted to list "hydrolyzed vegetable protein" on the label without mentioning that it may contain up to 40 percent monosodium glutamate. Hydrolyzed vegetable protein or protein hydrolysate (as it is sometimes called) is classified by the FDA as a natural flavoring. Therefore, a packaged food item might specify "natural flavoring" in its list of ingredients without mentioning that the natural flavoring consisted of hydrolyzed vegetable protein -- which contains MSG. This method of labeling applies to **any compound substance that may contain MSG**.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

What makes all this worse is the fact that manufacturers typically add a combination of MSG-containing ingredients to their foods. This combination is far more toxic than any one ingredient alone:

> *We also know that excitotoxins have a **compounding effect** when given together. For example, MSG, aspartate, and hydrolyzed vegetable protein given together in a single meal is much more toxic than when given individually. Many foods contain two or more of these excitotoxins. I have seen single frozen diet food dinners that contain MSG, hydrolyzed vegetable protein, and natural flavoring together. Add a diet drink sweetened with NutraSweet® and you have a single meal with **four known excitotoxins**. (Remember that hydrolyzed vegetable protein contains very high concentrations of two excitotoxins -- glutamate and aspartate.)*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

Foods containing MSG

> *MSG is a standard ingredient in most canned soups, soy sauces, bouillon cubes, soup stocks, and frozen dinners. It is difficult to avoid even in the finest of restaurants, where it is often hidden in protein powders and seasonings. The amount of MSG consumed daily by the average person has risen to a level where more and more people are experiencing harmful reactions*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Now that you know about the multitude of toxic effects attributable to MSG consumption, you'll want to know how to avoid it in the foods you buy. The most obvious way to accomplish this is to read food labels and avoid buying any food that contains the ingredients listed in the previous section. Namely, anything that contains **autolyzed, hydrolyzed, yeast extract** or **MSG** ingredients.

It's also helpful to know what categories of foods typically contain MSG. So here's the list.

Food products almost always containing MSG

- Flavored potato chips
- Flavored nacho chips
- Canned soups and dry soup mixes
- Gravy mixes
- Bullion cubes
- Salad dressings
- Jerkies
- Frozen fish with breading
- Canned meats
- Box dinners
- Breakfast sausage
- Any dinner "mix" with a flavor packet
- Frozen dinners
- International foods
- Poultry injected with broth
- Vegetarian foods (typically contain yeast extract) like veggie burgers
- Meat broths (chicken broth, beef broth)

As a general rule, no healthy diet should include these items in the first place. Most foods on this list exhibit other toxicities and nutritional shortfalls that go beyond MSG. For example, potato chips are high in saturated fat and acrylamides. Canned soups are very high in sodium. Frozen fish with breading usually contain hydrogenated oils. Breakfast sausages almost always contain sodium nitrite. MSG, then, is just one more reason to avoid these foods, but it's hardly the only reason.

Symptoms of MSG syndrome: how to tell if you're affected

So how do you know if you've been nailed by "hidden" MSG in foods? Here's a list of symptoms that have been associated with MSG. The most common symptom, however, is simply a major headache that appears within minutes or hours after eating a meal containing MSG. Here's the rest of the list:

- Headaches
- Weakness
- Dizziness
- Palpitations
- Cramps
- Diarrhea
- Nausea
- Gas/bloating
- Chest tightness
- Tingling/burning in the face and chest
- Blurring of vision
- Seeing shining lights
- Difficulty focusing
- Tingling around eyes
- Depression
- Paranoia
- Rage reactions
- Attention deficit disorder (ADD)
- Panic attacks
- Confusion
- Insomnia
- Muscle aches
- Weakness/paralysis
- Jaw stiffness (TMJ)
- Back pain
- Tendonitis
- Arthritis
- Numbness of face
- Speech slurred
- Sneezing
- Sleepiness
- Asthma
- Excessive perspiration
- Fast heartbeat
- Balance problems, staggering

This next list of symptoms details symptoms expressed by children who consume MSG:

Children's MSG symptoms

- Asthma
- Behavioral problems/ADD
- Stomach cramps
- Chest discomfort
- Thirst
- Headache
- Stomachache
- Tiredness, depression
- Nausea
- Dizziness
- Throat symptoms
- Loss of bowel or bladder control
- Rage reactions
- Hostility to other children

Although not all of these behaviors and reactions in children can be blamed on MSG, there is little doubt that MSG promotes these symptoms and behaviors. A wise parent would remove MSG from the diets of their children, regardless of whether they are showing these symptoms.

The use of MSG in foods served to children at public schools

Given the evidence of nerve damage and health problems associated with MSG, it would seem prudent to ensure that our children are not exposed to it, especially in environments outside the home -- like public schools -- where regulatory bodies are able to exert some degree of control over the diets of children. Yet there is absolutely no regulation that limits the use of MSG in school lunches:

> *Both publicly and privately owned cafeterias serving large numbers of people are likely to use MSG. Not only does it improve the taste of food prepared in large quantities, but it is economically wise since it prevents large trays of food from tasting old or stale. Millions of such cafeteria meals are served to children in* ***elementary and high schools*** *each day. H. H. Pullium of the USDA stated that "there are* ***no federal regulations*** *or policies which prohibit or limit the use of monosodium glutamate (MSG) in the National School Lunch Program or any of the U.S. Department of Agriculture's (USDA) federally funded programs." This lack of any regulation has allowed the fast-food industry access to school cafeterias. The MSG-related results, such as* ***declining test scores, increased absences, increased ADHD and Ritalin use****, and* ***increased violence****, has been disastrous.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

One can only wonder if part of the growing problem with poor performance and growing violence in our nation's schools is due to the increased consumption of excitotoxins -- a situation dubiously sanctioned by the state!

The heavy use of MSG in restaurants

> *Many meals served in restaurants contain* ***very high doses of MSG*** *and other excitotoxic amino acids. In fact, they equal or even exceed experimental doses that* ***regularly produce brain lesions*** *in animals. (Remember, humans concentrate glutamate in their blood following a meal containing MSG higher than any other known species of animal.) Even* ***a single bowl of soup*** *may contain several grams of MSG. Most* ***salad dressings are loaded with MSG*** *and hydrolyzed vegetable protein (also labeled as vegetable protein), as are croutons. If you use steak sauce, it frequently contains both, disguised as "natural flavoring" or "spices". Chips, creamy sauces, some gravies, rice dishes, and other gourmet foods can all be loaded with excitotoxic "taste enhancers".*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

If you enjoy eating out, you're not going to like this section. I'll admit it is extremely inconvenient to try to avoid MSG in restaurants, because the only reliable way I've found to accomplish this is to boycott all restaurants. I know, it sounds impossible, and I'm not suggesting that it's something everybody is up to doing. But in my own experience, I tried for years to eat at restaurants without getting migraine headaches from MSG. What I discovered is that:

- Waiters and waitresses are generally clueless about MSG. Some have never heard of it. And they certainly have no idea of the extent of its use in restaurant food.
- Many waiters and waitresses think "made from scratch" means mixing a commercially-produced soup powder with water and warming it up to make soup.
- At most restaurants, the cooks are even less informed about MSG than the waiters. They have no idea what ingredients are contained in the mixes they use to prepare foods for customers.
- Few restaurants have ingredients lists available for customers. To obtain these, you have to be a real pest, which usually ends up annoying the people you're dining with.
- Even upscale restaurants depend heavily on MSG and chemical taste enhancers. Just because the menu prices are sky-high doesn't mean they prepare their foods with fresh ingredients.

Why Chinese restaurants are actually the best place to avoid MSG

Amazingly, I've found Chinese restaurants are the best places to eat if you want to avoid MSG, because they actually know what it is. If you ask, they'll make your dinner without it. Other restaurants, in contrast, have never heard of MSG or don't know what's in their mixes, and therefore they can't remove it. So even though most people associate MSG with Chinese food, I've found that Chinese restaurants are practically the only place you can go to truly avoid MSG! (Just don't eat from their buffet. Buffet food items always contain MSG. All the poison you can eat!)

Also, watch out for the dark sauces used by Chinese restaurants. Even if the cook doesn't add MSG to your stir-fry dish, the oyster sauce probably contains it anyway. I've also found that black bean spicy sauces always contain MSG, even when the chefs swear they don't.

How do I know all this? I have the "gift" of being especially sensitive to MSG. If I consume it, my head starts to feel flushed, and within an hour or so, I'm usually experiencing an extreme migraine headache which lasts for hours (all night, usually).

> *Meats, vegetables, seafood, seasonings, and soups served in any restaurant may contain MSG. Colonel Paul Logan of the National Restaurant Association has quoted an association survey indicating that "**three out of four of all good restaurant operators are now using Glutamate**" (Glutamate Manufacturers' Technical Committee Publication: The Value of Glutamate in Processed Foods). Inquiries by my staff in 1987 to hundreds of franchised restaurants, cafeterias, and individual restaurants about their use of MSG brought a variety of responses. Many were vague in their answers, citing "trade secrets," while others listed foods they served that contained MSG while still not knowing it was an element in hydrolyzed vegetable protein. Some who answered my questions were genuinely concerned about the widespread adverse reactions to MSG. However, frequently **the chefs did not know which sauces contained MSG** or hydrolyzed vegetable protein (HVP). Huge amounts of MSG are still used. I have discovered that in the "finer" restaurants, the "soup bases," clam broths, and breadings are all places to find MSG.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Indian restaurants are hazardous when it comes to avoiding MSG. Curries frequently contain outrageous doses of MSG. The worst MSG headache of my life occurred after eating a curry dish at an upscale Indian restaurant. It felt like my head was about to burst with each heartbeat.

Tibetan foods and other "Eastern" foods also frequently contain MSG. Egg rolls always contain MSG, and the vast majority of restaurant soups contain MSG:

> *Adults, including pregnant women, frequently ingest large concentrations of MSG and other excitotoxins in their food. In one study it was found that some restaurants add **as much as 9.9 grams of MSG to a single dish**, enough to produce **brain damage in experimental animals**. Liquids containing MSG, such as soups, are absorbed faster and more completely than solid foods.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

It may not be what you want to hear, but the fact is that if you eat at restaurants, you are eating MSG, whether you like it or not. It's impossible to avoid. This is why I no longer eat at restaurants except in rare circumstances. The one safe dish to order? Fresh salad topped with grilled salmon. No dressing. (Practically all salad dressings contains MSG, too.) But practically everything else on the menu contains either MSG or other metabolic disruptors such as hydrogenated oils.

Truly, restaurants are terrible places to eat if you want to promote your good health. They serve toxic ingredients to unwary customers under questionable conditions of food safety and cleanliness. The only good restaurant is a locally-owned, ethical restaurant run by someone you know and trust. All restaurant chains are serving excitotoxins and metabolic disruptors to customers.

The inside story of corruption and politics in the MSG cover-up

> *The subtitle of my first book on excitotoxic food additives was "The Taste That Kills." Since publication of the book in 1997, a mountain of newer information has surfaced confirming the damaging effects of these additives. Because so many people have read the book... awareness of the problem has grown significantly. The food industry has responded with feeble attempts to defend the continuing practice of adding such dangerous additives to our food. In one of their more interesting attempts at self-justification, they were given an entire issue of a prestigious journal in which to expound the safety of MSG. The supposedly scientific articles mostly read like infomercials, with some even encouraging the elderly to eat more foods containing MSG! Interestingly, the Ajinomoto Company, primary manufacturer of MSG, **funded every article in the journal**. They are getting desperate.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**
>
> *"The FDA believes that MSG is a safe food ingredient for the general population."*
>
> **- Statement from the FDA**

I don't believe in conspiracy theories, except for the ones that are true. When it comes to MSG, there's a massive, decades-long cover-up well underway. The FDA is colluding with food companies and MSG manufacturers to continue to allow MSG to be widely used in foods, even as they are well aware of the research proving its toxicity.

This pro-MSG effort is well organized, well funded and far reaching. There are billions of dollars at stake. The FDA and food producers aren't going to let the health concerns of pesky consumers get in the way of windfall profits.

To accomplish the cover-up, the MSG industry engages in scientific fraud by paying selected researchers to conduct studies carefully constructed to show that MSG is safe. In one such study, researchers funded by the MSG industry distorted test results to "prove" that high doses of MSG weren't harming infant monkeys. In reality, the MSG was causing the monkeys to vomit, which resulted in the MSG being expelled from their bodies before it could harm them. This fact was never even mentioned by the MSG industry-funded research until years after the research was published:

> *In 1971 Dr. W.A. Reynolds and coworkers reported that they were unable to confirm Dr. Olney's previous findings that MSG fed to infant monkeys consistently resulted in injuries to specific areas of the hypothalamus. That is, they found that large doses of MSG fed to newborn monkeys had no toxic effect on infant monkeys' brains.*
>
> *Dr. Olney became **suspicious of the study** when he realized that they were feeding massive doses of MSG to these infant animals. In his experience, such doses almost **always caused the animals to vomit**. But if the monkeys did indeed vomit, Dr. Reynold's **data would be completely invalid** since little of the MSG would have actually been absorbed.*
>
> *Later, at a public hearing, Dr. Olney asked Dr. Reynolds if their monkeys vomited. In front of a large audience **she admitted that they had**. Yet, a few months later, when the report appeared in Science magazine, **no mention was made of vomiting**, a critical omission.*
>
> *Dr. Olney wrote Science magazine a letter asking why this vital data was omitted. They referred his letter to Dr. Reynolds. This time **she denied that the animals had ever vomited**.*
>
> *Four years later Reynolds and others published another paper **admitting that the monkeys had vomited** after feeding them large doses of MSG. But of even greater importance, for the first time they admitted that **their monkeys were under anesthesia throughout the entire experiment**, using a drug called phencyclidine. This powerful anesthetic agent is also one of the most potent **antagonists of glutamate receptors known**. (It is related to MK-801.) This drug is known to totally **prevent MSG lesions** of the hypothalamus. Therefore, their **entire experiment was invalid** from the beginning. It is hard to believe that they were unaware of this protective effect of phencyclidine.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

The MSG industry engages in scientific fraud to promote their product

This is just one small example of how the MSG industry engages in scientific fraud in order to promote their economic agenda of ensuring the continued sales of MSG. Another way the MSG industry influences the food industry and legislators is to aggressively donate money to food and health groups such as the American Dietetic Association, which derives part of its multimillion dollar budget from so-called "corporate sponsors." Among the list of corporate sponsors? The Ajinomoto company, makers of MSG. How's that for a conflict of interest?

> *We now know that the food industry will stop at nothing -- including* ***influencing scientific studies that fraudulently portray MSG as safe*** *-- to continue the practice of adding excitotoxins to our food. Food manufacturers have used every name in the book to disguise high-glutamate additives. And, as always, they have* ***used their power in Congress*** *to have laws enacted to help them in this cover-up. FDA regulations now say that manufacturers do not have to put the term "monosodium glutamate" on the label as long as a particular ingredient doesn't contain more than 99 percent pure product. What this means is that you will have to learn all the disguised names and become an obsessive label reader.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

Another group that has routinely aided in the MSG cover-up is the IFIC:

> *The International Food Information Council (IFIC), also located in Washington, D.C., was one of the most outspoken organizations that fought the airing of the "60 Minutes" segment [on MSG]. It currently offers* ***propaganda materials that attest to the "safety" of MSG****. In addition, IFIC has created affiliations in producing written materials with the American Academy of Allergy and Immunology and the FDA. The IFIC Foundation's mission is to be a force that helps the media, educators, health professionals, and scientists effectively communicate science-based information on health, nutrition, and food safety for the public good. The IFIC Foundation is a nonprofit organization* ***supported by food, beverage and agricultural companies****. Because it is industry supported,* ***its information is biased to protect whatever product*** *the IFIC chooses to promote*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

The FDA: key players in the MSG cover-up

The FDA routinely relies on MSG industry propaganda to decide what is "true" when it comes to the toxicity of this food additive. According to the MSG industry, MSG is 100 percent safe, and that has long since been the position of the FDA. No matter what science is presented to the agency, and no matter how many doctors testify about their findings and real-world experiences with patients devastated by MSG reactions, the FDA maintains the position that MSG is perfectly safe for everyone.

The following relates the story of Dr. John Olney and his efforts to warn the FDA about the potential dangers of this food additive:

> *When Dr. John Olney discovered the harmful effects of food borne MSG on the brains of developing animals he **attempted to alert the FDA** concerning this danger. He assumed that they would welcome his information with open arms and open minds. But he was soon to learn that **government protected industries can be formidable foes**. Dr. Olney stated that soon after he had published the results of his experimental findings on the toxicity of MSG in 1969 **he came under tremendous fire** from various directions. A multitude of papers were published attacking his data, claiming that when his experiments were repeated in their labs no toxicity was found.*
>
> *But he found that these detractors all had one thing in common, in that they were all affiliated in one way or another with the Glutamate and/or food industries. Further, he noted, one group of food industry apologists wrote an indignant letter to the scientific publication Science claiming that Dr. Olney's experiments were invalid because he had used baby animals and baby animals were inappropriate subjects for the study because they had immature enzyme systems that made them **especially vulnerable to glutamate toxicity**. Incredibly, this was at a time when the food industry was **adding large amounts of MSG to baby foods**. Their logic escapes the rational mind, unless it is motivated by industrial profits.*
>
> *Dr. Olney, realizing the terrible implications for the health of millions of babies, continued his fight to **alert the public and the FDA** concerning this danger. The FDA referred this tough issue to a government-sponsored "Food Protection Committee" in an effort to resolve the MSG/baby food controversy.*
>
> *One spokesman for the food and glutamate industries stated that even if MSG did indeed destroy the arcuate nucleus in the hypothalamus, it didn't matter because it was **not known to have any functional significance**. Yet it was well known at the time that the arcuate nucleus of the hypothalamus played a vital role in the regulation and release of important hormones from the pituitary. The committee continued to declare MSG safe as a food additive even in baby foods. Dr. Olney states that at this point he began to look into the backgrounds of the members of the "independent" FDA committee and discovered that '**it was founded by, funded by, and totally controlled by the food industry** and that most of the members of the subcommittee appointed to investigate the Glutamate /baby food issue had **strong financial ties with the glutamate and/or food industry**. The committee chairman was receiving money from both industries at the time of the committee deliberations."*
>
> *Dr. George Schwartz discovered that a pamphlet put out by the FDA outlining the consumer "facts" concerning the safety of MSG as a food additive had in truth been **compiled and published by The Glutamate Association**, which describes itself as an "organization of manufacturers, national marketers, and processed food users of glutamic acid and its salts, including monosodium glutamate." When Dr. Schwartz pointed this out to the FDA authorities they quietly **removed the pamphlet from circulation**.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

See, even when the FDA promises some sort of "investigation" into MSG, it turns out the board members appointed to conduct the investigation are, themselves, tied to the very industry they are supposed to be investigating. It's sort of like having Al Capone play the federal judge in a Chicago mob trial. The entire purpose of these investigations is to create the appearance of an investigation when, in fact, the whole thing is a political charade.

The real reason why the FDA wants to make sure consumers keep eating MSG

The FDA, along with the MSG industry groups and corporations, are determined to keep the MSG scam running for as long as possible. It is generating enormous profits for MSG manufacturers and food companies. Better yet, from the point of view of the FDA, **it is subsequently creating billions more in profits for pharmaceutical companies whose drugs are frequently prescribed to treat the very symptoms caused by MSG toxicity**. In this way, the FDA has double the incentive to make sure the American public keeps consuming MSG in mass quantities and suffers the resulting health effects. If MSG were banned, drug company profits would plummet as MSG-induced diseases vanished.

> *It is obvious that the FDA has been captured by the chief MSG manufacturer, the Ajinomoto company, the food industries and their public relations organization,* ***The Glutamate Association****. By producing a multitude of spurious studies purportedly showing that MSG is safe as a food additive they can say with impunity, "The weight of the scientific evidence demonstrates that MSG is safe for human consumption."*
>
> *The public has the perception that the FDA, being a government organization designed and dedicated to quality assurance and safety, would never allow an unsafe product to be used by the food industry. In fact, most of us assume that the FDA is, if anything, too cautious. But in this instance, we have seen that* ***powerful industrial giants*** *have been able to capture a government agency and use it to* ***promote an unsafe product****.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

And:

> *The FDA has serious internal problems in regard to MSG. Years of* ***faulty and biased regulation*** *has led to inaction. Tracking the money demonstrates how such faulty decisions were made in the past.* ***It is a scandal****.*
>
> *Through a Freedom of Information Act request of all FDA-consumer correspondence for the past ten years relating to monosodium glutamate and hydrolyzed protein, I obtained several letters from FDA officials advising MSG-sensitive people to* ***avoid hydrolyzed proteins****. The standard form letter response that was sent to consumers stated that symptoms of MSG reactions are generally "mild and transient."*

In December of 1989, at a meeting with top FDA officials, I informed them of my concerns as a physician about adverse reactions to MSG. At this meeting those present were unaware that substances such as hydrolyzed protein could be labeled as "natural flavorings." When asked why they had not followed up on a single case report of an adverse reaction, I was asked if I would accept a plea of "incompetence" on the part of the FDA staff!

Some people also have wondered why the FDA was so quick to look into the problems caused by tryptophan but have neglected problems caused by MSG. Whether the economic power represented by the Glutamate Association, the ***years of lobbying and false or deceptive "scientific" studies****, and the entrenched,* ***close-minded position of many in the FDA*** *are the reasons is a matter of opinion. In my view, the foregoing factors begin to explain the* ***years of neglect****. In fact, until recently, the FDA sent out Glutamate Association propaganda to consumers requesting information about monosodium glutamate.*

- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex

The health damaging effects of MSG may take time to produce symptoms

It's easy for the FDA to deny MSG is harmful to humans, since the harm caused by MSG is not so immediately obvious. As you've seen in the studies mentioned in earlier sections of this chapter, MSG is especially noted for causing dangerous long-term effects:

One of the reasons why it is so difficult to convince the FDA bureaucrats of the connection between MSG and delayed brain damage in humans is because it ***may take years before clinical signs of neurological damage show up****. This damage is slow and cumulative, with each dose of MSG or aspartate damaging a number of important brain areas. While a baby exposed to large doses of MSG or other excitotoxins may not show signs of brain damage at birth, they may do so* ***many years later****.*

- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills

Even as the FDA continued the MSG cover-up, it occasionally collides with the truth about MSG and has to scramble to make it go away:

In 1992 the FDA commissioned an independent review of the literature to determine whether or not it should seriously review the current use of MSG. At the public hearings which were held, two extreme views were offered: Consumers and support groups poured out their touching stories of lives forever altered by severe reactions to the use of MSG, while industry spokespersons touted its efficacy, its usefulness, and its apparent harmlessness. The Federation of the American Society for Experimental Biology's (FASEB) council issued its final report in July of 1995. The executive summary, approximately twenty pages at the beginning of the report, illustrated findings of harmful effects of MSG and defined the term "MSG symptom complex" as connected to symptoms verified to occur after oral exposure to MSG. This landmark report, "Analysis of Adverse Reactions to Monosodium Glutamate," validates the ***adverse reactions that consumers have been reporting for years****. The overall conclusion of the expert panel is that causality by MSG had, indeed,*

been demonstrated by scientific evidence. The body of the report repeated time and time again that more research was necessary to evaluate the harmful side effects of MSG, such as ***endocrine disruption, brain lesions, heart irregularities, emotional disorders****, and so on.*

- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex

Did the FDA forward the report to the Associated Press and put out a warning about MSG? Of course not. The report was buried and has long since been forgotten. No amount of evidence can sway the actions of an agency entrenched in a philosophy of protecting industry profits at all cost.

The FDA makes sure the prejudiced Glutamate Association is invited to all inquiries

Accordingly, any time an investigation or meeting regarding MSG is about to take place, the FDA invites the Glutamate Association to get involved:

It appears that the Glutamate Association has a cozy working relationship with the FDA. In fact, any time someone challenges the safety of MSG or hydrolyzed vegetable protein, the ***Glutamate Association is invited*** *to give its defending testimony. If the FDA really wants an unbiased view it should seek the advice of scientists who have no connection at all to the manufacture and industrial use of MSG. But they rarely do.*

Another way the FDA works with the Glutamate Association is by ***yielding to their lobbying efforts to change the labeling laws*** *so that the words "monosodium glutamate" are not required on food labels unless it contains 100 percent pure MSG. Also MSG need not even be mentioned by any name if one product containing pure MSG is only used as an ingredient in another food. For example, if broth is used to make a soup, and the broth contains pure MSG, MSG does not have to be listed as an ingredient. But if the broth is sold alone, it must appear on the label.*

- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills

Doctors and authors criticizing MSG have also come under repeated attacks from the MSG industry. The author of one of the books mentioned here was sued for $4 million by one food manufacturer, for example. The sort of action taken against people who speak out against MSG is reminiscent of the movie, "The Insider" in which a lone tobacco scientist wanted to share the truth about cigarette companies and their manipulation of nicotine in their products in order to addict customers.

In fact, there are strong parallels between the tobacco industry and the MSG industry. Both industries manufacture a product that causes widespread disease. Both industries are well funded and bankroll fraudulent scientific studies to support their baseless positions. Both industries have tremendous political influence in Washington, and both industries manufacture a product that consumers actually enjoy consuming. It also seems both industries will stop at nothing to make sure their product continues to be legal to sell to unwary consumers, regardless of the health consequences.

The primary difference between the two industries is that the tobacco industry's mirage vanished, and now the vast majority of scientists recognize that cigarette smoking is dangerous to your health. MSG hasn't yet been widely recognized as a threat to health, but that knowledge is spreading quickly, thanks to the Internet and publications like this one. Personally, I intend to pursue this issue until MSG is banned outright as a food additive. That is the only acceptable outcome that would protect the health of consumers.

The MSG industry attacks doctors and authors who speak out against MSG

But back to the attacks on doctors and authors who speak out against MSG. Here's how the industry deals with these people:

> *MSG had come under criticism periodically from various members of the medical profession, the research community, and consumer advocates. But by then the excitotoxin "taste enhancing" business had become a multibillion dollar enterprise. The Ajinomoto company, the primary manufacturer of MSG and hydrolyzed vegetable protein, in conjunction with a dozen American food manufacturers, decided to protect their interest by* ***forming a powerful public relations firm known as the Glutamate Association****. The number one contributor to this "attack group" was the* ***Ajinomoto Company of Japan****.*
>
> *The purpose of this group was not only to defend and promote the use of MSG and other "taste enhancers", but to* ***attack anyone who dared to point out the adverse health effects of MSG****. They did this by bringing their own scientists into any area where a serious question about safety had been raised. In most cases consumer advocates are knowledgeable people who lack the scientific background to withstand an assault by a scientist steeped in the jargon of the pure and applied chemist. These* ***attacks could be cruel and overwhelming*** *and only those with thick skin and determination could withstand the assault.*
>
> **- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills**

And yet, many people are determined to bring the truth about MSG to light:

> *Scientists studying these problems have sometimes run into severe obstacles. As Dr. Gary J. Baker, the Australian asthma specialist, notes, "The story needs to be told. This will include not only the side effects of MSG, but also the* ***discrediting of the people honestly reporting these effects****, the frustration many of us have had in finding funds to do the necessary further research and the anger at the regulatory bodies for ignoring this problem."*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

If you're curious to see some of the pro-MSG propaganda at work, look no further than the website constructed by the Anijomoto Company, **www.MSGinfo.com**, which recommends that everyone, even pregnant women, can safely eat MSG!

> *Yes. If you're pregnant, you can feel confident about consuming foods containing monosodium glutamate. Because pregnancy is such an important time for you and your unborn child, extensive scientific research has been conducted to make sure that MSG is safe for both of you. No studies have ever found MSG to cause problems with reproduction, birth or the fetus itself.*
>
> **- Propaganda from the manufacturer of MSG, 2004**

The blood-brain barrier explanation offered by the MSG industry is proven false

In reality, practically every study or argument claiming MSG is safe is built on gross distortions of science or facts about human metabolism. Many such studies claim MSG simply doesn't cross the blood-brain barrier -- a position that is readily proved false:

> *Some critics of these studies charge that MSG does not enter the brain because of the blood-brain barrier. There are two problems with this argument. First, in the newborn* ***the blood-brain barrier is incompletely formed*** *and will allow MSG to enter the brain. And second,* ***the hypothalamus, even in the adult, does not have a barrier****. That MSG can enter the brain of newborn animals given MSG was shown by two researchers who demonstrated not only high blood levels but* ***significant elevations of brain glutamate*** *lasting up to three hours after the dose was given. This has been confirmed by Dr. Inouye, who demonstrated the passage of radioactively labeled MSG into the neonatal brain following MSG injections.*
>
> *One of the problems in proving that MSG could cause major injuries to the hypothalamus was in explaining how it could injure neurons in this area when so few neurons of the glutamate receptor type were know to exist in the this tissue. But then it was only recently that* ***glutamate was found to be the primary neurotransmitter in the hypothalamus.*** *Using various staining methods, neuroscientists found that glutamate neurons connect to every major nucleus in the hypothalamus. Interestingly, these neurons were found to be sensitive to all glutamate-like compounds, such as NMDA, quisqualate, and kainate as well as aspartate and MSG. This indicates that a wide range of* ***excitotoxins can destroy and affect these vital neurons in the hypothalamus****.*
>
> *What this means is that glutamate type-neurons control every neuroendocrine function of the hypothalamus. This neuroendocrine function is designed to control the thyroid gland, adrenal glands, reproductive functions, gonadal function, body growth, and certain aspects of metabolism. But in addition, glutamate controls all the other functions of the hypothalamus, such as the biological clock, the autonomic nervous system,* ***sleep-wake cycles****,* ***hunger and satiety****, the emotions of* ***anger and rage****, and even* ***consciousness itself****.*
>
> ***- Russell Blaylock, M.D., Excitotoxins: The Taste That Kills***

Overall, what you're seeing in action here is a global, financially motivated political con job that

guarantees profits for food companies at the expense of untold human suffering. The players in this scam are the FDA, the MSG industry lobbying groups, MSG manufacturing companies and food producers who rely on MSG to make their foods taste appealing.

It is part of what I call the "chemical holocaust" promoted by the FDA that harms Americans through toxic ingredients in their foods and drugs. It is of such magnitude that the fatalities of 9/11 are dwarfed in comparison.

What's so astounding about this is that it has been allowed to continue for so many decades. That has only been possible due to the sad fact that most people blindly trust the FDA, and that the FDA's influence over all decisions relating to food and medicine is so widespread. Commercial interests do, indeed, run the show around here, and the FDA has shown itself to be nothing more than a mouthpiece for pharmaceutical makers and food companies who would sell arsenic to the public if they could make a buck doing it and if people didn't die so quickly that there was an obvious link to their products.

How MSG creates extraordinary profits for pharmaceutical companies

Speaking of drugs, pharmaceutical companies owe a tremendous debt to the Ajinomoto Company. The widespread use of MSG creates extraordinary profits for drug companies by creating health symptoms and MSG reactions that are typically treated with prescription drugs:

> *In the 1980s one of the largest income-producing medications was Tagamet, and then other similar medications came along to treat indigestion (for example, Zantac, Accid, and Prilosec). Much of their patent action treats* ***MSG side effects****. Now these medications often are available as over-the-counter medications for all consumers.*
>
> *In the 1990s antidepressants such as Prozac and Zoloft have become billion-dollar money-makers. I believe a good part of their popularity results from the ability of these serotonin-increasing medications to treat the malaise and depressive feelings* ***resulting from MSG effects and their aftermath****. Like the postcocaine and postamphetamine depressions resulting from continued cerebral nerve cell discharge, there is a similar scenario with an MSG-induced discharge to the point of nervous system exhaustion, released by antidepressant neurochemicals. All of this occurred against a background of increasing awareness of MSG toxicity, along with what Dr. John W. Olney, the leading scientist studying neurotoxicity, termed "****an industry-arranged whitewash****" at the FDA.*
>
> **- George R. Schwartz, M.D., In Bad Taste: The MSG Symptom Complex**

Where to learn more about MSG

I hope this has been an informative overview of MSG, the scientific facts about this excitotoxin, the industry cover-up, and the role of the FDA. Clearly, this is one ingredient you should take special care to avoid in your diet. Yet I encourage you to learn more about this dangerous food additive.

Naturally, the MSG industry sites and lobbying groups are all going to publish pro-MSG information, so they aren't reliable sources for unbiased information regarding MSG. To get the straight facts on MSG, you'll need to learn about it from sources that have nothing to gain from either the sale or the banning of MSG. I strongly recommend the two books cited in this section (**In Bad Taste** and **Excitotoxins**).

Action Item:

Avoid MSG and all its aliases (autolyzed, hydrolyzed, yeast extract) in all foods.

Read more articles on MSG at:
http://www.newstarget.com/msg.htmL

Reliance on Manufactured, Processed Foods

If you weigh more than you'd like, you probably already know that part of what made you overweight in the first place was your consumption of refined carbohydrate foods. But that's not the full picture: you probably also consumed an excessive amount of processed foods -- that is, foods manufactured and sold to you in nice looking boxes, cans and other packaging.

Processed foods, sometimes called manufactured foods, are less healthy for you than food ingredients in their natural state. For example, fresh broccoli from the grocery store is far healthier for you than packaged, flavored broccoli or broccoli-based frozen dinners.

Most packaged foods are overpriced

From an economic perspective, be especially wary of the price you're paying for each ounce of processed, packaged foods. Some prices are absolutely outrageous, like $1 per ounce (or even more). You'll get far more value for your dollar by purchasing fresh, raw ingredients rather than packaged foods. My own diet consists of ingredients and foods like coconut oil, unsweetened soy milk, oat bran, stevia, rice protein, eggs, fresh or frozen vegetables, shrimp and seafood, avocados, healthy oils like flax oil and guacamole, hummus, bean sprouts, tofu and a limited amount of fresh fruits. Some people may consider these to be expensive food items, but they are a fraction of the price of many manufactured products, and they are certainly far cheaper than the medical costs associated with diseases like diabetes and heart disease (which are caused by processed foods).

Lack of phytonutrients / phytochemicals

Here's another grocery shopping pitfall. I've fallen into this trap myself, and I've watched many others do it, too. The trap is that when you buy convenience foods, you may find yourself lacking a sufficient intake of all important phytonutrients (more commonly called "phytochemicals") that come from plant sources. The Standard American Diet is, in particular, lacking phytochemicals.

It's as if people are so focused on the immediate taste sensation they desire that they forget about their body's other health needs. This is an easy dietary trap to fall into, since so many manufactured foods contain no phytochemicals.

Meat, milk, and eggs for example, have no phytochemicals whatsoever. Neither do many of the prepared or processed grocery items you'll find on the shelf. Even when you find food items that contain vegetables (soup, for example) those items have been so highly processed that the phytonutrient content is largely destroyed. This adds up to a serious deficit of phytochemicals in the diets of most people. There's good news, however: I'll show you how to get more of these into your diet without having to wolf down pounds of vegetables each day!

> *No one has yet turned up any potent health-enhancing phytochemicals in steak, milk, or Twinkies.*
>
> **- Robyn Landis, Herbal Defense**

Phytochemicals are of critical importance to your overall health. Across the kingdom of edible plants available at nearly every grocery store, you will find a vast array of chemical compounds with healing properties that protect your body against virtually every modern disease: especially cancer, diabetes, heart disease, depression, Crohn's disease, obesity, and other disorders.

When we turn to convenience foods, it's easy to overlook the importance of getting these plants and their phytonutrients into your diet. In fact, in my experience, I found that it is virtually impossible to do so without taking some form of phytonutrient supplementation. I'm not talking about taking isolated vitamins and minerals -- the benefits of those products pale in comparison to the healing properties offered by whole food complexes and microalgae supplements.

To get these benefits, we have to actually eat these plants, or at least take them as whole food supplements and not as isolated vitamins or extracted chemical compounds:

> *In order for phytochemicals to do their job, however, we need to eat enough plant foods, and far too few of us do. One review of over 200 studies that examined the relationship between fruit and vegetable intake and cancers of the lung, colon, breast, cervix, esophagus, oral cavity, stomach, bladder, pancreas, and ovary, showed a* ***statistically significant protective effect of fruit and vegetable intake*** *in 128 of 156 dietary studies. For most cancer sites, low fruit and vegetable intake produced about twice the risk of cancer. The review suggests that major public health benefits could be achieved by substantially increased consumption of these foods. According to guidelines recommended by the National Cancer Institute, one must eat at least five half-cup servings of fruits and vegetables daily to lower cancer risk.*
>
> **- Donald R. Yance, Herbal Medicine, Healing & Cancer**

Think about your own diet. Do you eat at least five servings of fruits and vegetables every day? Most likely not. Few people do. And once you become fully aware of the considerable benefits derived from eating these phytochemicals, you'll want to immediately take steps to introduce them into your diet (I'll show you how...).

But first, let's take a look at phytochemicals and answer the two most obvious questions: what are they, and how do they impact your health?

What are phytochemicals?

> *An exciting branch of recent research has identified* ***biologically active substances in foods*** *-- plant foods, including fruits, vegetables, legumes, and grains -- that have* ***health-enhancing or possibly curative abilities****. Often these are the very substances that also give the food its color, flavor, or smell. These substances are being called phytochemicals (phyto- being from the Greek word for "plant"), or phytonutrients, or sometimes nutraceuticals or foodaceuticals. The idea behind these terms is that* ***food can be medicinal*** *as well as nutritious.*
>
> **- Robyn Landis, Herbal Defense**

Phytochemicals are powerful, biologically active compounds found in plants. This biological activity can be extraordinarily helpful (in preventing cancer, for example), and the beneficial effects of these phytochemicals occurs in concert with the full spectrum of nutrients found in each plant. In other words, you can't isolate one phytochemical and expect it to have the health benefits of the whole plant. Studies on lycopene, for example, show it to be of limited value against prostate cancer when used in isolation, but when the entire tomato is consumed, prostate cancer risks plummet.

> *There's no doubt that certain natural substances found in many plants-called phytochemicals -- have the power to keep you well. Medical literature is saturated with epidemiological studies showing a direct correlation between low levels of plant foods in the diet and high rates of disease and untimely death. In one of the largest and longest-running studies, researchers at the Institute of Preventive Oncology in Tokyo proved, once and for all, that* ***your diet ...is the primary factor in predicting health and longevity****.*
>
> *Phytochemicals give a plant its color, flavor, and smell, but more importantly, they are part of a plant's natural defense system. Researchers have found that these same protective qualities can also boost your body's disease-fighting, detoxifying, and antiaging abilities. While the benefits are clear, research shows that Americans on the average eat only 25 to 35 percent of the five to six recommended daily servings of fruits and vegetables. Realistically, consuming five to six servings is hard to do. Furthermore, what we do eat is usually cooked, canned, or frozen (neutralizing up to 90 percent of the vital nutrients).*
>
> **- Underground Cures**

Researchers are learning that nature is by far the most powerful healer in the universe. No drug can compete with the healing powers of phytochemicals. Not that pharmaceutical companies aren't trying, of course: they'd love to isolate chemicals from broccoli plants, for example, and sell them as anti-cancer drugs. The catch is that isolated chemicals don't work as well as whole plants, which contain hundreds of phytochemicals that researchers haven't even identified.

The healing powers of plants is far beyond the scope of today's technology, and certainly beyond the philosophy of conventional medicine, which continues to be entrenched in the "germ theory" of medicine and disease, in which one "magic" chemical (such as penicillin) will "cure" a particular ailment. In nature, however, we see that it is a spectrum of phytochemicals that works in concert to protect against cancer, boost cardiovascular health, improve longevity and produce a bewildering array of other healthful benefits:

> *What scientists found -- and are still finding -- was that a single fruit or vegetable contains* ***thousands of phytochemicals*** *in trace amounts that interact in* ***complex but complementary ways*** *to prevent certain diseases and boost overall health. It is awesome to think that every bite of apricot, every leaf of a green leafy vegetable, every mushroom contains a rich chemical stew that can, among other things, block, retard, suppress, or flush away carcinogens; lower serum cholesterol and decrease arterial plaque; enhance the immune system; fight the effects of aging. There are hundreds of different phytochemicals, although only a small percentage have thus far been identified in nutritional laboratories.*
>
> **- Stephanie Beling, M.D., Power Foods**

The real story on phytochemicals is truly just beginning to unfold in the Western world. It's a story that can only be humbling to conventional doctors, drug company researchers, and perhaps even the corrupt officials at the FDA. Because the story says that nature is far smarter than human beings when it comes to reversing cancer, improving health, and preventing serious diseases. The humble broccoli plant, for example, contains **hundreds of phytochemicals** that go far beyond the grasp of even the most well-educated conventional doctor. The broccoli plant can reverse cancer in ways that anti-cancer drugs can't even approach. It's available for just a few dollars a pound (rather than thousands of dollars per pound, which is what pharmaceuticals cost) and has no harmful side effects whatsoever.

No wonder the discovery of phytochemicals is disturbing to drug companies! If people knew the true benefits of these phytochemicals and frequently consumed them, few people would need drugs. Personally, I live my life without any drugs whatsoever: no prescription drugs, no over-the-counter drugs, and no recreational drugs. Not even caffeine.

> *Antioxidant vitamins provide some of the cancer-fighting prowess of fruits and vegetables, but phytochemicals play just as big a role. We are now learning that the same chemicals that protect plants from viruses, bacteria, and fungi **protect us from cancer**. For example, people who drink green tea, which contains a phytochemical called "epigallocatechin gallate," have a lower risk of liver, lung, skin, esophageal, and urinary cancer. People who eat large amounts of cooked tomatoes, which are rich in the cancer-fighting chemical "lycopene," have a lower risk of prostate, cervical, breast, and colon cancer. Eating broccoli, cabbage and other members of the cole family offers protection against a broad array of cancers. The fact that the phytochemicals in fruits and vegetables are **potent anticancer agents** helps explain why cancer studies involving vitamin supplements have had such lackluster results: The pills contain only a fraction of what the plants have to offer. Until researchers can identify and encapsulate all the myriad healing substances found in plants, **it is far wiser to eat the whole foods themselves**. This way, you will be getting all their known **cancer-fighting nutrients** -- plus all those **yet to be identified**.*
>
> **- Artemis P. Simopoulos, M.D., The Omega Diet**

It's important to remember that these phytochemicals are not vitamins or minerals. These are other chemical compounds that, technically, make up the plant's own immune system:

> *Phytonutrients are chemicals present in plants that make the plants biologically active. They are not nutrients in the classic sense, but they are what determines a plant's color, flavor, and ability to resist disease. Researchers have identified literally thousands of phytochemicals and have also developed the technology to extract these chemical compounds and concentrate them into pills, powders, and capsules. These are called nutraceuticals -- the newest type of dietary supplement.*
>
> **- James F. Balch, M.D., A to Z Guide To Supplements**

I will discuss phytochemical supplements later in this section. As you can imagine, with the research and publicity showing these phytochemicals to be so protective against diseases like cancer, food producers are rushing to add them to their products. Most of these food products, however, remain "junk foods" despite the added dose of phytochemicals:

> *Nutraceuticals can also concentrate the best of food chemicals for daily consumption. Since only 9 percent of Americans eat five servings of fruits and vegetables a day, these supplements are playing an increasingly important role in our nation's health. There are phytochemical-enriched foods, for example* ***snack bars*** *fortified with soy phytochemicals (phytoestrogens), nutraceutical-****enriched margarine*** *to lower blood serum cholesterol, as well as* ***phytochemical-enriched candy*** *for children who don't care for vegetables.*
>
> **- Earl Mindell's Vitamin Bible**

By far, the best place to get these phytochemicals is from the foods themselves, not from "enriched" food bars or candy. Besides, the quantity of phytochemicals added to these foods is usually very tiny. It is also based on isolated phytochemicals which offer limited health benefits compared to the whole plant.

Certain whole plants, it turns out, offer extraordinary health benefits attributable to their phytochemical content.

Phytochemicals offer extraordinary protection against disease

> *There are stunning indications that a number of chemopreventive plant chemicals are* ***present naturally in our foods****. Nature has provided us with a generous menu of phytochemicals (plant chemicals), which have demonstrated chemopreventive benefits.*
>
> **- J. Robert Hatherill, Ph.D., Eat To Beat Cancer**

The phytochemicals available in everyday plants and foods -- like broccoli, garlic, flax seeds, olive oil, green tea, peanuts, blueberries and many more -- far outweigh the healing benefits of any prescription drug. Pharmaceutical companies are scrambling to identify and isolate these phytochemical compounds, of course, because they know that thanks to their stranglehold on doctors, hospitals and the FDA, they could sell these plant-based compounds for as much as $100+ a pill after receiving FDA approval. That's why as much as 25 percent of all pharmaceuticals are based on compounds found in plants. Medicine's history is founded in botany, after all. But the problem is that drug companies bastardize the gifts of nature by isolating, modifying and then concentrating specific chemicals until they reach toxic levels that are little more than a shadow of the original plant. These resulting chemicals are marketed as prescription drugs, and they are responsible for at least 100,000 deaths and two million injuries each year in the United States alone, and that's according to the American Medical Association (so the numbers are probably very conservative).

People would be far better off to just eat the plants in their natural form:

> *There are hundreds and hundreds of phytochemicals in plant foods that help **prevent cancer**. The chemicals that plants synthesize for self-protection against sunlight and insects and to help maintain their own growth enhance human health as well. Over the last twenty years, researchers have consistently found that those who eat the most vegetables and fruits have the lowest rates of cancer. Research has also shown that animals given vegetables and fruit before and after exposure to carcinogens are less likely to develop cancer. In a recent study involving the intake of vegetables, fruits, and related nutrients in relation to the risk of premenopausal breast cancer, a strong inverse association was found between **high intake of these nutrients and a low incidence of cancer**. ...The implications of this data are profound. Ultimately, they could be used to design a diet that would not only provide increased protection against cancer, but also serve as an adjunct therapy for individuals with cancer.*
>
> **- Donald R. Yance, Herbal Medicine, Healing & Cancer**

So why do these phytochemicals have such protective effects in humans anyway? Because they are created by plants as part of their own immune systems. These plants, like every living thing, need protection against free radical damage, viruses, pests and other health risks. They accomplish this by creating their own phytochemicals that protect them in extraordinary ways.

> *In plants, phytochemicals occur in minute amounts -- trace amounts, as scientists say -- but they interact in complex but complementary ways to fight the stress inflicted on plants by intense sunlight, or by insects, or by fungus or mold, or by virus invasions, or by atmospheric pollution. They actually toughen the cells of the plant to ward off deterioration and toxic influences.*
>
> **- Stephanie Beling, M.D., Power Foods**

In this way, plants are potent pharmaceutical factories that naturally and freely produce a vast array of chemicals that protect against cancer, diabetes, heart disease, and other serious health disorders. Growing a garden is like having a billion dollar pharmaceutical factory in your backyard, but the drugs that come out of this factory don't have negative side effects! (And you don't have to pay a fortune to get them, either.)

It is truly humbling to consider the reality that **nature has already provided everything we need to be healthy human beings**. We don't need drugs, we don't need the FDA, and we don't even need to try to isolate and name every single health-enhancing chemical found in these plants in order to benefit from them. All we really need is to recognize the wisdom of nature and act on that wisdom by eating a variety of plants that contain beneficial phytochemicals. We can also supplement our diets with whole food complexes made from the most powerful of these plants, which I will reveal in a later section.

> *Phytochemicals offer the same protection to the creatures that eat plants -- from the rabbit munching on the leaves of wild broccoli to the toddler eating her spinach because her mother tells her she must. Phytochemicals help humans **fend off cancer, reduce heart disease, improve strength** and energy, and **bestow longevity** by neutralizing the free*

radicals. Free radicals are loose cannons -- specifically, they are molecules with unstable electrons -- that destroy cells by damaging their membranes. ...Phytochemicals arrest this kind of damage. They wield antioxidants that scavenge the free radicals and prevent them from damaging cells.

- Stephanie Beling, M.D., Power Foods

It is not necessary that we name all the phytochemicals in these plants in order to benefit from them. In Western scientific thinking, the idea of reductionism remains dominant. Reductionism says that we can best understand nature by breaking it down into smaller and smaller parts.

Western medicine follows the same line of reasoning when it attempts to isolate and name every phytochemical found in everyday plants. If we could just get the full listing of everything in the plant, the thinking goes, we could master its healing effects and understand how it works. This reductionism thinking, however, is quite egoistic, if not downright delusional. When scientists identified the first four vitamins, they thought they knew everything there was to know about plant-based nutrition. Then along came other vitamins, and then newly-identified minerals, and then later, these phytochemicals. At every step, science remains behind the curve in understanding the true nature of plants and how they deliver healing benefits to the human body.

I suspect you could catalog and name every single chemical in a healing plant and you still wouldn't understand how it works its healing nature. There are elements at work that can't be seen under a microscope or targeted through a chemical assay. In fact, I believe that much of the healing effect from plants is granted through the vibrational character of these plants, not merely their chemical compounds. That's why you can't extract a specific chemical from a plant and expect it to offer the same benefits as the whole plant. Only the real thing contains all of the "unknown" healing factors that Western scientists haven't even begun to identify.

Reductionism is a dead end. You can't understand plants by breaking them into smaller and smaller parts. In fact, the real answer lies in precisely the opposite direction: zoom out and look at the whole plant and how it interacts with the whole body. This is why a holistic view of healing produces far better results than the reductionist view practiced by the vast majority of conventional doctors.

Getting back to the protective effects of phytochemicals, it is curious to note that most of the excitement over the healing benefits of these chemicals seen today is based on the reductionistic view of plants. They are beneficial to health only because they contain these amazing chemicals, most researchers believe:

> *Phytochemicals can be said to have pharmacologic actions -- predictable activity that can be **isolated and defined** as pushing a body process in one direction or another. But, being natural constituents of foods rather than concentrated synthetics, they provide their helpful activity without the downside of possible toxic injury or unpleasant side effects -- and in most cases, with the bonuses of nutritious fuel and a tasty experience along the way.*
>
> ***This type of substance** is being discovered in a wide range of foods we already value nutritionally, and it's exciting to know that these foods can provide additional health-enhancing and disease-fighting benefits not previously known or understood. Literally **hundreds of these substances** are currently being investigated.*
>
> **- Robyn Landis, Herbal Defense**

In reality, we don't need to know their names. We don't need to list them on a chart. I'm not knocking the research, because I think the fact that researchers are studying plants is a step in the right direction. But I am knocking the idea that the healing effects of these plants are only contained in these specific chemicals. In reality, there are other things at work here; things that we can't even begin to understand. Yet, notice that much of the discussion of phytochemicals focuses on them as being isolated substances, and there is a seemingly desperate rush to isolate, name and categorize all the phytochemicals under the sun:

> *These foods are loaded with protective compounds called phytochemicals. Unlike vitamins and minerals, which are essential for preserving health, phytochemicals actually stop changes in the body that can lead to disease.*
>
> **- Bottom Line Yearbook 2002**
>
> *Flaxseed oil also contains **lignans**, antioxidant **phytochemical compounds** that are believed to be hormone precursors. Lignans may bind to estrogen receptors in breast tissue and interfere with estrogen's cancer-promoting activity there. Studies show that women who excrete more lignans in their urine (presumably from increased consumption of lignans), have much lower breast-cancer rates.*
>
> **- Robyn Landis, Herbal Defense**
>
> *These antioxidant phytochemicals form the water-soluble colors of vegetables, fruits, grains, leaves, and bark. There are many types of flavonoids, and different plants contain varying concentrations of them. In fact, studies have shown that some **flavonoids** possess up to 50 times more antioxidant activity than vitamins C and E -- and those in red grapes are more than 1,000 times more powerful than vitamin E in inhibiting oxidation of human LDL cholesterol! The following are just some of the flavonoids you should at least know a little about because they can do a lot for your health!*
>
> **- Earl Mindell's Vitamin Bible**

And take a look at all the scientific-sounding names given to the various classes of identified phytochemicals:

> *Phytochemicals can do more than defend against cancer; they can also counterattack.* ***Indol -- 3-carbinol****, found in cabbage, cauliflower, and other cruciferous vegetables, triggers enzymes that keep the form of estrogen linked to breast cancer from predominating.* ***Allylic sulfide****, a phytochemical found in onions and garlic, enhances enzymes that detoxify carcinogens. Capsaicin, in hot chile peppers, and other phytochemicals in such spices as turmeric and cumin, keeps toxic molecules from attaching to DNA and perhaps initiating cancer.* ***Diallyl disulfide*** *blocks and suppresses cancer agents, and it stimulates production of a detoxification enzyme called glutathione-S-transferase. You find it in onions, leeks, scallions, chives, shallots, and, most powerfully of all, in garlic.* ***Lignans*** *in flax seeds, barley, and wheat are antioxidants that attack cell-damaging free radicals.* ***Terpenes*** *in citrus fruits increase the production and activation of a protein that interrupts the undifferentiated, out-of-control growth of breast-cancer cells in rats.* ***Phytosterols*** *in whole grains, legumes, and soy quite literally compete with the estrogens that promote cancer; while they don't destroy these cancer-causing agents, they do deflect them from their path.* ***Flavonoids*** *in just about all fruits and vegetables -- and in wine -- block carcinogens' access to cells and suppress malignant changes in cells.*
>
> **- Stephanie Beling, M.D., Power Foods**

As you can see, many people view the phytochemicals in plants as nothing more than a natural source for drugs. My own metaphor of the "pharmaceutical factory" eludes to this sort of thinking, and I chose that metaphor precisely because it's what most people believe about phytochemicals and plants. Unfortunately, even my own discussions of phytochemicals must, in some manner, follow Western-style reductionistic thinking. People "believe" that certain chemicals have certain healing effects, you see. But few people "believe" that plants operate at certain vibratory frequencies that are largely responsible for these healing benefits.

What is a chemical, after all, but a set of elements connected in a certain way? And chemical elements are, technically, nothing more than probability waves vibrating at various frequencies. If you had a powerful enough microscope and could zoom in all the way to the atomic structure of all chemicals, you'd see absolutely nothing! It's all empty space and probability waves! (Just ask any physicist.) All matter is really just energy, and phytochemicals are actually energy patterns that interact with the human body in complex, yet subtle ways that offer astounding health benefits that cannot be duplicated by drugging someone with an isolated chemical.

No matter what view of medicine and healing you subscribe to, there's no doubt that plants containing these phytochemicals can offer powerful healing effects to those wise enough to eat them:

> *Humans encounter invasive viruses just as plants do, and we, too, can be made very sick and weak by stress and pollution. The illnesses that result from these problems take a variety of forms: hypertension, cardiovascular sickness, arthritis, gastrointestinal disorders, cancer, and more. Phytochemicals in the plant foods we eat can provide* ***the same health benefits to humans that they provide to plants****. Beyond the body-building, body-sustaining power of macronutrients, beyond the sparkplug capabilities of the micronutrients, phytochemicals provide essential raw materials for suppressing, retarding, even reversing not just illnesses but also the debilitating effects of stressful contemporary life and the degenerative effects of aging.*
>
> **- Stephanie Beling, M.D., Power Foods**

The effect of these phytonutrients is so powerful that they not only prevent disease, they actually help reverse serious diseases like cancer:

> *What is especially exciting about nutrition is not just the possibility of prevention, but the reversal, of diseases. The body has a tremendous ability to heal itself -- including repair of the damage to our DNA. Certain vitamins, minerals, and special* ***phytonutrients can promote this healing*** *and strengthen our cells so that they are better able to protect themselves against future injury. In fact, recent evidence has shown that a common herb can* ***rescue injured brain cells*** *even when taken hours after the injury occurs!*
>
> **- Russell Blaylock, M.D., Health and Nutrition Secrets That Can Save Your Life**

Phytochemicals have been shown to be especially effective at preventing and reversing various cancers:

> *In 1989, a study investigating occurrence of second primary cancers came up with an interesting finding: that the* ***risk of second primary cancers was 40 to 60 percent lower*** *among patients whose diet had emphasized dark green leafy vegetables, legumes, cruciferous and yellow vegetables, and fresh fruits. Of course, people had always known these foods were "good for you," but that these particular foods should be associated with these particular cancer-fighting statistics raised a flag*
>
> **- Stephanie Beling, M.D., Power Foods**

Phytochemicals have also been shown to be effective in controlling blood sugar and insulin sensitivity:

> *A variety of phytonutrients derived from spices* ***influence insulin sensitivity****. For example, American scientists have found that 1 teaspoon of* ***cinnamon*** *a day may help* ***control blood sugar levels****. The common spice appears to rekindle the ability of fat cells to respond to insulin and increase glucose removal (Hodge 2000).*
>
> **- Disease Prevention and Treatment**

Soy is perhaps the best-known source for phytochemicals that protect against cancer and other diseases. That's why holistic nutritionists and alternative medicine doctors frequently recommend soy intake, especially for women.

> *Science has since confirmed the suppositions about soy's power. We have long known that soy is a rich source of protein; in fact, it is the only vegetable whose* ***protein is complete****. Now we know that it is* ***loaded with phytochemicals*** *-- with isoflavones like* ***genistein****, cholesterol-lowering* ***daidzein****, protease inhibitors,* ***phytic acids****,* ***saponins****,* ***phenolic acids****, and intense concentrations of* ***coumarins****. This is a stew with potent properties as an antioxidant and with phytosterols that compete against the hormone-related cancers; it's a* ***hormone-deflecting****,* ***tumor-suppressing****,* ***blood-thinning****,* ***virus-fighting****,* ***cholesterol-lowering warrior****.*
>
> *Genistein, for example, has been shown to thwart cancer at every stage of its development. It interferes with enzymes that "breed" cancer genes, cuts off the blood vessels that act as supply lines to developing cancers, stunts the growth of cancer cells. At the same time that genistein is stopping cancer cells, it also stops the growth of cells that can clog arteries, scavenging the free radicals that oxidize LDL cholesterol, the bad cholesterol. That makes soy an antidote to artery deterioration; some documented studies even conclude that it helps* ***rejuvenate old arteries****.*
>
> **- Stephanie Beling, M.D., Power Foods**

And yet, with these astounding benefits attributed to phytochemicals, it is yet more surprising that researchers have really only begun to identify and understand these miracle-class chemicals.

Phytochemicals are just beginning to be discovered

> Even today there remains a constant search for chemicals in plants (phytochemicals) that can serve as therapeutic agents. The plant kingdom is a vast reservoir of chemical variety. It is estimated that millions of chemicals are synthesized by plants as a result of the diversity of products that biochemical processes have produced over millions of years
>
> **- Carcinogens And Anticarcinogens In The Human Diet, The National Research Council**

The plant kingdom is the only source of healing phytochemicals a person needs to be healthy and vibrant. Right now, plants all across the globe are synthesizing miracle-class compounds that offer astounding health benefits to humans. And while researchers have identified hundreds of these compounds, literally millions exist: we've just scratched the surface of what nature has to offer!

> *"We're just getting to the tip of the iceberg regarding phytochemicals, but what we're learning is very exciting," says Dr. Klein, who is also a professor of foods and nutrition at the University of Illinois at Urbana-Champaign, where studies of phytochemicals in soy products are ongoing.*
>
> **- New Choices In Natural Healing, Bill Gottlieb**

Even as these phytochemicals are identified, there remains a great mystery over how they operate. By what mechanisms do they offer these impressive health benefits?

> *The exact mechanism of action is not yet known for every single phytochemical identified to date. However, there are many observations and theories about them. Most of the compounds with some confirmed activity are* ***anticancer*** *(preventing or fixing cell malignancy through various mechanisms),* ***heart protective, anti-aging*** *or* ***antioxidant*** *(blocking or repairing oxidative damage to cells), or* ***anti-inflammatory****.*
>
> *Some of the cancer-preventive and -healing compounds seem to be* ***quite sophisticated and wide-ranging*** *in their actions. They may block the formation of malignancy, cut off the blood supply to malignant cells, boost production of cancer-flushing enzymes, or counteract carcinogens (cancer-forming or -triggering toxins) themselves, either by detoxifying or preventing them from establishing on target organs. They may also support our own repair mechanisms.*
>
> **- Robyn Landis, Herbal Defense**

Research into phytochemicals continues to this day, but some federally-funded research has been cancelled, most likely due to the political meddling of the FDA and pharmaceutical companies, who don't want scientists to reveal the truth that plants are, indeed, far more effective than drugs in combating disease:

> *In 1990, the National Cancer Institute (NCI) launched a 5-year, $20 million program to learn more about biologically active plant chemicals (phytochemicals) in certain foods that may help to prevent cancer. Flaxseed was the first of six foods to be studied. Preliminary results indicated that flaxseed oil can exert powerful anticancer properties if the oil is high in lignan precursors. Unfortunately,* ***despite the incredible promise of preliminary results, the NCI canceled the project*** *before it was completed. Nonetheless, there is substantial evidence that suggests flaxseed oil exerts significant anticancer properties.*
>
> **- Michael T. Murray, N.D., The Encyclopedia of Nutritional Supplements**

Regardless of the political influence, phytochemical research continues at universities throughout the United States and especially at centers of science and medicine around the world (who are not so tightly controlled by U.S. pharmaceutical interests).

What they are finding, across the board, is that phytochemicals work best <u>in concert</u>, not in isolation.

Phytochemicals act in combination, not in isolation

> *Since the beneficial effects of phytochemicals are best realized naturally rather than synthetically, putting PowerFoods first is about real food, not pills. There is no evidence that phytochemicals as supplements have anything like the power of whole foods. Rather, what plant biologists are discovering is that* ***any one vegetable or fruit may have thousands of biologically active phytochemicals****. Every bite of a PowerFood is a cocktail containing thousands of these phytochemicals, all of them* ***acting together in mysterious ways to offer a multitude of effects****, fighting against the likes of cancer and heart disease while bestowing good health and vitality.*
>
> *From sweet treat fruits like figs to pungent, robust workhorses like garlic, in all their diverse textures, odors, tastes, and in a rainbow of color, the power of these plant foods is in* ***the way the phytochemicals combine****. When they do so,* ***they ignite a synergy of pharmacological activity*** *where the whole is greater than the sum of the parts. It is only by eating the* ***whole foods*** *that you can benefit from the process at work inside your body.*
>
> **- Stephanie Beling, M.D., Power Foods**

You can isolate a chemical from a plant, duplicate it in a lab, and feed it to people as part of a clinical trial. But the results won't be nearly as effective as eating the whole plant.

Pharmaceutical companies know this well, and this reveals one devious strategy they use to "prove" that foods don't offer protective health benefits. If they want to show that tomatoes don't prevent prostate cancer, for example, they will commission a study on lycopene, one phytochemical found in tomatoes. But they will use lycopene in isolation, and the study results will of course show the lycopene wasn't very strong in reducing the risk of prostate cancer. From this, the pharmaceutical companies will declare, "Tomatoes offer no protection against prostate cancer" as part of an effort to discredit the health benefits of natural plants. And newspaper headlines around the world will parrot the same flawed conclusion.

The entire design of the study is, of course, seriously flawed. The whole tomato offers powerful protective effects for prostate cancer. But the effect comes from perhaps hundreds or thousands of phytochemicals, many of which are entirely unknown to modern science, not to even mention the vibrational nutrition imparted by a living tomato plant.

Truly, researchers should be studying the effects of whole food supplements, not isolated chemicals. This focus on isolated nutrients is all part of the reductionistic approach to medicine, of course, and supplement manufacturers are guilty of the same dogmatic reasoning: they frequently manufacture and market supplements containing isolated phytochemicals that have been shown to have specific health benefits. There's nothing wrong with the intention, but it's missing the potentially much greater benefit of eating the whole food.

> *While it's true that some phytonutrients are available as nutritional supplements, no matter how "complete" the supplements are, they're bound to leave out many of the phytos that are found in fruits and vegetables. Not only that, but the mixture of these nutrients that you get naturally from carrots, blueberries, broccoli, and other plant foods provides some benefits that generally* ***can't be duplicated by a laboratory-produced pill****.*
>
> **- Gale Maleskey, Nature's Medicines**

This is why, as you will see, I strongly recommend that people who want to experience the health benefits from phytochemicals supplement their diets with superfoods and whole food complexes. This is absolutely necessary, in my opinion, for optimum health, since probably 95 percent of Americans simply don't eat a sufficient quantity of healing foods to begin with.

> *Because several thousand phytochemicals are currently known to exist, and because new ones are being discovered all the time, no [isolated] supplement can possibly contain all of the cancer-fighters found in a shopping basket full of fruits and vegetables*
>
> **- James F. Balch, M.D., A to Z Guide To Supplements**

Few people eat enough phytochemicals

Do you eat six servings of uncooked, unprocessed fruits and vegetables each day? Probably not. Few people do. (I don't either.) The fact is the dietary desires and habits of most people in English-speaking countries simply don't allow much room for fresh, raw vegetables. Most people are lucky to get one salad each day. In fact, for many, that might be their only serving of fresh vegetables for the day.

Even though we all realize phytochemicals are essential to our good health, it's extremely difficult to get an adequate supply of them into our diet by eating massive quantities of fruits and vegetables each day. That's what our ancestors did, of course, but in modern times, we don't have all day to hunt for food and chew on it.

That's why the only reasonable solution to this dilemma is to supplement your diet with whole food complexes. By "whole food complexes," I mean capsules, tablets or liquids made from whole foods that are rich in phytochemicals.

My #1 recommended product is called **Jenny Lee Supergreens**, available from http://www.JennyLeeNaturals.com. This product, sold as a powder, combines Japanese chlorella, spirulina, quinoa, alfalfa sprouts, flax seed meal and other ingredients to provide a nutritional powerhouse that I personally consume every single morning as part of my "breakfast shake." Another great product is called **Berry Green**, sold in health food stores. It combines organic, freeze-dried vegetables and fruits into a potent disease-fighting powder that you can add to all sorts of recipes.

Supplementing your diet with whole food concentrates is the only way to get a sufficient quantity of phytochemicals into your diet, because these whole food complexes are nutrient dense. The water has been removed from them, and the resulting powder contains far more phytonutrients per ounce than the raw plant. Generally speaking, dehydrating plants removes 90 percent of their weight, and a considerable portion of their volume as well.

In other words, you can “squeeze” a lot of broccoli -- which is rich in anti-cancer compounds -- into powdered broccoli capsules. A mere four capsules might contain the same phytochemicals as an entire serving of fresh broccoli florets. Through supplementation, you can intake large quantities of plant-based phytochemicals without needing to radically alter your eating habits. Of course, raw whole foods are always better, but in practical terms, **whole food supplements are the only way most people are going to get these foods into their diets**.

I take whole food supplements before, during and after every meal. I don’t put a piece of food in my mouth without first taking some chlorella, spirulina, “veggie” tablets, powdered broccoli sprouts in capsules, sea vegetables in capsules, and so on. And the supplements I take are always made with a wide variety of whole foods, not isolated compounds. I aim for variety.

In the sections that follow, I introduce my favorite whole food supplements and share my recommended sources for acquiring them. Truly, these whole food complexes need to be part of every person’s diet. There’s simply no other practical way for people to experience the full benefits phytochemicals have to offer!

Phytochemicals are not vitamins

> *Phytochemicals are neither vitamins nor minerals, yet they are equally potent and vital to the healthy functioning of our bodies. They are isolated from plants and are known technically as anthocyanosides, limonoids, glucarates, phenolic acids, flavonoids, coumarins, polyacetylenes and carotenoids*
>
> **- Francisco Contreras, M.D., Health in the 21st Century**

It’s important to remember that phytochemicals are not vitamins, nor do they function exactly like vitamins in the human body. For one thing, there’s no such thing as an essential phytochemical in the same way there are recognized essential vitamins. Technically, you can survive (for a while, at least) without consuming phytochemicals, but why would you want to, when they can be so beneficial to your health?

Phytochemicals are more like natural pharmaceuticals, but far safer (and far less expensive) than drug company pharmaceuticals. In the past, however, they were sometimes called vitamins:

> *Phytochemical is the term now used when discussing the plant source of most of these protective compounds. Right now, these compounds have a “quasi-nutrient” status, so perhaps phytonutrients is a more accurate term. But the more common term remains phytochemicals. In the past, phytochemicals were **classified as vitamins**: Flavonoids were known as vitamin P, indoles and glucosi-nolates were called vitamin U, and so on. But they lost their status as vitamins because specific deficiency symptoms could not be established. Today, phytochemicals are **classified according to their functions** as well as individual physical and **chemical characteristics** of the molecules.*
>
> **- Mary Dan Eades, M.D., The Doctor’s Complete Guide to Vitamins and Minerals**

Foods that contain phytochemicals

So where do you find phytochemicals on the menu? Here's a list of some of the many common foods containing beneficial phytochemicals. Remember, foods must be prepared with minimal processing in order to retain their phytonutrients. Canned fruits and vegetables don't count (neither does canned soup). The processing of food strips out most of the beneficial compounds, and the overcooking of these foods greatly reduces their phytochemical content. Anything that's canned has been overcooked. Anything that's pasteurized has also been literally killed. Canned foods, packaged foods and pasteurized foods are all "dead" foods.

Here's where to get phytochemicals (consume minimally processed items only):

- Cabbage
- Broccoli
- Brussels sprouts
- Kale
- Cauliflower
- Raw nuts (all kinds)
- Soybeans
- Tomatoes
- Citrus fruits
- Melons
- Red grapes
- Berries (all varieties)
- Sprouts (all varieties)
- Garlic
- Onions
- Ginger
- Chilies
- Arugula
- Bok Choy
- Collards
- Watercress
- Culinary herbs like oregano, sage, and rosemary
- Olive oil
- Flax oil
- Coconut oil
- Macadamia nut oil
- Avocados

... and many more.

Note, once again, that meat, milk, eggs and most packaged foods contain no phytochemicals. If you're going to get these phytochemicals into your diet, you'll need to either eat them in whole food form, or take whole food supplements.

How to get phytochemicals into your diet

As someone who has studied holistic nutrition for many years, and read literally hundreds of books on the subject, I cannot overstate the importance of superfood supplementation. I already mentioned that the only way for most people to obtain adequate supplies of phytonutrients in their diets is to supplement with whole foods:

> *Sometimes raw vegetables are not easy for the system to digest. Storage and processing by the supplier or overcooking in the home contributes to loss of phytonutrients. Often,* ***only half the phytonutrients in any serving*** *of raw vegetables ultimately becomes available for absorption -- the other half is quickly eliminated from the body.* ***Concentrated***

> ***vegetables*** *(particularly those with the water content removed and which are ground to the consistency of powdered sugar) are more digestible. In this form, it is estimated that* ***90 to 100 percent of phytonutrients****, and all of their cancer-fighting properties,* ***become available for absorption into the body*** *(Mowatt 1998).*
>
> **- Disease Prevention And Treatment by The Life Extension Foundation**

That's why I strongly recommend whole food concentrates (also called whole food complexes) as your supplementation choice. The trick is to find products and supplements that actually contain ingredients they claim to contain, aren't made with filler, and you can actually stomach. In this section, I discuss my most highly recommend superfoods: Jenny Lee Supergreens, The Ultimate Meal, chlorella, spirulina, whole food complexes, and sea vegetables.

Chlorella and spirulina

I take both chlorella and spirulina (which are called "micro-algae") with nearly every meal. These are simply the top two superfood supplements that every person needs to add to their diet. Their nutritional makeup is downright astounding:

- Ounce per ounce, spirulina offers twelve times more digestible protein than beef.
- These micro-algae posses an extraordinary spectrum of macro minerals (calcium magnesium, zinc, potassium) and trace minerals.
- They contain all the B vitamins, plus vitamins C, E, and many others.
- Spirulina contains a blue pigment phytochemical ("phycocyanin") with powerful anti-cancer properties.
- Spirulina also contains an omega-3 oil -- GLA -- that's critical for proper brain nutrition (and is almost always lacking in Western diets).
- Chlorella contains CGF (Chlorella Growth Factor) which actually rebuilds damaged nerve tissue in the body.
- The high chlorophyll content of both chlorella and spirulina demonstrate powerful cleansing effects on the body's blood and organs (liver, kidneys, spleen, etc.)
- These micro-algae have been shown to help reverse cancer, fight diabetes, prevent heart disease, and much more.

They are truly amazing food sources. To get the full story, you simply have to read my full report on chlorella and spirulina offered at http://www.chlorellafactor.com

I also reveal sources of where to buy chlorella and spirulina at the sources page:
http://www.chlorellafactor.com/chlorella-spirulina-33.html

Note: I earn absolutely no money from any of the products or companies I recommend below. No company paid to be listed here. They are included solely due to the quality and value of the superfood products they offer.

Jenny Lee Supergreens

As mentioned above, my #1 recommended source for superfood supplements is Jenny Lee Naturals (http://www.jennyleenaturals.com). They're a small, family-run company with honest pricing, no-hype packaging, and outstanding ingredients. Everything they sell is potent, and none of it contains fillers or unhealthful additives. The product I recommend is **Jenny Lee Supergreens**.

I used to eat **The Ultimate Meal** every day (see below), but switched to **Jenny Lee Supergreens** instead, because it's a better value and shares most of the same healing ingredients.

I consume Jenny Lee Supergreens on a daily basis. The taste is quite acceptable, although if you're used to eating lots of sweets, it might take some time to get used to the relatively bitter taste of greens. So go slow with it, and blend in some fruits when you first start using this product. (It's sold as a powder, so you can blend it with a protein shake, breakfast shake, etc.)

Remember, Jenny Lee Supergreens isn't sweetened. There are no sugars, no chemical sweeteners, nothing but stevia. So feel free to sweeten it in any way you like (stevia is my recommendation).

The Ultimate Meal

Another favorite whole food complex is a product called The Ultimate Meal. I've never spoken to the manufacturer of this product, but I've used it for years, and I've studied the ingredients it contains quite carefully. It's a green powder sold in a large metal can, and you can find it at most health food stores at both the retail level and on the Internet. It may seem like an expensive product -- it runs around $60 a can -- but it's also one of the very best superfood complex products I've ever found. It's made with organic ingredients that are expensive to acquire. And it contains a vast assortment of phytonutrients and healing compounds that simply cannot be listed on the label nor duplicated by any isolated vitamins or mineral supplement.

Eating The Ultimate Meal is challenging for some. It's a powder, not a capsule, so you have to get used to the taste. And the taste is something that not everyone enjoys the first time around. In fact, I tried this product many years ago and couldn't handle the taste at first. The only way I could drink the powder was to blend it with a banana, which made it tolerable and, over time, quite appealing. Today, years later, I rather like the taste. This should give you hope, because eating The Ultimate Meal over time causes your body to adapt to its taste, to the point where you may actually enjoy adding this powder to your diet.

By far the easiest way to take The Ultimate Meal is to blend it into some sort of shake. I wouldn't try to take The Ultimate Meal by itself, however. If you're new to the product, you definitely need to make an effort to mask the taste so you can tolerate it long enough to get used to it.

The taste of The Ultimate Meal, by the way, comes from the simple fact that it is not sweetened at all. That's great news because it means there's no aspartame, no sucralose, and no sugar alcohols or high carbohydrate refined sugars in the mix. You can sweeten it in whatever way you like. Naturally, I recommend using stevia to sweeten it, but feel free to use whatever sweetener you like best.

You will definitely need some sort of sweetener, since The Ultimate Meal is considered rather bitter thanks to the fact it contains a dense mixture of organic vegetables and greens, such as organic freeze-dried broccoli sprouts. This ingredient, all by itself, contains such powerful anticancer compounds that drug companies are probably drooling over it right now.

The Ultimate Meal is one of my favorite whole food complexes. But there are many others available, both in capsule form and as powders. **Berry Green** is one such powder that is also recommended. It's made from freeze-dried organic fruits and vegetables. I have an entire report on Berry Green available at http://www.truthpublishing.com

Sea vegetables

Sea vegetables are outstanding sources for phytonutrients and trace minerals. I take sea vegetable supplements every day, since I don't at all enjoy the actual taste of sea vegetables.

My favorite sea vegetable supplement? Kelp (bladderwrack), and brown seaweed extract, which is known to be a powerful anticancer supplement:

> *Sea vegetables are exceptionally concentrated packages of nutrients and phytochemicals. They contain vitamins, are high in fiber, and have small amounts of protein. Mostly, sea vegetables are a **rich source of such minerals** as potassium, calcium, magnesium, iron, and iodine. ...Thanks to their phytochemical power, sea vegetables are **anti-inflammatory and tumor-suppressing**. Their phytochemical content also includes the carotenoids and fiavonoids, the most powerful of the antioxidants.*
>
> *Researchers have suggested that the ubiquitous presence of sea vegetables in the Japanese diet may be why the incidence of **breast cancer in Japanese women is one-sixth that in American women**. Sea vegetables have been shown in the test tube and in laboratory animals to **suppress colon cancer** and to **boost the immune system**. A drink of broth made from kombu, a brown alga, reduces hypertension and can help prevent strokes. Japanese scientists believe that substances in nori fight numerous disease-causing bacteria, combat ulcers, and serve as an anticoagulant.*
>
> *Certainly folk medicine has long used "kelp," really a brown alga but used as a catchall word for sea vegetables, to treat such ailments as indigestion, arthritis, stress, skin diseases, asthma, even constipation. And ongoing research into the supranutritive power of sea vegetables seems to be confirming its healing potential.*
>
> **- Stephanie Beling, M.D., Power Foods**

Other phytochemical supplements

If you want to shop for something other than the whole food complexes I've mentioned here, please do so! In fact, if you're using one that you particularly enjoy, let me know about it.

My advice is to stay away from isolated nutrients like single vitamins or minerals, and instead, stick to whole food complexes: products made from condensed whole foods, preferably organic foods. This is where you will get your best overall nutrition, even though the labels of these products cannot legally state what diseases these products may prevent or even reverse.

Read more about phytochemicals at:
http://www.newstarget.com/phytochemicals.html

Putting It All Together

In part III of this manual, we've covered tremendous ground:

- We've examined all of the metabolic disruptors found in the food supply and taken a closer look at the diseases caused by those ingredients.
- I've named the foods containing those metabolic disruptors and urged you to avoid them.
- We've explored the things you should add to your diet, such as water, phytonutrients, fiber, chlorella, and healthy oils.
- We've talked about the tremendous health benefits people experience as a result of adding those substances to their diets.
- We've examined new habits to form, such as reading ingredients labels, getting exercise, and taking whole food nutritional supplements or supergreens powders.
- And throughout this tour, we've talked about ways to accelerate your health results and achieve much higher states of health than you may have thought possible.

Hopefully, at this point, you have some idea about which of these many ideas you plan to integrate into your own life. You don't need to use everything here in order to be healthier. In fact, if you were to take just one idea from this manual and really use it, you'd see a marked improvement in your results and I think you'd be more than thrilled with the small investment you made in acquiring this information.

I realize this has been a lot of information to absorb, so here's a wrap-up of the more important points:

Things To Avoid:

- Avoid sodium nitrite, found in most packaged meat products, because it is a precursor chemical to powerful carcinogenic compounds that are well known to contribute to cancers of the digestive system.

- Avoid MSG, found in many sausage products, salad dressings, soups, and mixes. It has been shown to overexcite nerve cells, damage the hypothalamus gland and imbalance the endocrine system, cause reproductive problems, result in stubborn obesity, and is suspected of being a causative factor in Alzheimer's disease, behavioral disorders, and many other problems.

- Avoid hydrogenated oils, found in margarine products, shortening, and virtually all baked goods such as brand-name crackers and cookies. These oils contain trans fatty acids and are well known to contribute to poor cardiovascular health and heart disease, not to mention nervous system disorders.

- Avoid artificial chemical sweeteners such as aspartame, acesulfame, and sucralose. These artificial chemical sweeteners have a dubious health record at best, and none have undergone long-term epidemiological studies on humans. Aspartame, in particular, has been linked to blindness, migraine headaches, seizures, dizziness and a variety of other problems.

- Avoid non-organic meat products such as hamburger, steaks, and ham. Even though they cost more, organic meat products have the benefit of being free of pesticides, antibiotics, hormones and bizarre feed practices that non-organic livestock are normally subjected to.

- Avoid diet soft drinks, not simply because of the chemical sweeteners they contain, but because they are highly acidic drinks that disrupt the acid/alkaline balance in the human body. This disruption, in turn, causes your body to lose bone mass as it attempts to buffer dietary acid with skeletal alkaline minerals.

- Avoid homogenized milk fats like those contained in milk. These homogenized fats are artificially manipulated through an unnatural process that makes them difficult for humans to digest. There are serious questions about whether the human body can properly deal with homogenized fats, and many believe these fats contribute to poor cardiovascular health.

- Avoid dairy in general, since cows' milk is the perfect food for baby cows, but not for adult human beings. Most humans are allergic to cows' milk, and regular consumption promotes asthma, constipation, sinus problems and general stagnation.

That may seem like a lot of things to avoid, and you may think that there's nothing left to eat! Don't be concerned. In the sections that follow, I will list a great number of foods and products that you can safely consume that will also avoid you being exposed to the dangerous metabolic disrupters mentioned above.

There is a wide selection of foods you can eat to keep you slim, trim and healthy. With a little bit of knowledge and creativity, you'll find ample foods and recipes to choose from, and you will never feel as if you've been deprived!

Things to add to your diet

Now let's discuss things you would be wise to add to your diet.

- Add more water to your diet, because most people are chronically dehydrated, and a lack of water makes it difficult to lose weight. Drink filtered water or bottled water only, and make water your primary beverage. Don't try to drink tap water. Instead, buy a water filter and make your own filtered water.

- Add more dietary fiber to your meals. Most people do not get enough fiber because they're focused on manufactured, processed foods that naturally lack insoluble fiber. The best way to add fiber to your diet is to purchase psyllium husk fiber, mix a tablespoon with a large glass of water, and drink it down once or twice each day. You can also boost your consumption of fresh vegetables and whole grains.

- Add stevia to your diet. Stevia is a wonderful sweetener that has virtually no calories, no carbohydrate impact on your system, and it has been safely used by hundreds of millions of people around the world for many years. You can purchase stevia online or at any health food store, and you can add it to virtually any food or beverage you eat. Stevia is an excellent way to sweeten foods and drinks without using sugars or chemical sweeteners.

- Add phytochemical supplements and superfoods to your diet. The phytochemicals found in plants offer extraordinary health benefits, including protection against cancer, heart disease, oxidation, aging, and much more. My recommendations: chlorella, spirulina, Jenny Lee Supergreens, Berry Green, The Ultimate Meal, whole food complexes (green foods mixes) and sea vegetables.

- Add unrefined coconut oil (or macadamia nut oil) to your diet. Coconut oil is an extremely healthy, plant derived source of healthy saturated fats that's made up of medium chain triglycerides. Coconut oil provides slowly digested, stable calories that won't spike your blood sugar and will help satiate your hunger for hours. It also tastes absolutely wonderful. The key is to purchase unrefined, unprocessed Coconut oil, which is not always easy to find. You may have to buy it online.

New habits

Finally, here's a summary of the new habits you may wish to form to enhance your health:

- Get into the habit of reading ingredients labels on the foods you purchase. It may sound daunting at first, but after reading the labels of a few hundred items, you'll find that the labels are very easy to read and that, indeed, you can generally guess which metabolic disrupters you will find on the labels of any food in a grocery store. You'll also learn where to look for certain ingredients on the label. For example, sodium nitrite is almost always the last or second-to-last ingredient on packaged meat products. Monosodium glutamate is an easy ingredient to find on ingredients labels because it is a very long chemical name and it stands out, but its aliases (hydrolyzed, autolyzed, yeast extract) are harder to spot. Hydrogenated oils are usually located near the beginning of the list of ingredients, and most chemical sweeteners are located near

the end. By recognizing and applying these simple patterns for reading ingredients labels, you can quickly scan the label of any food in less than 10 seconds and determine whether you should eat it.

- As much as you can, the get into the habit of relying on natural, unprocessed foods rather than purchasing excessive amounts of packaged, manufactured foods. There's nothing wrong with purchasing manufactured foods such as breads, soups, microwaveable meals and so on, as long as you don't rely on these items for the bulk of your diet.

- Get into the exercise habit. Cardiovascular exercise is crucial to supporting your weight loss and health enhancement goals. It will make your diet far more effective, and it will accelerate your progress towards your goals. Cardiovascular exercise will improve your mood, enhance the function of your immune system, build stronger muscles and bones, increase the oxygenation of the organs and bones in your body, and improve your overall health and state of wellbeing. Cardiovascular exercise will also accelerate your weight loss results.

- Consider the extraordinary benefits of engaging in strength training, regardless of your age or gender. Strength training builds new muscle mass that increases your resting metabolic rate and burns calories even when you're not exercising. If you been overweight or are now, you already have impressive muscles supporting your skeletal system and body weight. If you don't train those muscles while you lose weight, you will actually lose muscle mass along with your body fat and end up as a slimmer, but weaker human being. With strength training combined with a smart diet, you end up being both thin and fit.

- Finally, supplement your diet with chlorella and spirulina, superfoods, sea vegetables, whole food powders, or other whole food supplements. This will provide your body with healing *phytochemicals* that are almost always lacking in the diets of most people.

If you put all of this together -- the ingredients in foods to avoid, the foods to add to your diet, and the new behaviors to pursue -- you realize that this isn't really a diet at all. It's a lifestyle, something that you follow for the rest of your life. And if you follow this, that will be a long time, because you will live much longer and much happier than those dieters who consume metabolic disrupters, who don't drink enough water or eat enough fiber, and who avoid exercise and strength training.

That's why I almost think it's strange to call this a diet a diet at all. I consider it a way of life, not something that I do merely to lose a few pounds. Think about it: if a diet helps you lose body fat, feel more energetic, enhance your mood and state of mind, and feels stronger and more active, then why would you ever want to go back to your old eating habits after you've experienced all of these benefits? Consider your diet to be something you do for life, not something that's merely a craze or fad. If you make it part in your everyday lifestyle, you will live a long, healthy and very satisfying life.

SHOPPING FOR GROCERIES

Once you get used to reading ingredients labels, shopping for health-promoting foods and products is easier than you might think. For one thing, you don't need to look for health claims on the labels on all of the food items you purchase: some of the very best foods make no such claims. In addition, you don't necessarily need to shop at health-food stores or natural food stores in order to purchase foods that support your health. Many of my most highly recommended health-promoting foods are available at virtually any grocery store.

In this section, I'll explore the list of some of the best health-promoting foods available. I'll also warn you of pitfalls to watch out for when purchasing these items, such as the presence of heavy metals like mercury and cadmium in various seafood products.

The following list is by no means a complete list. But it's a good list, and it avoids all of the metabolic disrupters discussed earlier while providing affordable, healthy foods that support not only your weight loss goals but also your overall health and wellbeing.

How to use the shopping list

How should you use this list? Print it out and take it with you when you go shopping. Locate each of these items in a grocery store so that you become familiar with their shelf position. Once you locate each item, even if you don't intend to purchase it right now, read its ingredients label. This will help familiarize you with what these products contain, and you will be able to see the differences in ingredients between these healthy foods vs. the foods to avoid.

If you wish, purchase as many of these items as you'd like, and begin to experiment with them in your diet. You may find that many of these are similar or perhaps even identical to what you are eating now. If you discover considerable differences between this list and your present-day diet, I urge you to **make slow shifts toward this list over time and avoiding changing every item in your diet all of once**. If you attempt the radical approach of altering your entire diet all at once, you may succeed for a couple of days, but before long, you will begin craving your old familiar foods, and you're likely to give up the new foods altogether out of desperation.

The best strategy is to pick just one food item from this list each week and work with that item. Experiment with it and see how you might be able to make it part of your daily diet. In one month, you can try out four products, and even though you may ultimately decide that two out of the four products are not to your liking, you are still left with two products that are now part of your healthy lifestyle. That's real progress, and real progress takes time.

Remember, too, that it takes time for your body to get used to avoiding high-sugar, high-salt processed foods. When I stopped eating sugar outright, it took me a period of several months before my body stopped craving it, and the same experience seems common among people who have traditionally eaten a processed foods diet -- which includes virtually all Americans, by the way.

It took me years to shift my diet to the foods listed below while avoiding all of the metabolic disrupters and dangerous ingredients discussed here. So don't expect your own progress to be instant, and don't hope for overnight miracles. **Dietary habits take time to change**, and even though you may find that you don't enjoy every one of the food items listed here today, if you revisit those items in a few months or years, you may find them rather enjoyable.

That was my experience with avocados, for example: I wouldn't touch avocados until just a few years ago, but now I make them a staple of my diet. The key? I created new ways to use avocados that are virtually unknown by people in the U.S., such as blending avocados with soy milk and stevia to make a delicious shake that contains absolutely no animal fats, no sugars, and yet delivers all of the creamy texture and rich taste of high fat ice cream.

Foods To Buy:

Now I'm going to take all the information contained in this manual and apply it to create a shopping list of foods to buy and foods to avoid when shopping at the grocery store.

Eggs and egg products

Eggs are a wonderful food that offers an abundance of high-quality protein and, if you eat the yolks, a nutrient-rich source of healthy oils and sulfur compounds. There are basically two forms of eggs: raw eggs in a carton, and liquid egg whites in those small milk carton containers. I eat both. Let's discuss them separately, because each of these is a highly versatile food source that can be used in many ways.

Eggs in the Carton

Fresh eggs are an extremely valuable food source. It is regrettable that their reputation has been tarnished over the last two decades by misinformation about cholesterol. Today, of course, researchers know that eating eggs is actually good for your heart. Cardiovascular disease, in contrast, is promoted by the mass consumption of carbohydrates, hydrogenated oils, and red meat -- not dietary cholesterol from eggs.

Today, we know that both egg whites and egg yolks are very healthy food sources. And because eggs contain virtually no carbohydrates, they are an excellent choice for anyone attempting to control their weight. But as with many food products, there can be a big difference in the quality of the product from one carton to the next. With eggs, there is a tremendous difference in the nutritional value of mass produced eggs versus organic or free-range eggs. Let's talk about the differences.

Since eggs come from chickens, the substances contained in these eggs must be derived from the diets of the chickens that produced them. In a way, you can think of an egg as a conveniently sized food package made up of a dense collection of whatever food items were eaten by the chickens.

What you want to be eating are eggs that come from chickens who are given access to natural diets. For chickens, that means eating lots of insects, grasses, and seeds. By pursuing this diverse, natural diet, chickens will automatically consume increased quantities of many substances such as omega-3 fatty acids -- the healthy oils. Eating raw grasses, seeds, and insects also provides the chickens with healthy enzymes, phytonutrients, fibers and protein that contribute to the health of the chicken in much the same way that vegetables and whole grains contribute to the health of human beings. With this healthy, natural free range diet in place, the chicken produces a nutrient-rich egg that is far superior to a mass produced egg that comes from what I call “factory chickens.”

Free-range chickens also have better mental health. You may find it strange to talk about the mental health of chickens, but foods produced from healthy, happy animals are far better than foods derived from animals driven insane as a result of inhumane farming practices.

Avoid eating eggs from crazy chickens

On that subject, let’s talk about crazy chickens. If you take any animal and coop it up in a tiny cage so small that it can hardly turn around, and you pump it full of antibiotics and chemical hormones, and you keep it in the dark day after day, and feed it a diet containing waste products and questionable ingredients such as cooked blood from diseased cows -- which is a common practice in the mass produced chicken industry -- you will get an animal that loses its mind. These conditions exist right now at chicken farms all around the world, and especially in the United States. When these chickens go crazy, they become violent. They start attacking not only each other, but sometimes even tearing their own bodies apart by endlessly plucking their feathers and skin until they bleed to death.

The solution offered by corporate chicken ranchers? Cut off their beaks, of course, so that they can’t damage themselves or each other. It’s a common practice designed to maximize profits without having to spending the extra money taking care of the chickens.

Despite all this torture and questionable treatment, these chickens still manage to produce eggs. In fact, the vast majority of eggs available at grocery stores come from environments where chickens are not given free-range access to the natural environment. The question to you is this: **do you really wish to eat substances produced by animals that have been driven insane**?

There’s more to it than just that, by the way. Chicken farmers use a substance laced with arsenic in order to control parasites. Although no one has yet studied whether this arsenic is found in the eggs of mass-produced chickens, it’s not hard to imagine that some amount of arsenic would be found in those eggs, and if you ate them, you’d be exposing yourself to an unknown level of arsenic.

Whether you approach this from a nutritional point of view, a product safety point of view, or a system that supports the ethical treatment of animals, the choice is clear: choose eggs from free-range chickens grown without the use of antibiotics or hormones. And that doesn’t mean just choosing brown eggs, by the way: you have to read the egg cartons carefully and make sure you’re getting organic or free-range eggs. Brown eggs are not automatically healthier than white eggs. In fact, the color of all egg shells is determined by nothing other than the genetics of the chickens laying them, not by what they are fed.

Egg whites

Another way to get eggs into your diet is to purchase egg whites. You can find these in the small milk carton shaped packages, sold under a variety of brand names. These are pasteurized egg whites, which come out of the carton in liquid form.

You can find this product in both the pure form -- that is, with no extra coloring or flavoring -- or you can find it packaged as a yellow colored liquid that resembles scrambled eggs. I prefer the plain, uncolored variety, because I don't want egg whites that are already flavored or colored.

Liquid egg whites not only provide an excellent source of protein, they are also extremely versatile. I use them in a wide variety of foods in my own diet. You can safely drink them raw, and I frequently use egg white liquid as a supplement in blended soy milk drinks. Basically, you can add liquid egg whites to any drink or shake that you would normally mix in a blender, transforming it into a "high protein" drink.

Liquid egg whites can also be used to transform a regular bowl of cereal into a high protein bowl of cereal. Just pour some egg whites in with the milk and mix them together before adding the cereal. Of course, you are hopefully using stevia as your sweetener of choice rather than refined white sugar.

Egg whites can also be added to any baking recipe to transform them into high protein recipes. Baked egg whites are fluffy and help hold foods together, so they make an excellent ingredient for items like pancakes, breads, and even pasta.

Of course, you can also just pan fry the egg whites with frozen onions, add a little pepper, and you'll have a low-fat, high protein scramble! But if you are going to scramble these eggs, you're probably better off using whole eggs in the first place and getting to benefit from the egg yolk.

I use liquid egg whites in my chocolate dough recipe, which combines coconut oil, chocolate whey protein powder, Jenny Lee Supergreens, stevia, and liquid egg whites to create a low-carbohydrate, high-protein, nutrient dense meal that keeps you satisfied for hours.

You may find other uses for liquid egg whites as well. It's truly a versatile food. The only drawback to liquid egg whites is trying to locate organic egg whites. So far, I have been unsuccessful -- there doesn't appear to be any such product on the market at the time of this writing. Of course, you could go through the trouble of separating the egg whites yourself from organically produced eggs, but those egg whites have not been pasteurized and cannot be safely use in the same way as pasteurized egg whites. (You shouldn't drink them raw, for example.)

Fresh organic meats

If you're like most people, you are no doubt already eating meat as part of your diet. Remember to shop for fresh meats, not packaged meats, so that you avoid the cancer-promoting sodium nitrite ingredient. Also, where possible, purchase organic meats so that you eat meat products derived from animals that have healthier bodies and minds.

When you buy meats, look for meats that say, "Uncured" on the package label. That means they don't contain sodium nitrite, sodium nitrate, or other harmful preservative ingredients.

Fresh or frozen seafood, watch out for heavy metals

Fresh or frozen seafood makes an outstanding addition to every healthy diet. Seafood is low in fat, though, so be sure to supplement some healthy fats with your meal (avocados, coconut oil, organic animal fats, flax oil, etc.) in order to keep your hunger satisfied for longer.

The primary concern when purchasing seafood is to protect yourself from the heavy metals that now seem to have tainted practically every seafood item on the planet. Swordfish and shrimp are known to contain mercury, cadmium, and other heavy metals, so be sure to limit your consumption of these foods for health reasons, if not economic reasons as well. Also, you may benefit from a nutritional trick I follow: swallow a capsule of activated charcoal anytime you eat seafood. The activated charcoal absorbs heavy metals, preventing them from being assimilated into your body during digestion.

Salmon and fish

Fish products, such as salmon, codfish, whitefish, and other varieties, offer excellent sources of protein and healthy oils. The thing to watch out for here is processed, refined fish foods. For example, if you purchase frozen fish steaks and think you are eating a healthy diet, think again: the fish steaks are not only breaded with a high carbohydrate breading, they are also prepared with both hydrogenated oils and monosodium glutamate (MSG), making them a triple threat to your diet and your health.

The only way to eat fish is grilled, baked, or pan-fried. If it's deep-fried or breaded, avoid it completely.

Fresh vegetables

As you make your shopping rounds at the local grocery store, don't forget to load up on the basics: fresh vegetables. My favorites are steamed broccoli, pan-fried broccoli, pan-fried bean sprouts with soy sauce, stir-fried cabbage with shrimp and garlic (with olive oil at medium heat, of course), and steamed asparagus.

Whatever vegetables you like, make them the basis of your diet. To a large degree, fresh vegetables that are prepared with minimal cooking (raw or steamed, for example) provide balancing elements to your diet. For example, the vegetables provide fiber that's traditionally lacking in popular diets. They also provide digestive enzymes that are typically absent from

manufactured foods. Furthermore, these vegetables provide phytonutrients and a wide spectrum of healing compounds that enhance your overall health and support your dietary goals.

In fact, let me share with you a little trick I used to increase my consumption of fresh vegetables. The way I follow a weight control strategy is to not only avoid carbohydrates, but to also count calories. I count the total calories of every food item I eat, but all vegetables are free. That is, I don't count raw or steamed vegetables at all. This way, if I'm approaching my caloric limit for the day, I always know I can fill up on a plate of delicious steamed broccoli prepared with mashed garlic and a touch of salt, and it won't put me over the calorie limit for the day.

I eat very large portions of salad quite frequently, and I used salad dressings and other condiments sparingly. But whatever the strategy or trick you use to increase your consumption of fresh vegetables, stick with it. The importance of consuming vegetables can hardly be overstated.

Breads and tortillas (watch out for hydrogenated oils)

If you are looking for breads or tortillas, go ahead and shop for the whole-grain varieties now available at many grocery stores. But be sure to read the labels and avoid any that contain hydrogenated oils or high-fructose corn syrup (found in many breads).

Beans and lentils (watch for MSG in bean mixes)

Beans and lentils are another excellent food source. Don't fall into the trap of buying bean soup mixes or flavor mixes that contain MSG or yeast extract, since both ingredients are classified as excitotoxins. As with other foods, read the labels or just buy dry beans and add your own flavors.

Lentils are my favorite, because they are naturally high in protein and fiber. They're versatile, easy to cook, and can be quite delicious when prepared properly. I prefer to purchase dry lentils and cook them in a crock pot, but there are also some excellent lentil soups offered by natural food manufacturers, including one product that has no salt added.

Fresh fruits in moderation

Remember to eat fresh fruits on a regular basis. You need fruits in your diet for nutritional reasons: fruits are very high in certain antioxidants, vitamins, minerals and phytonutrients. Avoid high sugar fruits such as watermelons and grapes, and stick with fruits that are nutrient dense without all the fructose. Excellent choices include all of the berries (blueberries, raspberries, blackberries and strawberries), avocados (which are technically a fruit, but will be discussed in more detail later), kiwi, oranges, papaya and mangos.

Remember, if you crave fruits and want to minimize the impact on your blood sugar and production of insulin, you can always eat high fiber or high-fat foods before the fruits in order to slow the digestion and assimilation of those fruit sugars. In essence, by frontloading your stomach with fiber or fat, you are decreasing the glycemic index of the fruits you consume.

Organic meat jerky with no MSG

Organic, natural meat jerky products are an excellent food source for healthy lifestyles. The trouble is, it's almost impossible to find jerky that doesn't contain both sodium nitrite and MSG. I wouldn't touch the common, "gas station" jerky products, but I have found one company that makes natural jerky products out of turkey, beef and even salmon, available at Trader Joe's and other specialty food stores. The company is called Snackmasters and they are based in California.

Don't go crazy on meat jerky products, however, since even the natural ones are loaded with sodium and, like all meat products, they contain virtually no fiber. Always read the ingredients of jerky products, and look to avoid both MSG and sodium nitrite. Many also contain added sugars.

Hummus

Here's a food most people overlook, and it's one of my favorites: hummus. Hummus is made from mashed chickpeas, blended with tasty ingredients like vinegar, salt and red peppers. I was never a fan of hummus until I rediscovered it two years ago, and now I consume it quite frequently. Hummus is moderately low in carbohydrates, high in protein, high in fiber, and contains some healthy oils. Today, even common grocery stores carry hummus products that contain none of the metabolic destructor ingredients mentioned in this manual. Just be sure to read the ingredients labels and make sure you're not buying some cheap, low-end hummus made with partially-hydrogenated oils.

My favorite variety is spicy red pepper hummus, which is offered by several different manufacturers. I use it as a dip together with either WASA crackers (see below), or Bran-a-crisp wafers. It makes for an easy, zero preparation meal that meets all the requirements of healthy dieting without ingesting any of the metabolic disrupting ingredients.

WASA fiber rye crispbread

As a smart consumer, you probably already know to avoid most crackers and baked goods. But every once in awhile, you might find yourself craving a cracker of some kind. When that fancy strikes you, reach for the WASA fiber rye crisp bread product, which is by far my most highly recommended cracker for anyone wishing to be healthy.

What's so special about this cracker? Two things: it's made with whole grains (so it doesn't contained processed, refined grains), and it has no hydrogenated oils whatsoever. As a bonus, it is lightly salted with sea salt. That makes it simply the healthiest cracker available on the market, and one that I highly recommend.

You can eat it with hummus, or if you're craving something a little sweeter, use my coconut oil / agave nectar / butter flavor recipe for an outrageously delicious dessert treat that won't blow your diet.

Bran-a-Crisp wheat bran fiber bread

In the “outstanding cracker” category, I have one more recommendation to make: Bran-a-crisp crackers. These crackers are thicker and rougher than the WASA crackers mentioned above, and they have only four grams of carbs per cracker.

These crackers are also delicious when dipped into hummus. Eaten alone, they are hardly notable, but they certainly add a high amount of fiber to any diet. I strongly recommend these crackers to anyone who wants extra fiber or who desires a healthy cracker.

The bran-a-crisp package, by the way, states that these crackers are 65 percent wheat bran. The taste of these crackers confirms that claim.

Shredded lettuce and organic salad mixes

Shredded lettuce is one of my favorite appetite-suppressing products for ensuring success with healthy weight maintenance. As I mentioned above, I don’t even count the calories in lettuce, meaning that the only thing I have to pay attention to is what I put on the lettuce. My favorite? Taco sauce and vegetarian sausage patties made without MSG. Sometimes I top it off with shredded soy cheese, and if you’re into real cheese, you can certainly use that as well.

It makes for a hunger busting, low-carbohydrate, high fiber meal that fools your body into thinking you just ate at the buffet when, in fact, you’ve only consumed a couple hundred calories in all. Eat a plate full of shredded lettuce each day, and you will find your weight management to be far easier.

As always, focus on organic shredded lettuce if you can find it. If you can’t, non-organic shredded lettuce is better than no shredded lettuce. In fact, I can’t find organic shredded lettuce at my local grocery store, so I just eat the conventionally grown lettuce.

Pearled barley

If you know anything about processed grains, you know that many of them have a high glycemic index, meaning that they spike your blood sugar and encourage your body to store fat. It’s true of oatmeal, cream of wheat, grits, and other cereals (served hot or cold). But if you’re craving for grains of some kind, here’s a great choice that won’t blow you away with refined carbohydrates: pearled barley.

You can find pearled barley near the oatmeal section at most grocery stores. It’s sold in a tiny box with a very high markup on this basic grain that actually cost no more than a couple dollars a pound if you buy in bulk. (Try your local co-op.) Pearled barley has the lowest glycemic index of any grain, and you can cook it into a sort of kashi pilaf by boiling the grain and then pouring off any extra water.

From there, you can decide what to add to the grain to make a delicious meal. My favorite? Add a tablespoon of coconut oil and liquid butter flavoring from products like I Can’t Believe It’s Not Butter or Smart Squeeze. Mix it together and enjoy. If you want it a little sweeter, add some stevia

or natural sweeteners that are very low on the glycemic index such as agave nectar or prickly pear cactus juice.

You can also go the spicy route and add some Cajun flavoring, red peppers and boiled shrimp to make a pearled barley gumbo.

You get the idea. With boiled pearled barley as the base, you can add practically any flavoring you want to make a healthy, delicious and filling meal.

Another of my favorites is to add cinnamon powder, coconut oil, rice protein powder and stevia. It makes for an excellent “cinnamon oatmeal” replacement, without all the carbohydrates.

But don’t think that all barley is the same. Rolled barley has a very different effect on your body than pearled barley. Rolled barley has a higher glycemic index and acts a lot more like oatmeal. Therefore, it should be avoided. Stick to pearled barley as your grain of choice.

Benefiber

In the category of supplemental fibers, I’ve already mentioned psyllium husk fiber, which is my top recommended source for getting fiber into your diet without all the extra sweeteners and chemical ingredients found in many fiber products. But not everyone can stomach the rather bland taste of psyllium husk fiber, and for those, my next recommendation is a product called Benefiber, made by the same company that makes Ex-Lax.

Benefiber is made from guar gum, a natural fiber that I also use as a thickening ingredient in many drinks and shakes. Benefiber can be easily added to your soups, drinks and recipes to give you additional fiber without all the grit of psyllium husk fiber.

On an ounce per ounce basis, however, it’s rather expensive, but it does have the advantage of being readily available at stores like Wal-Mart and regular grocery stores. Or look for it in the pharmacy section near the fiber supplement products. I don’t regularly use this product myself, because I prefer psyllium husk fiber, but I have used it before and found it to be quite easy to take. It also has no flavor, which is good since you don’t eat fiber for the taste anyway.

Low-sugar cereals like Hi-Lo

As a kid I grew up on breakfast cereals like Frosted Flakes, Lucky charms, and Cocoa Pebbles. And to this day, I still enjoy an ice cold bowl of sweet tasting cereal with milk, although I only use soy milk these days since I wouldn’t dream of drinking cows’ milk.

While following a healthy diet, it has been virtually impossible to get a decent bowl of cereal until recently, when several manufacturers started making cereal products that are remarkably low in added sugars. The very best I’ve found is a product called Hi-Lo cereal, made by the organic milling Co. (**www.organicmilling.com**).

This cereal has only five net grams of carbohydrates per serving, and is just barely sweetened with a touch of evaporated cane juice. That’s an ingredient I normally avoid, but there’s so little

of it in this cereal that I don't mind. What I do is use stevia to sweeten it up, turning it into a rather sweet cereal without adding any additional sugars whatsoever. It tastes wonderful!

My recipe is to add one scoop of soy protein or rice protein, some stevia powder, and some soy milk and mix it together in the bowl before adding the cereal. With the cereal added, it's a delicious bowl of a high protein, high-fiber cereal that satisfies even my strongest desire for a bowl of Lucky Charms.

I purchase this Hi-Lo cereal at Trader Joe's, and I'm not sure where else it might be available, but I suspect that as it gains in popularity, you'll be able to find it at other retailers as well. If you don't find it at your grocery store, approach the store manager and ask them for it. Give them the web address of the Organic Milling Co. and ask them to stock the product. It's the very best way to get these stores to carry the products you want to eat.

Flax oil & meal

You are probably already aware that flax oil is very high in omega-3 fatty acids and is a healthy addition to any diet. You may not be aware, however, of all the ways you can use flax oil.

Blend it in with drinks or shakes. Add it to soups and sauces. Mix it in as part of virtually any recipe. Try to get at least 1 tbsp. of flax oil each day as part of your diet, and your heart and entire cardiovascular system will thank you for it.

You may also enjoy using flax meal, which has a sort of nutty flavor and can be sprinkled on top of practically any food. I sprinkle flax meal on a bowl of pearled barley mixed with coconut oil and stevia: it's a delicious, high fiber, low-carb recipe that satisfies for hours.

Unrefined coconut oil

I've mentioned coconut oil with some frequency in this report, and I've found that virtually everyone has some sort of initial negative reaction to coconut oil because they've been taught that coconut oil is somehow dangerous for your health. It turns out that information was incorrect, similar to the way in which eggs were routinely labeled as dangerous. Today, eggs are known to be healthy for your heart, not detrimental.

Unrefined, unprocessed coconut oil is quite simply one of the healthiest sources of fat you can get. I make it a regular part of my diet. It has remarkable properties, including the one that may interest you the most: its ability to **satiate your hunger** and suppress your appetite for hours on end.

After I eat any recipe containing coconut oil, I find that my blood sugar remains remarkably steady, and my appetite remains low or nonexistent for many hours. No other oil, protein, fiber, or supplement has yet been able to create that effect in my body. Only coconut oil accomplishes this, and aside from these metabolic benefits, I find coconut oil to be absolutely delicious.

It has a creamy texture and a sort of subtle sweetness that's evident when you eat it even though it contains no sugars. It feels cool on your tongue, and creates an instant feeling of comfort, far exceeding any other source of fat I've ever tasted. And coconut oil is extremely versatile: because

it's solid at room temperature (about 76°F), it can be spread on crackers like butter, blended with practically any drink, or melted onto any food item that's warmer than room temperature.

Coconut oil can be sweetened with stevia, flavored with spices and powders, accented with cinnamon, and blended into just about any recipe imaginable. It is one of the most versatile health ingredients of all.

So why does nearly everyone believe that coconut oil is such a dangerous source of dietary fat? The answer is because coconut oil is made of saturated fats, and even though the fats in coconut oil are quite different from fats in animal products, the two have been lumped together into one group and blamed for a vast array of diseases. That blame, it turns out, isn't justified. Many of the studies upon which the high-fat theory of heart disease is based fail to consider the ravaging effects of high-carbohydrate diets. From my research, I think excess consumption of carbohydrates, not saturated fats, is to blame for the vast majority of heart disease and cardiovascular disorders we're seeing today.

But even if you believe that saturated fats are the primary culprit for heart disease, coconut oil is an entirely different kind of fat. For one thing, it's derived from a plant, not an animal. Its molecular structure is that of medium chain triglycerides, which are metabolized quite differently than the long chain triglycerides found in animal fat.

Medium chain triglycerides are not so easily stored as body fat like long chain triglycerides. Instead, these medium chain triglycerides are burned like a slow, steady carbohydrate, providing steady, sustained energy that doesn't spike blood sugar levels or produce an exaggerated insulin response. As a result, coconut oil is ideal for diabetics, although if you make such a statement to most doctors, they would vehemently argue against it. But most medical professionals simply haven't researched coconut oil enough to know these things. Remember, it wasn't long ago that the American Heart Association warned people to avoid practically all oils -- even heart-healthy omega-3 oils!

Consider this: coconut oil was consumed in very large quantities by the native populations of Hawaii, the Philippines, and the South Pacific islands, all of which demonstrated remarkably low rates of heart disease up until the time they were exposed to the high-carbohydrate, highly refined Western diet. Once the Western diet arrived on their shores, they began to experience all the common diseases we now see as epidemic in modern society. But their native diet, which was high in coconut oil, produced no such disease.

I don't have the space to cover this topic in detail here, but I encourage you to learn more and to challenge any mistaken beliefs you might have about coconut oil being somehow harmful. In fact, it is a highly beneficial oil. I eat it every day, and I recommend it to everyone who asks what kind of diet I follow.

Real guacamole and avocados

Here's another favorite food that's mentioned frequently throughout this report: avocados. Fresh avocados are, indeed, one of nature's miracle foods. The more I learn about this fruit (yes, it is technically a fruit), the more I am humbled by the accomplishments of nature in being able to squeeze such a nutritionally dense food into such a convenient container.

Avocados are high in potassium, magnesium, and other important minerals. Avocados contain a wide variety of healing phytonutrients that contribute to the green color of the fruit flesh. Avocados are high in fiber compared to most fruits, and they are especially high in healthy, plant derived fats. As a result, eating an avocado is like getting a bit of everything you need in your healthy diet. If I were stranded on a desert island, and had to choose only one food that was available, avocados would certainly be a contender.

The thing is, most people don't really know how to prepare and eat avocados in interesting ways. For most people, avocados are no more than an ingredient in guacamole. But that's a very limited application of this versatile fruit, and in my opinion, it isn't even the best application. If you've only eaten avocados as part of a salty Mexican dip, you've been missing out. The best way to use avocados is to use them in sweet-tasting recipes. Sweet? Really? You bet. Let me explain.

I'm going to describe the recipe to you and ask you to not judge it until you try it. Don't reject it based on some imaginary taste sensation. Instead, try it one time and see for yourself how amazing it is.

The recipe:

Spoon out one avocado and dump the avocado flesh into a blender. Add in three cups of milk or soymilk, and a handful of ice cubes. Add a good dose of stevia powder and a spoonful of honey, if you want. Now blend.

In less than 30 seconds, you will have the most beautiful green, delicious, low-sugar, nutrient dense milkshake ever invented. It tastes just like ice cream, thanks to the high fat content of the avocado combined with the sweetness of the stevia or honey. It's an amazing recipe that impresses virtually everyone who tries it.

Most people don't try it, however, because they don't have the courage to do something different with avocados other than making guacamole. But if you've got the gumption, try this recipe for yourself and then toy with it to get the exact flavor and texture that you like best.

This is the sort of sixty-second recipe that you can make a daily part of your healthy diet. It supplies healing nutrients, fiber, protein, and healthy fats all in a delicious package that has virtually no carbohydrates whatsoever. And notice that you didn't have to spend a fortune on some instant drink mix, either: all you needed was a few common ingredients available at most grocery stores.

If you want to make this recipe even sweeter and don't mind the extra carbs, add a banana to mix. You might even try it that way at first and then slowly transition off the banana over a period of several weeks.

As you've seen here, there are many different ways to eat avocados that go beyond the more traditional uses that you may be more familiar with. In my experience, avocados are best served up sweet, not salty. But any way you enjoy them, be sure to enjoy them frequently. Avocados are truly a "miracle food" provided by nature.

Unsweetened soymilk

You've probably already figured out that I don't drink cows' milk. I'm not going to list all the reasons here, since I've covered many of them already, but I do want to tell you why I prefer to drink soy milk and why you might consider trying it yourself. There is a danger in soy milk, however: most soy milk products at the grocery store are sweetened with cane juice and are, therefore, high in added sugars. The solution? Purchase unsweetened soy milk and add your own stevia powder. It makes a sweet, low-sugar, healthy drink that provides the healing benefits of soy isoflavones along with a good balance of protein and fat.

I drink soy milk not only because of what's in it, but also because of what isn't in it. Soy milk doesn't contain pus, for example, which is always present in small quantities in dairy milk. Soy milk also does not contain blood, which is another substance that is allowed in small quantities in cows' milk. Continuing with the list, soy milk does not contain antibiotics or artificial growth hormones, which are presently suspected of disrupting the natural hormone balance of the human body and perhaps even contributing to prostate cancer and breast cancer.

Overall, soy milk avoids all of these rather gross substances that are typically present in dairy milk. And by drinking soy milk, I also avoid ingesting homogenized milk fats which are, as discussed earlier, modified fats that are suspected of interfering with the normal fat metabolism in the human body.

For all of these reasons, soy milk remains a healthy choice as long as it isn't sweetened. But unsweetened soy milk is quite bitter, and most Americans wouldn't touch it. So you've got to sweetened it with something, and most soy milk manufacturers use low impact sweeteners like barley malt and rice syrup to avoid using using refined sugars.

I was raised on cows' milk

To share a bit of my own experience, understand that I grew up drinking enormous quantities of cows' milk. As a teenager, I consumed a gallon a day, and I would drink it by the glass every chance I could get, except when I was drinking soft drinks. I had milk for breakfast with my sugary cereals, milk for lunch at school, and another glass of milk for dinner. I was a milk consuming machine, just like most Americans are.

I also recall suffering years of extreme sinus congestion while simultaneously experiencing a rather embarrassing state of constipation. I was clogged up at both ends, and when I went to visit my family doctor for a solution, you can probably guess what he did: he prescribed a drug to combat the sinus symptoms. I went through most of my childhood with a pack of Kleenex in my pocket at all times, and I was known at school as the kid whose nose wouldn't stop running. Fun, huh? I was also good at math, which immediately qualified me as the geeky, nose-blowing math nerd of the school. That's right: I was the snot-faced math club geek.

All of that disappeared when I stopped consuming milk products. My sinuses cleared up within a matter of weeks, my bowel function transitioned to a healthy state, and I no longer needed to carry around packs of tissue. Unfortunately, I didn't figure this out until I was well out of school. So much for timing.

I can testify to the fact that life is a lot more enjoyable when you're not blowing snot every few minutes, and that's why you couldn't pay me a million dollars to go back to a diet that included dairy products like milk or cheese. I simply decided that I don't want the negative health effects that these dairy products caused me.

Whether dairy products cause you to experience the same symptoms is something that only you can determine. The dairy industry, of course, denies that any of this occurs with anyone, but millions of people who are discovering the side effects of dairy products now know otherwise.

Stick with soy milk. It won't clog you up. And it won't turn you into a geeky nose-blowing math nerd.

Nuts with no sugar, no salt, no MSG

Now we get to another of my favorite healing foods: nuts. Nuts are another staple of the healthy diet. And you get to choose from a wide variety of nuts: peanuts, almonds, walnuts, macadamia nuts, cashews and many more. In their natural form, nuts are an excellent source of healthy oils and, interestingly, antioxidants.

When it comes to buying nuts, however, it's easy to make a mistake. Most of the flavored nut products or nut mixes (like spicy nut mixes or trail mixes) contain both refined sugars and MSG. That puts them on the "do not buy" list.

Nut butters can also be deceiving: many peanut butter products, for example, are made with refined sugars and hydrogenated oils in order to prevent the natural peanut oil from separating. Obviously, these products are to be avoided as well, and this includes virtually every brand-name peanut butter product on the shelf.

Healthy nut butter products are those that have a visible layer of oil in the jar. Check the ingredient labels and make sure they don't contain sugars or hydrogenated oils. There is no need to add sugar to nut butters in the first place, since all nuts contain some carbohydrates and many nuts have a natural sweet flavor (such as cashews, one of my favorites).

One of my favorite manufacturers of healthy nut butters is the Kettle company:
www.kettlefoods.com

I especially enjoy their creamy, unsalted, unsweetened almond butter product, sold in small glass jars at health food stores. It's quite simply one of the best tasting nut butters I've ever eaten, and it's perfect for spreading on either the WASA crackers or the Bran-a-crisp crackers I mentioned earlier.

The great thing about eating nuts is that, similar to coconut oil, nuts provide a healthy source of dietary fat that stabilizes your blood sugar while providing a slow, steady stream of calories over a period of several hours. But it's also easy to overdo the consumption of nuts. Because they are so calorie dense, you're eating a high number of calories when you consume nuts, especially if you are snacking on an empty stomach.

From my experience, the best way to eat nuts is to consume 10 to 15 nuts as part of a meal that also consists of fiber, protein, and water. This way, the high calorie nuts won't dominate your meal, but they will make your meal last a lot longer and prevent you from getting hungry too quickly.

In addition to all of this good news about nuts, the nut oils themselves have extraordinary healing properties. Peanut oil, for example, is known to help counter arthritis and inflammation. **Every nut oil delivers a fascinating array of healing nutrients**, but no healing effects can be claimed on the labels of these foods according to FDA regulations, so the only way to find out about the healing properties of these natural oils is to keep educating yourself by reading books like this one. If you want to skip the research, here's the short version: eat a little bit of nut butter each and every day as part of your overall healthy lifestyle. As always, eat a variety of different nut butters so that you cycle through the healing benefits of each particular nut.

Almond nut butter, for example, is a natural anti-cancer compound. Peanuts are high in antioxidants and help reduce inflammation. You can learn more about these nuts by visiting **www.NewsTarget.com** and searching for articles on "peanuts" or "healthy oils."

Taco sauces, made without sugar or preservatives

Taco sauces can be an excellent food choice because they rarely contain sugars or other metabolic disrupters. Taco sauces are easy on the calorie count, and they don't contain unhealthy oils, either. To top it off, since they are made with tomatoes and other vegetables, they do offer some elements of nutrition and fiber, although fresh vegetables are no doubt far better for you than cooked, pasteurized vegetable sauces.

As always, I recommend looking into organic taco sauces, since they are made from ingredients that have not been exposed to pesticides and herbicides. These sauces likely contain higher nutrient density as well.

Protein powders

Protein powder is an essential supplement for healthy people. The world of protein powders is vast and confusing, with a bewildering array of protein powder products that mostly cater to bodybuilders. Many protein powders contain chemical sweeteners such as aspartame or sucralose, so this is the first ingredient to watch out for when purchasing protein.

Personally, I recommend two types of protein powder: soy protein and rice protein. Look for protein powder products that are unsweetened (or sweetened only with stevia), and absolutely avoid protein powders made with artificial sweeteners.

The next best sweetener ingredient, in my opinion, is fructose. Although fructose is a refined carbohydrate, but it has a much lower glycemic index than refined sugar, and it closely resembles the sugars found in fruits.

I used to be a big fan of whey protein, but after learning more about cows' milk (from which whey protein is derived), I made the switch to vegetable proteins. Whey protein tastes delicious, but it can also be difficult to digest and can exhibit many of the same problems caused by milk and dairy products (constipation, sinus congestion, autoimmune disorders, etc.). In my personal experience, however, I didn't have major negative side effects from whey protein. I just chose to move away from whey because of its dairy origin. Your own experience may differ, of course, so feel free to use what suits you best.

Currently, my #1 recommended protein powder is an unsweetened brown rice protein powder from a manufacturer called **Nutribiotic**. Their products are available at most health food stores.

Healthy cooking oils: olive oil, canola oil, coconut oil

Be sure to get a fair amount of healthy cooking oils into your diet. One of the best choices for this is cold pressed extra-virgin olive oil, which is good for your heart, your cardiovascular system, and your overall well-being. Of course, extra-virgin olive oil is rather expensive, so your next best choice is canola oil.

There's a bit of debate over whether canola oil is a healthy oil for long-term consumption. It used to be called rape seed oil, but its name was changed to make it more appealing. The rape seed, which produces this oil, also produces a toxin known as ricin, which was once used in an attempt to assassinate Fidel Castro.

This doesn't mean ricin is found in canola oil, because it isn't. Canola oil is free from these contaminants, and is certainly a much healthier choice than soybean oil or corn oil. But your best choice here is olive oil.

When shopping for products made with olive oil, be sure to read ingredients labels (and not just the claims on the front of the package). Many products claim "made with 100 percent olive oil" on the label, but when you look at the ingredients, you find that the first oil listed is actually some other oil, not olive oil. How do they get away with his claim? Well, the claim is actually true: the product is made with a little bit of "100 percent olive oil" that is mixed together with other, cheaper oils.

This is a common gimmick used by salad dressing manufacturers. Companies that make salad dressing know that many consumers are interested in olive oil, so they make salad dressing products that prominently announce olive oil on the front label while, in reality, using much cheaper oils as the primary ingredients. As always, check the ingredient labels, and remember that ingredients are listed in the order of quantity.

Mustard, hot sauces, condiments

There are many condiments and sauces available to healthy dieters. My favorites include mustard, Tabasco sauce, and other hot sauces. The pitfall to watch out for in this category is added sugars, which are present in rather large quantities in barbecue sauces, ketchup, relish toppings, and other condiments. If you start reading the labels of these condiment products, you'll be amazed to find just how much these food manufacturers rely on sugar to add taste to their products.

Summing it up

So now you've seen my recommended list of groceries and products that are safe to purchase and consume. It's not the entire list of things that are good for you, of course, so be sure to experiment with this list and expand on it in ways that work best for you. What this list does allow you to do, however, is to eat well while avoiding metabolic disrupters that are linked to diseases like cancer, diabetes, cardiovascular disease, neurological disorders and other serious health problems. If you stick to the list I've given you here, you will largely avoid these disorders while simultaneously supporting a healthy lifestyle.

In this list, I have frequently recommended organic products because they are both safer for you to consume and are grown by farmers and ranchers who operate with a higher degree of ethics and integrity. But I do want to clarify my position on organic foods and say that if you are on a very tight budget, it is far better to eat non-organic foods on this approved list than to turn to cheaper foods made with metabolic disruptors. Let me give you an example of what I'm talking about:

A shopper is looking for a good source of healthy dietary fats, and she is comparing organic avocados -- which are very expensive -- to a refined oil margarine product that's very cheap. Thinking that the organic avocado is simply too high a price to pay, she might choose the non-organic margarine product. That would probably be a mistake, since a better choice would be to turn to non-organic avocados. The raw, fresh, unprocessed avocado is going to provide far better nutrition and health than any manufactured product, even if the avocado isn't organic.

To explain this further, sometimes I see people at the grocery store who have their shopping carts loaded up with crackers, breakfast cereals, soft drinks and ice cream, but they're hesitating in the produce section because they can't decide between organic lettuce or regular lettuce. I can hardly keep myself from jumping up and down in frustration, because the products this person has already chosen to put into their shopping cart are so outrageously unhealthy and contain such a large amount of metabolic disrupters that the decision between organic and plain lettuce is inconsequential. Organic lettuce isn't going to help this person. What they need to do is get rid of the metabolic disrupters in their diet, ditch the refined sugars, kick the soft drink habit, stop eating hydrogenated oils, and only then should they begin to consider the question of organic versus non-organic produce.

In other words, organic foods are not going to make up for poor dietary choices. A head of organic lettuce doesn't counteract a bowl of sugary breakfast cereal. You don't get good karma or extra credit just by eating organic produce.

Food products to avoid

Now that you have the complete shopping list of healthy foods to purchase, let's talk about what food products you should avoid purchasing.

You should already be familiar with the ingredients to avoid, so if you make a habit of reading ingredient labels, you'll automatically avoid the foods discussed below. However, most people find this list to be very useful to help remind them of the food categories they should watch out for.

Obviously, I'm not going to be naming brand names of foods to avoid, but when I name a category like soft drinks, I'm sure you can imagine what brand-name soft drinks I'm talking about.

Popular peanut butters (hydrogenated oils + sugar)

Peanut butter presents a common grocery shopping pitfall. At first, it appears to be an excellent choice for healthy eating, but a closer inspection of the ingredients label reveals otherwise. Virtually all brand-name peanut butters contain metabolic disrupters: hydrogenated oils and refined sugars.

The hydrogenated oils are added to peanut butter products to prevent the peanut oil from separating while the product sits on the shelf. This gives it a more convenient, smooth and creamy texture, but of course it also adds an extremely unhealthy ingredient to the food product.

The refined sugars are added to peanut butters to turn the product into peanut butter candy, which is what most popular peanut butter product really are. Apparently, the inherent sweetness of peanuts is not enough for many of today's consumers, and so manufacturers have to make it even sweeter, transforming what would otherwise be a healthy food into a dessert.

One of the fastest ways to give yourself heart disease, obesity and diabetes is to purchase brand-name peanut butter products, the cheapest grape jelly you can find, and spread it on white bread to make a peanut butter and jelly sandwich. It is an extremely high-carbohydrate, low fiber, metabolic disrupting recipe that's sure to accelerate the onset of many serious diseases.

Instant rolled oats (high glycemic index)

Instant rolled oats present another common grocery shopping pitfall. Oats sound healthy, don't they? The FDA has even approved certain health claims that may be printed on the labels of products made with oats. Certainly, oats can be healthy if eaten in their whole grain form, but almost no oat product at any grocery store offers that: they mostly contain instant, processed oats that are both easy to cook and much higher on the glycemic index scale than whole grain oats.

In other words, when the FDA approved health claims for oats, they made no consideration for the form of those oats. Manufacturers can take an otherwise healthy whole grain and convert it into a high-carbohydrate grain that's digested much like white flour. That's primarily what you get when you purchase instant rolled oats.

Instead, look for steel cut oats, or oat groats. These offer the best health benefits. Even then, you have to eat them sparingly, since they do provide a hefty dose of carbohydrates.

Of course, it's wise to completely avoid any flavored oat products such as instant breakfast oatmeal packages. All of these contain refined sugars, chemical sweeteners, or both. They have no place in a healthy diet.

Packaged meats (sodium nitrite, MSG)

As I have already discussed, packaged meats should be carefully checked for ingredients like sodium nitrite. This means every packaged meat product: hot dogs, sausages, lunch meats, pepperoni, and so on. Don't buy any meat product containing sodium nitrite. Instead, look for nitrite-free meats ("uncured" meats) found in the freezer section, or purchase fresh meats.

Breads, buns and pastries (refined carbs, hydrogenated oils)

Hopefully, you are already avoiding breads, buns, and pastries due to their white flour content, but you should also be avoiding them for another reason: many are made with hydrogenated oils. The refined grains contained in these products isn't the only ingredient to avoid, it seems.

Virtually all breakfast cereals (refined sugars)

When shopping for breakfast cereals, don't be misled by claims that cereals are "high protein." Just because a cereal is high protein doesn't mean it isn't also high in added sugars at the same time. Virtually every breakfast cereal is made with refined, processed grains and refined sugars, regardless of whether it also contains protein.

Beef jerky (MSG)

Avoid beef jerky products made with MSG or sodium nitrite. As you will discover by checking out the ingredients labels at grocery stores, this covers virtually all popular jerky products on the shelves.

Many salad dressings (MSG + sugar)

Watch out for refined sugars and MSG in many salad dressings. Healthy salad dressings made with quality oils such as olive oil can be a healthy part of any diet, but this is one product where it's easy to go wrong and accidentally end up consuming metabolic disrupters when you did not intend to. As always, read the labels carefully. Salad dressings are notorious for hiding unhealthy ingredients behind misleading labels.

Pasta sauces (sugar)

Over the years, pasta sauces such as pizza sauce and spaghetti sauce have become sweeter and sweeter to the point where, today, many are so outrageously sweet that they are perhaps best described as tomato sauce candy. When purchasing pasta sauce, be sure to check the labels and avoid any sauces that contain refined sugars such as high-fructose corn syrup. You'd be amazed at how many pasta sauce products are made with this ingredient.

Soups: (MSG + sodium nitrite)

Soups are another product category rife with dietary pitfalls. Regardless of whether a soup claims to be healthy, many soups are made with refined carbohydrates, MSG and sodium nitrite. Any soup containing noodles, for example, is made with refined carbohydrates. Any soup containing meat, such as ham soups, are probably made with sodium nitrite. And many soups are flavored with both MSG and excessive amounts of sodium.

The vast majority of American food consumers greatly overestimate the health status of canned soup. In reality, **most canned soups are overcooked, processed foods that would be practically tasteless if they weren't juiced up with MSG and salt**. It doesn't mean you can't find healthy soups, because you can if you look hard and shop for them in the healthy foods sections of your grocery store, but it does mean that you shouldn't automatically assume a soup is good for you just because it has the word "healthy" on the label. Strangely, people still eat chicken soup for a cold, when in reality, it's one of the worst foods in the store for a person who's sick.

Fried foods: (trans fats + unhealthy oils + MSG)

It's seductively easy to consume too many fried foods. Fried foods, after all, are typically rather low in carbohydrates and taste delicious. But from a health perspective, fried foods have absolutely no place in the diet of any healthy human being. This is true for several reasons:

If you purchase frozen foods that are meant to be fried at home, you will find that virtually all of them contain hydrogenated oils. This is done in order to make the batter actually stick to the food so that it doesn't slough off during the frying process. But it's bad news because even if you use a healthy frying oil at home -- such as olive oil -- you can't avoid eating the hydrogenated oils contained in the batter into first place.

If you purchase foods that have already been fried, such as frozen egg rolls or frozen battered fish, rest assured that these products have been fried in the cheapest oil possible, and that oil has been used over and over again. As a result, these foods will contain trans fatty acids and cancer-promoting acrylamindes, which are highly toxic chemicals that are created when foods are fried at high temperatures.

Fried foods are also highly acidic, meaning they share some of the disadvantages of soft drinks in terms of creating an acidic environment in your body which must be buffered in order to restore the pH balance of your system.

Overall, fried foods are bad for your heart, bad for your pH, bad for your digestion, and even promote diseases like cancer thanks to toxic chemicals hiding in virtually all fried foods.

The alternative? Baked foods. These days, you can even find baked frozen fish products that contain no hydrogenated oils.

When it comes to frozen fish products, however, there's one more thing to watch out for: MSG. The vast majority of all frozen fish products contain either MSG or yeast extract (which is an ingredient that contains MSG or "free glutamic acid") in order to add flavor to an otherwise flavorless slab of fish. You have to look hard to avoid these excitotoxins in frozen fish products.

With the prevalence of both hydrogenated oils and MSG in frozen fish products, I've given up on the whole category of frozen fish. Instead, I purchase frozen shrimp, scallops, cuttlefish or squid, or I just head over to the deli and order fresh fish that I can prepare in any way I want.

Lunch snack paks (sodium nitrite + hydrogenated oils)

Lunch snack packs are those small lunch kits that usually contain crackers, lunch meat, artificial cheese food and some sort of dessert. Hopefully, you are already avoiding these due to their lack of healthy ingredients, but in case you want another reason to leave these products on the shelf, take a look at their ingredient labels. You'll find that virtually all of these products contain sodium nitrite (in the meat) and hydrogenated oils (in the crackers).

Diet soft drinks (chemical sweeteners + acidity)

Diet soft drinks are to be avoided entirely for reasons discussed earlier under the "artificial chemical sweeteners" section. Make a point to drop soft drinks from your diet for the rest of your life. It's really not that difficult: you get along just fine without carbonated sugar water. If you need help, check out my book, "The Five Soft Drink Monsters" which gives you a five-step strategy for quitting the soft drink habit. You'll find it at **www.TruthPublishing.com**.

Most yogurts (chemical sweeteners or sugar + dairy)

Yogurts are another food that many people mistakenly think are very healthy. Decades ago, yogurt was a healthy food if you could stomach the dairy fats, but today, most yogurts are really just yogurt flavored pudding thanks to their extremely high refined sugar content. Most yogurt products are made with a shockingly large quantity of fruit-flavored liquid syrup.

And in the yogurts that are made without refined sugars, you'll usually get artificial chemical sweeteners such as aspartame or sucralose. As a result, you'll need to avoid virtually all flavored or sweetened yogurts.

But don't worry: if you enjoy eating yogurt and would like to continue receiving the health benefits of consuming the live acidophilus cultures contained in many yogurt products, here's the perfect solution: purchase plain, unsweetened yogurt, and stir in your own protein powder and stevia extract powder. You can even mix in some crumbled freeze-dried strawberries or other fruits which are now available in many grocery stores.

Mix these ingredients together and enjoy! It's a high protein meal that gives you all of the taste and satisfaction of commercial yogurts without the carbohydrates or chemical sweeteners. Better yet, you control the ingredients.

Remember, too, that yogurts are dairy products and so organic yogurts are strongly recommended over non-organic ones.

Margarine (hydrogenated oils)

As a discussed throughout this manual, any margarine product containing hydrogenated oil should be avoided altogether. The best ingredients for margarine products? Coconut oil, olive oil, or canola oil. At the grocery store, look for margarine products that have zero trans fats or “no hydrogenated oils.”

Granola bars (refined sugars)

Granola bars used to be considered healthy foods, and in fact at one time they were. But over the years, they have succumbed to the same trend that has transformed so many products at the grocery store: they’ve been sugared up and transformed into candy bars, not health bars.

Consider this: most granola bars these days are loaded with refined sugars and high glycemic grains such as puffed rice or rolled oats. Just read the labels and you’ll see that these bars are mostly carbohydrate snacks containing almost no protein and very little fat.

These high-sugar granola bars were very popular during the low-fat craze of the 80’s and 90’s, but now informed people are avoiding them.

Most sugar-free products (chemical sweeteners)

When shopping for healthy products at the grocery store, be especially wary of any product that claims to be “sugar free” on the label: virtually all of these products are sweetened with artificial chemical sweeteners. Some examples of foods to watch out for are sugar free syrups, sugar free fruit drinks or punch drinks, and sugar free puddings.

Just because it says a sugar free doesn’t mean it’s good for you. In fact, the very claim of “sugar free” is a strong indication that the product contains chemical sweeteners, meaning it’s actually bad for your health.

Cream of wheat or grits or instant breakfast grains (high glycemic index)

Have already briefly talked about the high glycemic index of instant rolled oats, the same can be said of most instant breakfast grains such as cream of wheat or even grits. Any hot breakfast cereal that claims to be “ready in minutes” is going to have a high glycemic index due to the same characteristics that make the food convenient to cook: it has been rolled or processed into tiny particles. These tiny particles cook quickly, but they’re also digested quickly and tend to spike blood sugar levels.

Any puffed grains like puffed rice or puffed wheat (high glycemix index)

Watch out for any “air” grains such as puffed rice or puffed wheat. The puffed rice snack products were rather popular during the low-fat craze, but few people stopped to consider the glycemic index of puffed rice in the first place. It turns out that puffed rice impacts your body in very much the same way as white bread or refined sugars. Its spikes your blood sugar and results in the secretion of insulin from your pancreas -- two things that every health-conscious person should avoid.

Canned fruits (packed with corn syrup)

Watch out for hidden refined sugars in canned fruit products. While canned fruit is one way (although not a very good way) to get some fruit into your diet, most canned fruits are packed with high-fructose corn syrup, contributing carbohydrates and refined sugars to your diet. In addition, many canned fruits are packed with artificial chemical colors in order to add color to a product that has had the life cooked out of it.

A far better choice? Fresh fruits.

Any food bar that says “energy” or “sports” (refined sugars)

Many of the same manufacturers who profited handsomely by selling granola bars to the low-fat crowd have been retooling their product lines to produce “energy bars” and “sports bars,” which are now far more popular than granola bars. But this is largely smoke and mirrors: any food bar that says “energy” on the label is actually just another candy bar loaded with refined sugars. That’s the key word to look for: **energy**. In the food bar manufacturing industry, sugars = energy.

Another euphemism for sugars used by the food bar manufacturing industry is “sports.” Virtually all “sports” bars are also loaded with sugars and they are marketed as products that will give you more energy and help you excel in physical activities such as running, biking, and so on.

In reality, serious athletes don’t need refined sugars. What they need are complex carbohydrates just like everybody else, and the more they know about nutrition, the more they avoid energy bars and sports bars. These bars, which are more accurately described as candy bars, are really only purchased by suckers who probably aren’t very physically active in the first place.

There is an exception to all this: if you are a marathon runner or a triathlete or a long-distance cyclist, and you have perhaps 8 percent body fat and burn four thousand calories a day from training, you may in fact need some refined sugars during training. These can provide rocket fuel energy for sustained, highly strenuous cardiovascular workouts. But only Olympic-class athletes really need such high energy sources of carbohydrates. The rest of us, which covers more than 99 percent of the population, should avoid all refined carbohydrates and continue with our comparatively mild physical fitness activities.

Sports drinks (artificial colors, big ripoff)

In the same category of “sports” products sold to suckers, you’ll find those salty, neon-colored sports drinks. These sports drinks represent one of the worst ways you can spend dollars at the grocery store. They are made primarily of salt water colored with artificial colors. They provide virtually no nutrition, and are vastly overpriced based on the cost of their ingredients. They are aggressively marketed, however, and appear to be experiencing some degree of success in the marketplace thanks to purchases by consumers who simply don’t know any better (and who are easily influenced by celebrity endorsements).

You can make your own sports drink by dropping a few grains of Celtic sea salt and stevia powder into a bottle of spring water. Chances are you probably get plenty of salt in your diet as it is, and you don't need to "replace" anything lost during exercise other than water unless you're a triathlete or Ironman contender.

Canned beans (watch out for sugar)

Another grocery product to watch out for is canned beans: many contain hidden sugars that are not prominently mentioned on the label. As always, check the ingredients list for details.

Dinner mixes (most contain MSG)

Dinner mixes, boxed dinner kits, and other instant meal products that contain any sort of "flavor packets" almost always contain MSG. Look for ingredients like monosodium glutamate, hydrolyzed vegetable protein and yeast extract.

Sauce mixes (most contain MSG)

As with dinner mixes, above, most sauce mixes also contain MSG. This excitotoxin is especially prominent in gravy mixes and salad dressing mixes. But you should watch for it in any sort of flavor packet mix or bouillon product.

Instant rice (high glycemic index) or rice mixes (MSG)

Don't be misled into thinking that instant rice products qualify as whole grains. Instant rice is metabolized a lot like white flour: it's high on the glycemic index and results in insulin spikes. As a general rule, the faster the rice cooks, the higher the glycemic index.

Also, beware of rice mixes that contain any sort of flavoring. Most of these products also contain MSG or yeast extract.

Instant potatoes (high glycemix index)

As with instant rice, instant potatoes are also very high on the glycemic index. These should be avoided entirely. If you want mashed potatoes, make your own, and be sure to keep the peeling on.

Breakfast sausages (MSG and sodium nitrite) and bacon

Although I've already covered packaged meats, I think both breakfast sausages and bacon deserve an extra mentioned here. Virtually all sausage and bacon products are processed with sodium nitrite. By eating these products, you are producing cancer-causing nitrosamines in your digestive system.

But there's another reason to avoid these breakfast meats: cooking with high heat also produces carcinogens. By microwaving or frying these meats at hot enough temperatures to make them brown, you are also creating toxic carcinogens that you ingest upon eating these meats. These carcinogens, combined with the sodium nitrite added by food manufacturers, results in a heightened health risk that you would be wise to avoid entirely.

A better choice for breakfast? Eggs or fresh meats made without nitrites.

"Sweetened with fruit juice" products like jellies

Watch out for products that claim to be made with "no added sugar" or "sweetened with fruit juice." Just because something is sweetened with fruit juice doesn't mean it isn't a high-carbohydrate product. Fruit juice, by any measure, has a high glycemic index and counts as a high-impact carbohydrate. While fruit juice may be slightly healthier for you than refined white sugar, it has virtually the same effect on your blood sugar and insulin response. Therefore, avoid products that are sweetened with fruit juice.

Simultaneously, another ingredient frequently used by food manufacturers to avoid listing sugar on the label is "evaporated cane juice." This ingredient is also a high glycemic index carbohydrate. For dietary purposes, it is nearly identical to refined white sugar. There are differences in the manufacturing process, and so-called evaporated cane juice does contain more vitamins and minerals than white sugar, but its impact on your blood sugar is virtually the same.

Frozen potatoes (hydrogenated oils + carbs)

Frozen potato packages are yet another food to avoid. Although they may appear to be a relatively healthy food manufactured with minimal processing, the vast majority of frozen potato packages contain hydrogenated oils.

Potatoes can be useful for controlling hunger if used sparingly: studies have shown that potatoes rank very high on the satiety index, meaning that people who eat potatoes tend to eat far fewer calories later in the day. But even if you choose to consume potatoes, eat them sparingly and only with other foods containing fats or fiber. This will minimize the impact of the potatoes on your blood sugar. And of course, never eat potatoes fried in someone else's oil: buy them frozen and pan fry them in your own olive oil or coconut oil, preferably at minimal heat settings.

Beware of deli-prepared foods

Also beware of foods prepared in any grocery store deli. According to most state laws, deli prepared foods do not have to reveal all of the ingredients that went into them. Since these food products don't cross state lines, they aren't subject to federal food labeling requirements, either. As a result, if you purchase sandwiches, convenience meals, or fried foods made right at the grocery store, you may not find a label listing ingredients at all. My advice is: no ingredients, no purchase. If you don't know what's in it, why on earth would you put it in your mouth?

Cleaning out your pantry

After reviewing this list of food and grocery products to avoid, you may realize -- like most people -- that you probably have a few of these products in your refrigerator or pantry right now. What's a person to do? Should you throw out all the food in your pantry and replace it with products from the approved shopping list?

My general advice on this question is that no, you shouldn't throw out all of the foods in your pantry just because they contain metabolic disrupters. There is one exception to this, however: if you are currently suffering from a serious disease such as cancer, you should immediately throw out all foods containing sodium nitrite. If you are suffering from diabetes, you should definitely throw out all foods containing refined sugars or white flour. If you are suffering from heart disease or cardiovascular disease of any kind, you should immediately throw out all products containing hydrogenated oils or homogenized milk fats. In other words, if you are currently battling any disease, the importance of getting these disease promoting ingredients out of your diet outweighs the economic penalty for doing so.

But for everyone else, if you've been eating these food products for a number of years, chances are that one more day or week on the same products is not going to kill you. The key is to stop buying those products from this day forward, and start stocking your pantry and refrigerator with healthy products that support your weight loss goals and your overall health and wellbeing.

So feel free to eat your way through the inventory you might have right now while working to improve your diet by shopping from the approved foods list and avoiding the unapproved foods list.

QUESTIONS AND ANSWERS

Now let's covers some of the common questions and answers concerning the information I have presented in this manual.

Do I have do follow everything in this manual to be healthy?

This is a common concern among people who are initially exposed to the truth about the highly toxic ingredients contained in many of the foods they have eaten. Some people, after reading this information, throw up their hands in despair and figure, gee, I can't eat anything, so why bother discriminating at all? I'll just eat everything I want to eat!

In reality, you don't have to follow everything in this manual in order to improve your health. I believe in empowering people with information that helps them make informed, educated decisions about what level of health outcome they wish to achieve. With the information I've presented in this manual, you have control. And you have the choice of how much of it you wish to apply in your own life.

If you are eating many of the dangerous ingredients I have discussed here, you could conceivably improve your health by doing just one thing in this manual while ignoring everything else. If you are suffering from heart disease or cardiovascular disorders, for example, you might choose to simply avoid hydrogenated oils and forget the rest of what you read here. And that would amount to considerable progress. That would be an improvement over your current diet and it would undoubtedly help you overcome the challenges you now face with your health condition. After six months or a year, you might find that you feel so much better that you're ready to take on a second bit of advice from this manual.

Or if you are suffering from cancer or digestive disorders, you might decide to avoid sodium nitrite only. If you have neurological disorders such as uncontrollable tremors, forgetfulness, or mood disorders, you might decide to avoid all of the metabolic disrupters associated with neurological disorders, such as artificial chemical sweeteners and MSG.

The full spectrum of health: it's your choice

The choice is entirely up to you. Imagine your health as being a point on a very long line stretching from a place on the far left that we will call disease, to a place on the far right that we will call "perfect health." You can decide where you wish to live on that line by determining what foods and ingredients you eat and what level of physical exercise you pursue. This may also be related to what level of self-discipline you think is worth expending in order to achieve your desired level of health.

Most Americans are somewhere between neutral and the far left: they are engaged in unhealthy dietary habits and they routinely avoid physical exercise. Adopting healthy food choice results in a shifting towards the right, but if you are consuming sodium nitrite, hydrogenated oils, MSG, chemical sweeteners and other metabolic disrupters, you will never progress further to the right than the neutral point. **If you want to achieve a state of health, rather then a state of disease,**

you will have to avoid these substances in your diet. The more you choose to avoid, and the longer you avoid them, the more quickly you will shift to the right, closer to a state of perfect physical health. By adding a healthy dose of physical exercise such as cardiovascular training or strength training, you can further accelerate your shift towards the right. Other things that move you closer to the right include purchasing organic foods, eating more raw foods, and engaging in all-important nutritional supplementation through superfoods like chlorella and spirulina.

You have the power to determine your health outcome

So the choice is really up to you. Notice that this is the opposite of the message you have probably heard from the conventional medical establishment, which goes out of its way to disempower people and make them believe they have no control over their health outcome. Conventional medicine likes to tell you that diseases just “happen” to you, for no fault of your own, and due to circumstances you do not control such as your genetic makeup.

This message is false, of course. You are, in fact, the only person who has control over your health outcome. Your doctor cannot determine your health, the FDA cannot determine your health, and no prescription drug can make you healthier (they can only mask isolated symptoms). You are the only person on the planet who can decide where you want to be on that health spectrum and then take the necessary actions to arrive at that position.

It isn’t my place to engage in any sort of judgment about where you decide you want to be on that line. If you examine what you want in life, and you decide that eating all of the foods you emotionally desire is far more important than controlling what you eat in order to achieve a desired health outcome, and you actually apply some thought to this issue and arrive at a decision, I respect that decision no matter where it rests on the line. You may decide you only want to be slightly healthier than neutral, and that’s fine as long as it’s something you have carefully weighed.

What I am against is people who don’t actually make a decision -- people who just do whatever they want to do without really thinking about it, and without anticipating the outcome that will be created by their actions. **It is, indeed, an indicator of both maturity and intelligence when people consciously anticipate the future results of their present actions**. With dietary choice, the results of present actions are often far away, and that makes them difficult for many people to accurately anticipate, but it doesn’t mean they don’t exist. If you could compress time, and clearly see the cause-and-effect relationship between foods and disease, the correlation would be crystal clear. It is only the time lapse that confuses most people about this cause/effect relationship.

Why isn't this information more widely publicized?

Many people find this information to be so shocking, and so obviously true, that they wonder why there isn't more attention given to it by news organizations or the FDA. To understand the answer to this question, you have to study the politics of food. An excellent book to read on the subject is, Food Politics by Marion Nestle, a former USDA employee who worked on the original Food Guide Pyramid project.

Food manufacturers generate enormous advertising revenues for publishers of newspapers and magazines, not to mention television networks. Accordingly, it is not in the financial interests of organizations who depend on food company revenues to investigate the practices of those companies and print any information that might harm their sales. If they did, the very first thing that happens would be the mass cancellation of advertising contracts by whatever food company was disparaged in the press. Some people might say there is no link between editorial and advertising at magazines and newspapers, but only an extremely naïve person would believe such a fairy tale. In reality, as every newspaper editor and advertising executive well knows, if a newspaper or magazine publishes a negative expose of any of its advertisers, that advertiser will immediately and probably permanently pull its advertising from that publication.

To state this simply, publishing companies don't attack their advertisers, and food companies are major advertisers.

This is why my publisher, Truth Publishing, doesn't accept advertising from any manufacturers or marketing companies. Since there are no financial ties, there's no conflict of interest, and **that's why this book and the articles on Newstarget.com are one of the few sources from which you can hear the stone-cold truth about dangerous foods and ingredients**. Mainstream publishers won't tell you this information because they depend on those advertisers to keep them afloat!

At the federal regulatory level, the reason you never hear about the health damaging effects of food ingredients is because food manufacturers hold an enormous degree of influence over lawmakers and regulatory agencies like the FDA and the USDA. When any agency even attempts to recommend that Americans eat less of a certain food in order to achieve a better state of health, the industry group that would be negatively affected by such an assertion goes into political overdrive and complains loudly to lawmakers while denying the scientific basis for such dietary recommendations.

For example, in the United States, the Big Sugar industry strenuously denies any link between the consumption of refined sugars and diseases like diabetes or obesity. Through political influence, they managed to get the Bush administration to actually block an initiative by the World Health Organization that would have recommended that people all over the world limit their intake of refined sugars.

Over the years, there have been some rather energized debates over the Food Guide Pyramid published by the USDA. Every industry wants its own foods and products to be the largest recommended group on the pyramid, and no matter what pyramid the USDA publishes, food manufacturers that didn't achieve the most prominent positions will complain loudly. Presently, the breads, grains, and cereals food group occupies the largest and most prominent position on the food guide pyramid, which should be no surprise considering that the US Department of Agriculture

is, in essence, a marketing branch of the agricultural industry. By advising people to eat more grains, they are in effect promoting the financial interests of grain farmers. In fact, the Food Guide Pyramid should more accurately be called the “Buy More Grains” Pyramid.

Overall, federal regulatory agencies do not have the political clout to tell American consumers the truth about link between foods and diseases, even if they wanted to. The food lobbies simply hold too much sway in Washington. As a result, dietary recommendations from the USDA have been watered down thanks to the meddling of politicians whose reelection campaigns are funded by food companies. When the USDA wanted to tell consumers to eat less red meat, for example, the meat industry balked and, through the influence of Senators representing meat producing states like Texas, the advice to “eat less red meat” went through a miraculous transformation. “Eat less red meat” first became “limit your consumption of meats high in saturated fat.” After another round of protest from the beef industry, this watered down claim was transformed even further to: “ increase your consumption of lean meats,” a claim that apparently satisfied the beef industry because it is now part of the USDA’s dietary recommendations guide.

Even though many people within the USDA wished to advise consumers to reduce their consumption of red meat, the power and influence of the beef industry was simply too strong. **The recommendation to limit meat intake ultimately became advice to increase the intake of lean meats**, which is almost precisely the opposite message that the scientific evidence truly supports!

That’s food politics at work, and it helps explain why no federal regulatory agency would dare touch the sort of information I have presented in this guide: the food industry would go crazy, and anyone who suggested anything of the sort I have presented here would immediately lose their job. (Fortunately, I’m not on the government payroll.)

That’s why you can only get this information from people like myself who have absolutely no vested interest in the food industry. I promote foods that are healthy and that enhance the quality of life of human beings, and I blatantly and honestly expose foods and ingredients that promote disease. It’s the most honest, straightforward information you’ll ever get on the relationship between foods and disease, and it’s the kind of information that I hope you now understand you can never receive from any newspaper, magazine, television station or government regulatory agency. Those organizations are simply unable to tell the truth about the relationship between foods and disease due to their political circumstances.

This isn’t some giant conspiracy: it’s just the way the world works. Everyone wants to keep their job, whether they work at the USDA or as an advertising salesperson for a popular magazine. If you just go with the flow, you keep your job. But if you rock the boat, you will not only find yourself looking for a new job within a matter of days, you will probably be blacklisted by the entire industry and find yourself without work for an extended period of time. That’s why even well-meaning people don’t speak out about this kind of thing: they have families and they don’t want to risk having no salary for the next two years while they look for a new job.

If you are one of these well-meaning people who wants to speak out while also protecting your identity, please contact me. As an investigative journalist, I offer guaranteed protection of my sources while providing an outlet through which you can make your information public. Best way to reach me? Use a free email account from Hotmail or Yahoo as your return address. Keep your identity to yourself and tell me what you’ve got that you want made public. You can find my email contact information on Newstarget.com

What qualifies you to be an expert in nutrition and health?

An excellent question, and it is one that I encourage you to ask of any person from whom you are seeking advice about your health. Because the fact is that most conventional medical doctors have few qualifications in nutrition or the relationships between foods and health. Medical schools are so busy teaching doctors about drugs and the diagnosis of diseases that they spend almost no time teaching doctors about the fundamentals of nutrition and health.

Doctors learn about the causes of disease, not the causes of health, and their training of treatments is dominated by "educational seminars" from drug companies who provide a strongly biased education that eliminates the possibility of using diet and exercise to prevent disease and promote good health. The bottom line? Unless a doctor has spent his or her own time studying nutrition, they may have received as little as one hour of training on the subject during four years of medical school. That's one hour, not one credit hour, meaning that they listened to a total of 60 minutes of information about nutrition in all their four years of medical school.

In contrast, I have now spent over **5000 hours** conducting investigations, reading books on nutrition and health, and conducting real-world experiments that have taught me a world of useful information about how nutrition really works in the human body. By any honest assessment, then, you might say I have 5000 times the credibility of most MDs when it comes to nutrition. You have to understand that being a "good" doctor doesn't require either the accumulation or the communication of any nutritional knowledge whatsoever. No doctor gets blamed for failing to educate their patients about what kinds of food they should eat or not eat. If a doctor diagnoses disease, prescribes drugs, and orders expensive lab tests for patients that result in more revenues for whatever hospital or medical group owns the facility that the doctor works for, he or she is considered a "good" doctor.

And yet it is precisely the doctors in our society who die at younger ages than the rest of the general population. It's true: doctors die younger, they live far more stressful lives, and they suffer from an astounding assortment of health problems for which they have the responsibility of helping treat in patients! Taken as a group, doctors hardly represent the optimum state of health in a human being. A rational person might ask, "If doctors aren't themselves healthy, how can they recommend strategies for being healthy to their patients?"

The answer is, they can't. Most conventional doctors simply are not healthy people themselves. They never experienced what it's like to go from being in a disease state to a state of optimum human health. Very few doctors have reversed any major diseases in their own bodies. Very few doctors are healthy, happy human beings that you would want to have as health mentors. And although they may have an impressive array of "book knowledge" about diseases and what drugs to prescribe to mask the symptoms of those diseases, they generally lack the sort of real-world experience that I think is an absolute necessity to being able to understand and communicate health enhancing information. I don't mean to disparage all doctors with these generalizations, since many of the very best authors, researchers and true heroes of nutritional medicine are, in fact, medical doctors, but I think this is a valid point when you look at the general health of doctors across the board. Most are in very poor health.

(Still, I must say that I quote heavily from doctors in this guide, and the doctors I quote here would very likely agree with my assessment of "most" doctors. As with any profession, the quality, intelligence, ethics and abilities of doctors varies widely. There are very "good" doctors and very "bad" ones. The problem today is that there are far more of the latter than the former.)

It just doesn't make sense to seek health advice from a so-called authority who can't, themselves, demonstrates a high degree of health. Would you take your car to a car mechanic who had to get a ride to work because his own car wouldn't start? Would you get your haircut from a person whose own hair looked like a ragged mop? Would you hire a web site designer whose own site looked awful? If you said no to these examples, then **why on earth would you seek health advice from a person whose own health is anything other than stellar?**

You see, a piece of paper on the wall that says "M. D." can't give a person the knowledge and wisdom to be healthy. The healthiest healers I know have no such credentials, and they don't need them. Walk into any Chinese herbalist shop in any city anywhere in the world, and you're likely to find people who are in a high state of health. You won't see some obese Chinese doctor behind the counter, hawking the latest prescription drug. Instead, you're likely to find a rather well-balanced, healthy person who can tell a lot more about your state of health by feeling your pulse for five minutes then any conventional medical doctor could tell from $5,000 worth of high radiation CT scans and magnetic resonance imaging equipment. Heck, any good chiropractor in the U.S. can tell you more about your state of health than a CT scan.

But getting back to the main question, what is it that qualifies me to be an expert in nutrition? First of all, I don't claim to be such an expert, since that is only something that each individual reader can decide. My job is to share what I know, and I know what works because I've experienced it firsthand. I've gone from being near diabetic and overweight to lean, athletic, highly energetic and extremely healthy. In my own health transformation, my own appearance was altered so radically that people told me I seemed to drop 10 years of age. I have a resting pulse of 48. My blood chemistry nails the "healthy" mark on every single test such as liver enzyme function, blood platelet counts, cholesterol levels, and so on. My blood pressure is 105/65 and I have extraordinary bone mass density that makes my bones remarkably strong. (50 percent more dense than the bones of a 25 year old, actually.)

I'm not saying any of this to brag, but rather to share with you the extraordinary results that can be achieved by any person who applies sound nutritional wisdom with strength training and cardiovascular training over a period of several years. I went from an aged looking, depressed, low-energy, overweight, near-diabetic individual on a high-carbohydrate diet to a lean, athletic, young-looking practitioner of healthy lifestyle choices in terms of foods, beverages and physical activity. I don't even have good genes for any of this: I'm not an "easy gainer" like the hulks who put on 20 lbs. of muscle mass in 6 months by pumping weights at the gym. I'm also not naturally thin, since all the men in my family have struggled with being overweight. I'm highly sensitive to carbohydrates and very quickly put on pounds if I start eating foods like bread or grains.

In other words, it's easy to look at me and say, "Gee, this guy must have it easy; he was probably born that way." But that's hogwash: I had to work for every health improvement that I've achieved. I forced myself to learn the knowledge necessary to solve my own health problems, and that is, I believe, absolutely the only way that any person can become an expert in health. To compare the depth of my own knowledge and experience with a medical degree is ludicrous -- the medical degree

doesn't even compare when it comes to knowledge about nutrition and the underlying causes of health. Then again, I'm no expert when it comes to diagnosing diseases, writing prescriptions, and ordering lab tests for ill patients. I'll happily leave that to the doctors, however, since that seems to be their primary expertise.

So what qualifies me to talk about nutrition and health? The same thing that qualifies anybody to talk about those things they have personally mastered through years of applied study, research and personal experience. A person who has taken the journey, and who has pursued an area of specialty with a high degree of personal passion is always going to be better informed and, I think, wiser than someone who simply read the information in the book and took a series of tests that proved he or she could remember what they read. There is simply no replacement for personal experience. When it comes to nutrition, doctors haven't even read the books or taken the tests. There are no nutrition tests in most medical schools!

And yet, with all this said, I still consider myself a novice when it comes to understanding the miracles of the human body and the healing potential of nature. I realize I have just scratched the surface of understanding when it comes to the human body and mind, nutrition, and nature. There's a universe of information to explore, and perhaps someday I will be far enough along on that path to consider myself "well informed." Frankly, I'm just a humble student of nature.

I currently have heart disease. How soon can I reverse my disease if I follow your advice?

First of all, I am not a doctor, nor do I pretend to be one by putting on a white lab coat and writing drug prescriptions to patients. None of the information I present in this report should be taken as medical advice. If you have a serious medical condition, I invite you to seek out a qualified health professional, preferably someone who is open to the idea of using lifestyle changes to improve your overall state of health. You will probably find this very challenging if you limit your search of medical professionals to MDs.

So to answer this question, let's move away from talking about your specific health condition in particular, and move into talking about the ability of dietary changes to create a healing effect in human beings. When you look at the historical and modern-day scientific data about nutrition and diseases, it becomes clear that **virtually all of our modern diseases are in fact caused by poor dietary practices**. Cancer, diabetes, heart disease, obesity, osteoporosis, irritable bowel syndrome, clinical depression, and even neurological disorders can all be traced to a specific dietary pattern that, when altered, results in a rather rapid improvement in the health outcome of the patient.

But whether a dietary change can actually reverse a specific disease such as diabetes depends entirely on the degree of permanent damage that may have already been caused as the disease progressed. If a person permanently damages their liver through excessive alcohol consumption, for example, eliminating alcohol from the diet will not bring back the liver. In a similar way, the person who suffers from permanent, physical heart damage will not automatically start rebuilding a new heart by switching to a heart-healthy diet. However, it may be some comfort to know that many so-called "physical" malfunctions of the heart are actually not permanent physical deformities and have been shown to be reversible through dietary changes such as eliminating refined carbohydrates from your diet and supplementing with full-spectrum B vitamins.

It was the very father of medicine, Hippocrates, who said "Let thy food be thy medicine." (That was right after he said, "First, do no harm," which has also been largely forgotten by Western medicine.) Food is not only the best medicine, but in fact the only medicine that a human being needs in order to achieve a high state of health and well-being. Prescription drugs do absolutely nothing to address the core causes of diseases and disorders: they only mask isolated symptoms, and by doing so, they encourage patients and doctors to overlook the root causes of these diseases, allowing them to progress even further to the point where they create more symptoms that, of course, require even more prescriptions. It's a vicious cycle that spirals into a life of misery and dependence on expensive prescription drugs.

The answer to this dilemma, according to most people, is to make the government (i.e. the taxpayers) pay for all these prescription drugs. It's ridiculous, of course, since the real solution rests in altering a patient's dietary and physical fitness habits so that they can be free of all prescription drugs. This sort of thinking is obviously not very popular with the prescription drug manufacturers.

The best results in using diet to reverse and prevent disease are experienced when a person begins to not only avoid metabolic disrupters in their diet, but when they start adding powerful nutritional supplements to their daily intake. I have personally experienced extraordinary gains in physical and mental health from taking superfoods like chlorella. Spirulina is another of my favorite superfoods, and I regularly take whole food complexes that are loaded with phytonutrients from a wide variety of plants. I'm a big believer in nutritional supplementation and its ability to prevent and reverse disease.

In fact, if you hang around me much, you'll often hear me laughing about people's fear of cancer, and how I believe that cancer is one of the easiest diseases to reverse through nutritional therapy. By last count, there are more than 20 nutritional approaches to cancer of which I'm aware, and just two or three of these therapies, when used in combination, will beat the vast majority of early-stage cancers as long as the person simultaneously stops consuming cancer promoting products and ingredients like sodium nitrite. Cancer is exceedingly easy to reverse through nutritional therapy. One of the more powerful anticancer foods, by the way, is garlic. Eat it raw, if you can stand it, and watch your cancer cells melt away.

Another powerful anticancer compound is apricot seed oil, a substance sometimes called vitamin B-17 or Laetrile. It is able to move directly to cancer cells within the human body and deliver potent tumerogenic chemical compounds directly to cancer cells without touching healthy cells. In other words, it operates much like conventional chemotherapy except it automatically targets cancer cells on a cell by cell basis rather than poisoning the entire body of the patient.

Read more at:
http://www.curezone.com/foods/laetrile.html

In the food category, raw broccoli contains such powerful anticancer compounds that I have often stated it would be front-page headline news all over the world if it were a prescription drug. The drug manufacturing companies would claim they found the "cure" for cancer, and that everyone should take it even as a preventive measure. In fact, all you have to do to help prevent your own cancer is eat raw broccoli several times a week, or better yet, drink broccoli juice that you make fresh right your own kitchen.

These are just a few small examples of the more than 20 nutritional therapies for reversing and preventing cancer through the use of dietary changes and nutritional supplements.

Overall, the answer is yes, dietary changes can both prevent and reverse serious diseases. Be warned, however, that **this position is considered heresy in the conventional medical establishment primarily because it threatens the profits of prescription drug companies**. The people making money by selling you a lifetime of drugs certainly don't want you to find out that **you can cure your own diseases by altering your choice of foods and beverages**. If that truth were to leak out and be widely accepted, drug company profits would be wiped out virtually overnight. People would be far healthier, but drug company executives would have to start looking for new jobs. They hate doing that.

Once again, it isn't some giant conspiracy, it's just a large number of people who are each looking out for their own jobs. If you were an executive in a drug company, who knows -- you might act in very much the same way.

How serious is the health risk from these metabolic disruptors anyway?

The health risk from consuming metabolic disrupters is extremely high. In fact, a critical review of the available scientific evidence clearly shows that the vast majority of our most common modern diseases are simply the result of consuming metabolic disrupters over a period of years or decades. Truly, more than 90 percent of heart disease, diabetes, cancer, osteoporosis, mental disorders and digestive disorders can be entirely prevented by avoiding the metabolic disrupters that are so prominent in our food supply. Of course, accomplishing this across the entire population would mean making drastic changes to our food supply: perhaps 80 percent of the products in grocery stores would have to be reformulated or simply removed from the shelves, because that's the percentage of food products that promote disease.

Of course, that's unlikely to happen anytime soon. Most people aren't privileged to the kind of information you're getting here, and the vast majority of Americans will continue to eat whatever they like and whatever the food companies push on them. They are not really interested in being healthier, only in satiating their taste with the latest, greatest super-intense snack food that is offered to them in pretty packaging with a fifty-cents-off coupon.

From a national level as well, if you really take a look at the food politics at play here, you will find that the people in charge at the USDA and FDA admit it would be disastrous to the economy if people actually avoided the foods that causes these diseases. **The pharmaceutical and medical industries would be devastated, since people would no longer need prescription drugs**, expensive diagnostic tests, and frequent visits to their doctors. If people ate healthy foods and avoided metabolic disrupters entirely, they simply would not get sick at anywhere near the rates we are seeing today. The financial and economic implications of this are huge. All this is stated quite clearly in the book **Food Politics**, where Marion Nestle brings up this very point and describes how these federal agencies have concluded the only practical solution is to try to enrich certain foods to make sure they don't promote a very limited number of diseases related to nutritional deficiencies. In other words, these federal agencies are well aware of the links between metabolic disrupting

ingredients in foods and the diseases they cause in the general public, but they refuse to take action to educate the public or force food manufacturers to reformulate their foods simply because the economic fallout would be too great.

Poison vs. metabolic disruptors

But when it comes to the discussion of poisons and whether or not these metabolic disrupters can be considered poisons, you have to explore the working definition of the word "poison." Many people think of poisons as substances that induce death within a few minutes or hours after being consumed. If you drink battery acid, you aren't likely to live very long, and thus battery acid would be considered a poison by most people.

But what if a substance takes longer to kill you? What if there were a liquid that would kill you in 10 years if you drank it today? Would that be considered a poison? From a technical point of view, it certainly should be, but in the real world, most people never associate the two events. The passage of time has simply been too long. People don't connect the events, so they don't consider the original liquid to be a poison at all.

This is what happens when people consume metabolic disrupting ingredients such as hydrogenated oils, MSG, sodium nitrite, and many others. These are all technically poisons, because when consumed on a daily basis over a long period of time, they do in fact induce disease and death. The only reason they aren't labeled poisons is because they don't kill people overnight. But they do, in fact, kill people over the years. This fact has been well documented in the scientific literature.

In this way, long-term thinkers would obviously consider these substances to be poisons, but short-term thinkers might never make the connection. Food manufacturers rely on short-term thinking by the general public in order to get away with using disease-causing ingredients in their foods without being responsible for the toxic effects caused by those ingredients. They know they can use any ingredient considered legal by the FDA and that they will never be held responsible for the financial consequences experienced by consumers who eat those ingredients. In other words, a manufacturer that uses hydrogenated oils in its margarine product might earn $1000 in sales from a single customer over the course of two decades. But that customer might experience $50,000 in health care costs and lost productivity as a direct result of the eating that margarine product containing hydrogenated oils. Yet the manufacturer has no responsibility under the laws written today to compensate the customer for his or her health care costs or loss of productivity related to the consumption of the margarine product.

In this way, **food manufacturers shift the economic burden of their unhealthy foods and ingredients on to consumers**. For their part, consumers blindly accept this economic shift, primarily because they are clueless about the cause / effect relationship between foods and diseases. If food manufacturers were forced to actually add in the long-term financial effects of their products to the prices of those products, a tub of margarine might cost $10. A package of bacon, laced with sodium nitrite, might cost $10 as well. A diet soft drink containing aspartame might sell for six dollars a can. If food and beverage products were priced at level that truly represented their total cost to the consumer, healthful foods like vegetables, organic meats, cold pressed olive oil, avocados, and other similar items would appear inexpensive in comparison.

I have frequently explained this to people who complain that buying organic foods is too expensive. I challenge them by asking them to tell me the cost of one night at a hospital. What's the cost of a single visit to the doctor? What is the cost of having heart disease, cancer, or diabetes that is caused by consuming processed foods made with ingredients that promote these diseases? In comparison, organic foods and unrefined, unprocessed foods are a bargain.

GETTING STARTED: FIRST THINGS FIRST

I have presented an enormous amount of information in this manual, and for some people it is initially too much information. So in response to those who have asked me for the short version -- some way to make all of this really simple and easy to follow -- I offer the following list of the top five things to do in order to make your food choice healthier.

If you've been reading this manual and thinking to yourself, "Where do I start?" This is the answer: start right here!

1. Give up soft drinks for life.

Giving up soft drinks is a fundamental step toward achieving both weight loss and health enhancement goals. There's simply no reason to drink soft drinks. Regular soft drinks are loaded with refined carbohydrates in the form of high-fructose corn syrup, and diet soft drinks contain artificial chemical sweeteners linked to neurological disorders. Both types of soft drinks are highly acidic and tend to disrupt the pH balance of your system. Simply make a decision and a commitment to live the rest of your life without soft drinks. You really won't be missing much, and if you avoid them for a year or so, you'll never want to go back.

If you need help quitting soft drinks, check out, The Five Soft Drink Monsters at www.TruthPublishing.com

2. Make water your only drink.

Water is the only beverage you need, period. You don't need fruit juices, you don't need vegetable drinks, and you don't need cows' milk. What you really need is water, and chances are that you need a lot more of it than you're currently drinking. If it helps you get used to drinking water, try it with ice at first, but strive to drink room temperature water in the long run.

3. Read the labels and avoid dangerous ingredients.

Start reading the ingredient labels of all foods, right now, before purchasing them. Don't buy something unless you know exactly what's in it. Don't put it in your grocery shopping cart unless you read the label first. Make this a habit. This is the only way that you can exercise total control and choice of freedom over what ingredients you decide to put into your body. It's the only reliable way to avoid consuming metabolic disrupters.

4. Supplement with superfoods

Supplement your with superfoods such as sea vegetables, chlorella, spirulina, and whole food concentrates (like Jenny Lee Supergreens or The Ultimate Meal). Focus on supplementing with whole food complexes, not isolated vitamins or minerals. Make your supplements a regular part of your dietary habits.

5. Physical exercise

Finally, get serious about physical exercise. You can't diet your way to a fit, lean body. At some point, you're going to have to get on your feet and start moving. There are no magic bullet workarounds that will allow you to avoid exercise and be healthy at the same time, so we all might as well stop waiting for them to appear. Physical exercise is quite simply a prerequisite for human health. If you're not already physically active, you can get started with something as simple as daily walking. Whatever you do, rest assured that your physical exercise efforts will not only accelerate the progress you make on your diet, it will also dramatically alter your mood and help increase both your bone mineral density and lean body mass. It will also, of course, increase your cardiovascular health, immune system function, and even improve digestion. The list goes on and on, but you get the point: move it or lose it.

REFERENCE: MANUFACTURES' WEBSITES

I personally consume and recommend foods and products made by the following companies. Some companies allow you to buy products directly from their websites. For others, you'll have to look for their products in local retailers.

http://www.JennyLeeNaturals.com

Offers Jenny Lee Supergreens, my most highly recommended superfood powder product. It's made with chlorella, spirulina, quinoa, and a variety of other health-promoting superfood ingredients. I use it daily.

http://www.UltimateLife.com

Makers of The Ultimate Meal superfood powder. I have experienced tremendous results from this product. I've also seen people drop 25 pounds of body fat in a month by consuming The Ultimate Meal.

http://www.Snackmasters.com

Makers of meat jerky products processed with no sodium nitrite or MSG (something that's very difficult to find).

http://www.BobsRedMill.com

Bob's Red Mill makes the only grains I'll buy. These are whole grains and exotic grains (such as quinoa, which isn't really a grain, by the way) that can be part of a healthy lifestyle. Some of my favorite products from this company? Flax meal, wheat germ, pearled barley, and guar gum (which I blend into various superfood drinks).

http://www.Melissas.com

Makers of healthy, natural food products that have managed to gain widespread distribution through grocery stores and Wal-Mart. I like their hummus, soy cheese, tofu, and other products. Highly recommended.

http://www.JustTomatoes.com

Makers of dried fruits and vegetables with nothing added (no sulfites, no preservatives). These foods are very expensive on a per-pound basis, but a little goes a long way. I use their dried fruits and add them to breakfast cereals. You can also use their dried vegetables in soups. Very handy products from an honest company.

http://www.DiestelTurkey.com

Makers of deli-style turkey meat products containing no nitrites and no MSG. Difficult to find, but check for their products at health food grocers like Wild Oats and Whole Foods.

http://www.wasa-usa.com

Makers of my favorite low-carb, whole grain cracker that's totally free of hydrogenated oils. All crackers should be this healthy! Their WASA crackers are readily available at most grocery stores, sometimes located near the "kosher" crackers section.

http://www.branacrisp.com

Another of my favorite crackers. Made with loads of fiber and no hydrogenated oils, these crackers are my #1 choice for using with coconut oil and stevia powder. Spread coconut oil on these crackers, add some liquid butter flavor, sprinkle some stevia, and you've got a 100 percent healthy snack with no metabolic disruptors!

http://www.Organicmilling.com

Makers of my current favorite choice for low-carb breakfast cereals: Hi-Lo cereal. It contains only 5g of carbs per serving. Although it isn't very sweet out of the box, it can be sweetened up with stevia. I also add whey protein powder to add protein to the cereal. Highly recommended.

http://www.Kettlefoods.com/ketus/index.html

Kettle Foods makes a variety of products, and I don't recommend all of them (I don't recommend potato chips, no matter who makes them, for example). But I highly recommend their nut butters, especially their almond butter. All of Kettle's nut butters are made without hydrogenated oils or added sugars. Delicious!

http://www.galaxyfoods.com

Galaxy Foods makes a variety of veggie-based dairy replacement products like veggie cheese, veggie spread, and many other products. I've eaten them for years and recommend them without hesitation. They're easier to find on the East Coast, but I've managed to find them in Arizona without any problem. You may have trouble in the Midwest, however, unless you check at health food stores.

http://www.cvc4health.com

Makers of Super Stevia Extract, one of my favorite powdered stevia products. I buy it at Trader Joe's.

About the Author

The Health Ranger (Mike Adams) is a holistic nutritionist with over 5,000 hours of study on nutrition, wellness, food toxicology and the true causes of disease and health. He is well versed on nutritional and lifestyle therapies for weight loss and disease prevention / reversal. Adams uses no prescription drugs whatsoever and relies exclusively on natural health, whole foods, superfoods, nutritional supplements and exercise to achieve optimum health. To prove the value of nutrition and physical exercise in enhancing health, Adams publishes detailed statistics on his own blood chemistry (with full lab results) at http://www.newstarget.com/AdamsHealthStats.html

For additional books authored by Mike Adams, visit www.TruthPublishing.com. To read timely articles and commentary on today's health topics, visit www.NewsTarget.com. For free access to Adams' book on superfoods, visit www.ChlorellaFactor.com.

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