Pharmacology Fact: To Use a SYNTHETIC anything is an Insult to the Body

SINthetic Chemicals will cause disease

Here is just a taste of the Scientific Evidence
SINthetic drugs special laws

The Synthetic Experiment has failed. We now know after many years that Synthetic medicines have too many side effects and they create more disease than they cure. In fact the SINthetic compounds offer no chance of cure they offer dependency. A depressed person is not depressed because he is Prozac deficient. Using a synthetic compound upsets the balance of the homeostasis of the body and produces side effects. If we use a natural medicine and behavioral medicine we can cure diseases that SINthetic medicines only placate.

Our society has offered protection of a designed medicine only to Synthetic compounds where you can get a patent. A patent gives you market control for 19 years. You cannot patent a natural medicine which is most often much much safer and often more effective long term. A natural medicine is not protected in the market place. People who invest in research are only interested in return on investment and as such SINthetic patents give more profit as they hurt and often kill people. Profit over people is not a good way to build medicine.

Our society has also given special laws to the pharmaceutical companies. If someone makes a building and the building falls and hurts someone the building manufacturer is liable for damages. If the brakes fail on your new car the car maker is liable for damages. But not the drug companies. You see hurting people is not enough. The drug companies are not responsible for damages of their drugs unless you PROVE they knew it was going to hurt and sold it anyway. This would be like proving the car company knew the brakes were bad and sold you the car to get a laugh. The powerful Drug companies have made special laws for themselves.

The total prescription drug liability to the drug companies is now over 20 trillion dollars. Last year the drug companies sold over 300 billion in drugs and made over 70 billion in profit. This incredibly large profit has made it tempting to attack any and all competitors even if they help people. Natural medicine is more logical safer and at least a viable choice in medicine. and this is the key choice for we all need to be able to choose. Thomas Jefferson's favorite quote is written around the top of his monument and it says “I have Sworn on the Altar of God to Oppose any who want to Tyrannize the Minds of Men”. The greatest tyranny is the SINthetic drug companies who wish to remove choice.

Desire’ Dubounet
1. The Synthetic drug companies do not know how to properly place the electrons around the atoms in making a drug. Nature uses QED via Photosynthesis to put some of the electrons into high energy quantum states. This is how we get energy and life.

2. The Synthetic Drug companies use antiquated outdated reductionism philosophy to assemble and test their drugs. The Fractal Complexity of Nature with its incredible complexity must be revered rather than ignored. The height of IGNORANCE is to ignore nature. An IGNORANCE that makes money.

3. There is no study known that ever shows a synthetic drug completely equivalent to its natural counterpart. The reductionism studies only measure the required variables. They DO NOT measure side effects. Side effects are observed and often only observed years or decades later. The laws and the FDA protect them.

4. Side Effects dominate and proliferate the Synthetic Drug scene. Look at the Physician Drug Reference and see that all drugs have a list often a long list of side effects. This is not natural. Almost Every year over a hundred drugs are removed from the market because they are hurting people. It’s just a matter of time before the hurtful side effects are seen.

5. Our society has now learned conclusively that synthetic foods are incompatible with health. We have now rejected all synthetics and we know that the finest quality comes from the natural. It is the next step of simple human consciousness and thought to see clearly that synthetic drugs are incompatible with the human body.
Processed foods linked to all Autoimmune disease

By Micki Hogan
Mar 8, 2013 in Health

Recent research concludes that processed foods such as hot dogs, sausage, and salami are officially linked to the increase of autoimmune diseases.

Scientists from Yale University and the University of Erlangen-Nuremberg in Germany have finished their research that proves the sodium content in processed foods and fast food are a contributing factor to autoimmune diseases. It was discovered that exposing these cells in a lab to a table salt solution made them act more 'aggressive.' The cells are called T helper cells. These cells activate and help cells fighting pathogens like bacteria and viruses. They also play a huge role in battling infections.

Other research has suggested that cells known as Th17 play an important role in the increase of autoimmune diseases. Processed foods and fast food that have high sodium content increased the TH17 cells and these cells acted more aggressively. In an autoimmune disease, the body has triggers that tricks itself into thinking the healthy cells are ill and cells such as TH17 attack the healthy cells. The cells have been proven to be more active according to the sodium in processed foods like hot dog or salami.

The study suggests that through time the complications of autoimmune diseases such as Crohn's Disease and Ankylosing Spondylitis can be dramatically reduced by the salt intake by the patient. In short, the healthier you are, the less the chances of facing an invisible illness. And if you are currently struggling with an autoimmune disease, reducing your salt intake may increase your health.

No illness can be predicted but research such as this is leading the way to make life easier for patients world wide.
Vitamin A Palmitate Side Effects

*By Autumn Jones, eHow Contributor*

Vitamin A palmitate is a synthetic version of the vitamin A that occurs naturally in animal food sources. It was developed to fortify low-fat and fat-free dairy products, whose natural vitamin A has been stripped away in the fat-removal process. Palmitate originates in palm oil but undergoes so many chemical changes that the result can barely be called a derivative of the oil. Although found primarily in food products, palmitate can be taken orally or by injection to treat vitamin A deficiencies. However, just like natural vitamin A, it can be overdosed, resulting in a number of serious side effects. If you experience any of the below while taking palmitate supplements, call your doctor immediately.
Synthetic Drugs Show Deadly Side Effects

By Dr. Manny Alvarez
Published November 06, 2011 | FoxNews.com

Three Texas teenagers suffered heart attacks after smoking an illegal brand of synthetic weed known as K2. While doctors said there is no definite proof the drug is to blame, they still worry it may have been the cause.

K2 is just one of a number of synthetic weed products that have become increasingly popular among U.S. teenagers. Other brands include Blaze, Spice and Red X Dawn.

Essentially, the products are a blend of herbs and spices laced with synthetic cannabis-like chemicals meant to mimic the highs marijuana produces. The Drug Enforcement Administration banned five of these substances nationwide in March due to reports from poison control centers, hospitals and law enforcement.

Prior studies have linked marijuana use to heart disease, but this is the first time K2 has been associated with heart problems, according to the new report.

The teenagers who suffered heart attacks had none of the usual medical problems that usually precede heart attacks in adults, such as high cholesterol or blood pressure. However, all three admitted to
Synthetic drug incidents on the rise

Designer substances that mimic marijuana and other illegal drugs are making users across the nation seriously ill, causing seizures and hallucinations so intense that thousands of them seek help at emergency rooms and other medical facilities.

Cases involving “bath salts”

Cases involving synthetic cannabis

SOURCE: American Association of Poison Control Centers
Scientists Officially Link Processed Foods To Autoimmune Disease

The modern diet of processed foods, takeaways and microwave meals could be to blame for a sharp increase in autoimmune diseases such as multiple sclerosis, including alopecia, asthma and eczema.
A team of scientists from Yale University in the U.S and the University of Erlangen-Nuremberg, in Germany, say junk food diets could be partly to blame.

'This study is the first to indicate that excess refined and processed salt may be one of the environmental factors driving the increased incidence of autoimmune diseases,' they said.

Junk foods at fast food restaurants as well as processed foods at grocery retailers represent the largest sources of sodium intake from refined salts.

The Canadian Medical Association Journal sent out an international team of researchers to compare the salt content of 2,124 items from fast food establishments such as Burger King, Domino's Pizza, Kentucky Fried Chicken, McDonald's, Pizza Hut and Subway. They found that the average salt content varied between companies and between the same products sold in different countries.

U.S. fast foods are often more than twice as salt-laden as those of other countries. While government-led public health campaigns and legislation efforts have reduced refined salt levels in many countries, the U.S. government has been reluctant to press the issue. That's left fast-food companies free to go salt crazy, says Norm Campbell, M.D., one of the study authors and a blood-pressure specialist at the University of Calgary.

Many low-fat foods rely on salt--and lots of it--for their flavor. One packet of KFC's Marzetti Light Italian Dressing might only have 15 calories and 0.5 grams fat, but it also has 510 mg sodium--about 1.5 times as much as one Original Recipe chicken drumstick. (Feel like you're having too much of a good thing? You probably are.

Bread is the No. 1 source of refined salt consumption in the American diet, according to the Centers for Disease Control and Prevention. Just one 6-inch Roasted Garlic loaf from Subway--just the bread, no meat, no cheeses, no nothing--has 1,260 mg sodium, about as much as 14 strips of bacon.

**How Refined Salt Causes Autoimmune Disease**

The team from Yale University studied the role of T helper cells in the body. These activate and 'help' other cells to fight dangerous pathogens such as bacteria or viruses and battle infections.

Previous research suggests that a subset of these cells - known as Th17 cells - also play an important role in the development of autoimmune diseases.

In the latest study, scientists discovered that exposing these cells in a lab to a table salt solution made them act more 'aggressively.'

They found that mice fed a diet high in refined salts saw a dramatic increase in the number of Th17 cells in their nervous systems that promoted inflammation.

They were also more likely to develop a severe form of a disease associated with multiple sclerosis in humans.

The scientists then conducted a closer examination of these effects at a molecular level.

Laboratory tests revealed that salt exposure increased the levels of cytokines released by Th17 cells 10 times more than usual. Cytokines are proteins used to pass messages between cells.

Study co-author Ralf Linker, from the University of Erlangen-Nuremberg, said: 'These findings are an important contribution to the understanding of multiple sclerosis and may offer new targets for a better treatment of the disease, for which at present there is no cure.'

It develops when the immune system mistakes the myelin that surrounds the nerve fibres in the brain and spinal cord for a foreign body.

It strips the myelin off the nerves fibres, which disrupts messages passed between the brain and body causing problems with speech, vision and balance.

Another of the study's authors, Professor David Hafler, from Yale University, said that nature had clearly not intended for the immune system to attack its host body, so he expected that an external factor was playing a part.
He said: 'These are not diseases of bad genes alone or diseases caused by the environment, but diseases of a bad interaction between genes and the environment.

'Humans were genetically selected for conditions in sub-Saharan Africa, where there was no salt. It's one of the reasons that having a particular gene may make African Americans much more sensitive to salt.

'Today, Western diets all have high salt content and that has led to increase in hypertension and perhaps autoimmune disease as well.'

The team next plan to study the role that Th17 cells play in autoimmune conditions that affect the skin. 'It would be interesting to find out if patients with psoriasis can alleviate their symptoms by reducing their salt intake,' they said.

'However, the development of autoimmune diseases is a very complex process which depends on many genetic and environmental factors.'

**Stick to Good Salts**

Refined, processed and bleached salts are the problem. Salt is critical to our health and is the most readily available nonmetallic mineral in the world. Our bodies are not designed to processed refined sodium chloride since it has no nutritional value. However, when a salt is filled with dozens of minerals such as in rose-coloured crystals of Himalayan rock salt or the grey texture of Celtic salt, our bodies benefit tremendously for their incorporation into our diet.

"These mineral salts are identical to the elements of which our bodies have been built and were originally found in the primal ocean from where life originated," argues Dr Barbara Hendel, researcher and co-author of Water & Salt, The Essence of Life. "We have salty tears and salty perspiration. The chemical and mineral composition of our blood and body fluids are similar to sea water. From the beginning of life, as unborn babies, we are encased in a sack of salty fluid."

"In water, salt dissolves into mineral ions," explains Dr Hendel. "These conduct electrical nerve impulses that drive muscle movement and thought processes. Just the simple act of drinking a glass of water requires millions of instructions that come from mineral ions. They're also needed to balance PH levels in the body."

Mineral salts, she says, are healthy because they give your body the variety of mineral ions needed to balance its functions, remain healthy and heal. These healing properties have long been recognised in central Europe. At Wieliczka in Poland, a hospital has been carved in a salt mountain. Asthmatics and patients with lung disease and allergies find that breathing air in the saline underground chambers helps improve symptoms in 90 per cent of cases.

Dr Hendel believes too few minerals, rather than too much salt, may be to blame for health problems. It's a view that is echoed by other academics such as David McCarron, of Oregon Health Sciences University in the US.

He says salt has always been part of the human diet, but what has changed is the mineral content of our food. Instead of eating food high in minerals, such as nuts, fruit and vegetables, people are filling themselves up with "mineral empty" processed food and fizzy drinks.

**Study Source:**

This is the result of a study conducted by Dr. Markus Kleinewietfeld, Prof. David Hafler (both Yale University, New Haven and the Broad Institute of the Massachusetts Institute of Technology, MIT, and Harvard University, USA), PD Dr. Ralf Linker (Dept. of Neurology, University Hospital Erlangen), Professor Jens Titze (Vanderbilt University and Friedrich-Alexander-Universitat Erlangen-Nurnberg, FAU, University of Erlangen-Nuremberg) and Professor Dominik N. Muller (Experimental and Clinical Research Center, ECRC, a joint cooperation between the Max-Delbruck Center for Molecular Medicine, MDC, Berlin, and the Charite -- Universitatsmedizin Berlin and FAU) (*Nature*, doi:[http://dx.doi.org/10.1038/nature11868]). In autoimmune diseases, the immune system attacks healthy tissue instead of fighting pathogens.
10 WORST FOOD INGREDIENTS

Find out where it’s lurking, why it’s bad, and how you can avoid it:

1. Monosodium Glutamate (MSG)
2. Aspartame
3. High Fructose Corn Syrup (HFCS)
4. Agave Nectar
5. Artificial Food Coloring
6. BHA and BHT
7. Sodium Nitrite and Sodium Nitrate
8. Potassium Bromate
9. Recombinant Bovine Growth Hormone (rBGH)
10. Refined Vegetable Oil

Example U.S. Brands That Are Reformulated Without Additives in Other Countries

Food Babe Investigates
Scientists Officially Link Processed Foods To Autoimmune Disease

May 12 • "Food" to Avoid, Articles • 21190 Views • 10 Comments

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Sodium chloride drives autoimmune disease by the induction of pathogenic T\textsubscript{H}17 cells

- Markus Kleinewietfeld,
- Arndt Manzel,
- Jens Titze,
- Heda Kvakăn,
- Nir Yosef,
- Ralf A. Linker,
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Nature
06 March 2013

There has been a marked increase in the incidence of autoimmune diseases in the past half-century. Although the underlying genetic basis of this class of diseases has recently been elucidated, implicating predominantly immune-response genes\textsuperscript{1}, changes in environmental factors must ultimately be driving this increase. The newly identified population of interleukin (IL)-17-producing CD4\textsuperscript{+} helper T cells (T\textsubscript{H}17 cells) has a pivotal role in autoimmune diseases\textsuperscript{2}. Pathogenic IL-23-dependent T\textsubscript{H}17 cells have been shown to be critical for the development of experimental autoimmune encephalomyelitis (EAE), an animal model for multiple sclerosis, and genetic risk factors associated with multiple sclerosis are related to the IL-23–T\textsubscript{H}17 pathway\textsuperscript{1,2}. However, little is known about the environmental factors that directly influence T\textsubscript{H}17 cells. Here we show that increased salt (sodium chloride, NaCl) concentrations found locally under physiological conditions \textit{in vivo} markedly boost the induction of murine and human T\textsubscript{H}17 cells. High-salt conditions activate the p38/MAPK pathway involving nuclear factor of activated T cells 5 (NFAT5; also called TONEBP) and serum/glucocorticoid-regulated kinase 1 (SGK1) during cytokine-induced T\textsubscript{H}17 polarization. Gene silencing or chemical inhibition of p38/MAPK, NFAT5 or SGK1 abrogates the high-salt-induced T\textsubscript{H}17 cell development. The T\textsubscript{H}17 cells generated under high-salt conditions display a highly pathogenic and stable phenotype characterized by the upregulation of the pro-inflammatory cytokines GM-CSF, TNF-\textalpha{} and IL-2. Moreover, mice fed with a high-salt diet develop a more severe form of EAE, in line with augmented central nervous system infiltrating and peripherally induced antigen-specific T\textsubscript{H}17 cells. Thus, increased dietary salt intake might represent an environmental risk factor for the development of autoimmune diseases through the induction of pathogenic T\textsubscript{H}17 cells.
High Dose Vitamin Supplementation Found To Reduce Lifespan Compared To Regular Diet  July 9, 2013 by MAE CHAN

Research published *Biology Letters* is supporting previous evidence that high-dose vitamin supplementation may reduce lifespan when compared to a regular diet.

A high intake of vitamin C and vitamin E could ‘dramatically’ reduce life expectancy by up to 26%, according to new research in rodents.

Researchers investigated the effects of high-dose vitamin supplementation in voles after previous work in mice suggested that a high intake of vitamin C and vitamin E slowed the process of cellular aging and increased life expectancy.

However, the new findings in voles suggest that high-dose supplementation may actually reduce lifespan when compared to a regular diet.

“When we began our research, we expected that voles’ lifespans would be boosted by the vitamin supplements in a similar way to the mice we had tested previously, so we were surprised to see that was not the case,” said Professor Colin Selman from the University of Glasgow— who led the research.

“Our findings suggest that major differences exist in the effects of high doses of antioxidants on oxidative damage and lifespan across species.”

Vitamin E’s role in disease prevention has been ambiguous due to several conflicting studies. Research suggests that the Vitamin E found in its natural form in foods such as almonds and sunflower seeds is indeed protective, while synthetic Vitamin E (alpha tocopherol acetate) supplements do not show the same protective effect.

**Study Details**

Speakman and his team fed field voles a diet supplemented with high levels of vitamin E or vitamin C from the age of two months in either warm or cold conditions and compared their longevity to groups of voles fed a regular diet.

The team found that voles in both cold and warm conditions that were fed supplements of vitamin E or vitamin C lived much shorter on average than those fed a regular diet.

Compared to animals on a regular diet, lifespan was reduced by 11% and 26% for vitamin E and C voles in the cold and by 17% and 18% for vitamin E and C voles in the warm, the team said.

Professor John Speakman from the University of Aberdeen, senior author of the study, said randomised controlled trials examining the effects of antioxidant supplementation on human lifespan are ‘unlikely’ to be possible, “so we are dependent on the results of animal studies.”
Also absent from the study are quality and manufacturing of raw materials used in the supplements which may significantly alter the results. For example, product quality on major manufacturer's supplements show an increased number of binders, colors, and poor quality control which affect absorption and effectiveness. The differences in product quality between supplement manufacturers of vitamins is now staggering.

"It's impossible at this stage to extrapolate the results from this small amount of data we have on voles and mice but it does suggest that caution is warranted in the use of high doses of antioxidant vitamins," said Speakman. 

Mae Chan holds degrees in both physiology and nutritional sciences. She is also blogger and technology enthusiast with a passion for disseminating information about health.

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**THE REAL TRUTH ON RED FOOD DYE**

Red Dye #3 is considered a carcinogen and yet is still used in mass food production. Did you know...that compounds in food dyes are linked to allergies, learning problems, hyperactivity and mood disorders in children?

- **Red 2** – carcinogenic; increases bladder tumor risk; found on Florida oranges.
- **Red 3** – thyroid carcinogen; banned from external use products; found in maraschino cherries, sausage and candy among others.
- **Red 40** – most common food dye; linked to allergies and ADHD in children; found in candy, cereal, desserts, drugs and cosmetics among others.
- **Yellow 5** – currently undergoing testing; linked to behavioral problems in children; found in beverages, candy, cereal, gelatin, pharmaceuticals and cosmetics among others.
- **Yellow 6** – currently undergoing testing; suspected of causing adrenal tumors and hypersensitivity; found in baked goods, cereal, candy, gelatin and cosmetics among others.
- **Blue 1** – currently undergoing testing; suspected of causing kidney tumors; found in beverages, candy, cereal and pharmaceuticals.
- **Blue 2** – currently undergoing testing; suspected of increasing tumor risk – especially of the brain; found in beverages, candy, pet food and pharmaceuticals.

[www.undergroundhealthreporter.com](http://www.undergroundhealthreporter.com)
The dangers of artificial food colors

Wednesday, May 25, 2011 by: Neev M. Arnell

Tags: artificial colors, food, health news

(NaturalNews) “Should the FDA be so permissive with chemicals in food, suspect or not, that amount to little more than marketing?” asks The Daily Green (http://www.thedailygreen.com/healthy-eating/eat-safe/artificial-food-…). This question is particularly pertinent considering that colorings have not always proven to be harmless.

Citrus Red 2, Red 3, Red 40, Yellow 5, Yellow 6, Blue 1, Blue 2 and Green 3, --which include some of the most commonly used artificial food colorings--have all been identified as being, or being contaminated with, potential cancer-causing chemicals, according to the Center for Science in the Public Interest. And Blue 1, Red 40, Yellow 5, and Yellow 6 are known to trigger reactions in those with allergies.

History paints an ugly food color portrait

Until the twentieth century, food coloring could only be obtained from what people found in nature. Ancient Romans used saffron and other spices to put a rich yellow color into various foods (http://homecooking.about.com/od/foodhistory/a/foodcolorhistory.htm). Other frequently used natural colors included paprika, turmeric, beet extract, and petals of various flowers.
But many of the other frequently used natural colors were not only unappetizing, but downright dangerous (http://onlinelibrary.wiley.com/doi/10.1111/j.1541-4337.2009.00089.x/p...). Bakers added chalk to whiten bread, for example, and sweets manufacturers loaded candy with vermilion (which contains mercury), red lead, white lead, verdigris (which is a copper salt), blue vitriol (which contains copper) and Scheele's green (which contains both copper and arsenic).

The science of food coloring evolved from there and technology created a new kind of dye derived from coal tar, a waste product of coal gas and coke. The synthetic dyes came to be known at coal-tar colors and they are what we still use today.

By the beginning of the 20th century, some 695 of these had been synthesized, and over 80 were on the market. While they were generally a safer alternative to metal salts and used in less quantity, they were still unregulated.

In 1938, responsibility for regulating and enforcing color was granted to the newly instituted Food and Drug Administration. At that point, there were 15 synthetic colors approved for use in foods, 6 of which are still used today.

Modern food colorings have their own problems
While manufacturers were no longer adding mercury or arsenic to their products, food-coloring dangers took center stage, yet again, in the 1950s after many children became ill from eating Halloween candy containing the Orange 1 food coloring. The FDA banned the color after more rigorous testing suggested that it was toxic (http://www.nytimes.com/2011/03/30/health/policy/30fda.html).

Red 32 and Orange 2 were also delisted due to the same Halloween incident, according to the Harvard Law School paper, The Palette of Our Palates: A brief history of food coloring and its regulation.

The controversy continued when, in 1976, the agency banned Red 2 because it was suspected to be carcinogenic, according to The New York Times (http://www.nytimes.com/2011/03/30/health/policy/30fda.html).

Other colors have since been banned in the US including: Violet 1; Reds 2 and 4; Yellows 1, 2, 3 and 4, and Yellow 5 is undergoing testing, according to Encyclopedia Britannica (http://www.britannica.com/EBchecked/topic/212658/food-colouring).

The FDA decided to remove Red 2 from the provisional list in 1976, after Conflicting studies were published. Some studies showed the dye was safe and others showed that it was not safe and, in fact, caused breast and intestinal tumors in rats and was toxic to gonads and embryos. The FDA de-listed it stating that the color industry had not met its burden of proving the safety of Red 2.
Yellow 5 was the successor to Red 2 in popularity. The color, sometimes called Tartrazine, also had its own problems. It was one of the dyes singled out in 1977 by Ralph Nader's Public Citizen Health Research Group as unsafe. The group pointed to the de-listing of Red 2 and Red 4 a year earlier as evidence that dyes we consider "safe" are often later shown to be toxic.

While the FDA said that Public Citizen was "overstating the issue and causing public alarm that is simply not warranted," they simultaneously admitted that Yellow 5 caused severe allergic reactions in a small number of people.

**Is the FDA doing a better job today?**

The FDA suggested that problems associated with artificial coloring might be akin to a peanut allergy or intolerance to these substances and not to any inherent toxic properties of the colorings themselves, said the New York Times.

This may not be accurate, according to a 2004 Southampton University study covered by the BBC. A team of researchers found that adding food colors to children's diets increased hyperactivity rates in all young children, not just those who were allergic to food colorings or who had Attention Deficit Hyperactivity Disorder (http://news.bbc.co.uk/2/hi/health/3742423.stm).

"I want this to address a fundamental issue which is 'Why do we have to have colored food?' said Professor John Warner, the study's author.

"It's absolutely imperative to have follow up studies because we are not now just talking about a population of children with a particular problem we are saying there's a potential for this to be an effect on all children," he said. "And, if that really is the case, then food coloring should be removed."

Consumers can avoid synthetic food colorings by checking labels in grocery stores or by shopping at chains like Whole Foods Market and Trader Joe's, which refuse to sell foods with artificial coloring.
Research Findings on the Dangers of Synthetic Food Chemicals

Synthetic and Industrialized Food Chemicals

A Lack of Warning Labels for Synthetic and Industrialized Food Chemicals:
Is regulatory capture of the FDA by the food and chemical industries leading to serious health safety issues for U.S. consumers?
Copyright, 2012. Contact: http://chemical-free-life.org
Recapturing Regulatory Capture: A Paradigm for Understanding the Puzzling Decisions of the Food Police

Abstract: This paper explores findings linking a myriad of synthetic and industrialized food chemicals to serious adverse health consequences, and juxtaposes this with a theoretical construct suggesting label obfuscation and other actions by the chemical and food manufacturing industries as a primary reason these additives remain in the food sans label warnings to alert consumers. Also explored are potential obstacles behind the U.S. Food and Drug Administration’s failure to require warnings on food labels for consumers alerting them about potential hazards of some of these synthetic and industrialized food chemicals, and the effect this has had on consumer confidence and behavior.

Many U.S. consumers rely on the government for health safety labeling about synthetic and industrialized food chemicals and to monitor corporate marketing of ingredients and healthy food claims on food products containing these chemicals, but is that a good idea? This paper presents evidence that suggests that marketing and label obfuscation, among other tactics from the chemical and food manufacturing industries, combined with the current lack of government required warnings and disclosures on food ingredients labels, leaves consumers unaware and unprotected and thereby vulnerable to potentially harmful synthetic and industrialized food chemicals that may pose a threat to their health and well-being.

SYNTHETIC AND INDUSTRIALIZED FOOD CHEMICALS AND ADVERSE HEALTH OUTCOMES

A number of commonly used synthetic and industrialized food chemicals (more specifically, food additives, colorings/dyes, and preservatives) in the U.S. have been linked in empirical studies and clinical trials to adverse symptoms and health consequences (Lau et al. 2006; Sasaki et al. 2002; Tuormaa, 1994; Parke and Lewis 1992). The same is true for animal antibiotics, animal growth hormones and other animal drugs which have been found in U.S. meat and dairy products (McEwen and Fedorka-Cray 2002), as well as with high residue content of pesticides which have been found in both produce and meat and dairy products in the U.S. (LeDoux 2011).

One group of synthetic and industrialized food chemicals extensively studied and sometimes linked with adverse health reactions include food dyes/food colorings (Ahearne and Weiss 2010; McCann et al. 2007; Lau et al. 2006; Sasaki et al. 2002; Conners 1980; Ceserani, Colombo and Robuschi 1978; Feingold 1977; Freedman 1977; Baer and Leider 1949). A recent review of the empirical studies on food dyes revealed: “The food industry dumps over 15 million pounds of the dyes studied into the food supply each year. Three of the dyes carry known carcinogens, and
four can cause serious allergic reactions in some consumers. New studies show that seven of them contributed to cancer in lab animals, including brain and testicular tumors, colon cancer, and mutations” (Curran 2010). One such food dye in particular (commonly found in candy and cereals, among other processed foods) is Tartrazine (FD&C Yellow dye #5) which appears to cause the most adverse reactions of all azo dyes—especially to people with allergies and asthma (Elhkim et al. 2007; Arai et al. 1998; Dipalma 1990; Ceserani, Colombo, and Robuschi, 1978; Neuman et al. 1978; Lockey 1977) and has been linked in empirical studies and clinical trials to behavioral problems in children, including ADHD and learning difficulties (Pelsser et al. 2011; Ahearn and Weiss 2010; McCann et al. 2007; Bateman et al. 2004; Schab and Trinh 2004; Rowe and Rowe 1994; Pollock and Warner 1990; Weiss 1982; Swanson and Kinsbourne 1980; Weiss et al. 1980; Feingold 1977; 1976; 1975), respiratory problems, bronchospasms and asthma (Arai et al. 1998; Corder and Buckley 1995; Dipalma 1990; Hong et al. 1989; Van Bever, Docx and Stevens 1989; Settipane 1987; Freedman 1977; Stenius and Lemola 1976), urticaria/skin reactions (Dipalma 1990; Van Bever, Docx and Stevens, 1989; Settipane 1987; Juhlin 1981; Ceserani, Colombo, and Robuschi 1978; Settipane et al. 1976), anaphylactic shock (Trautlein and Mann 1978) irritability, restlessness, and insomnia/sleep disturbances in some children (Bateman et al. 2004; Rowe and Rowe 1994). Animal studies have also found a link with Tartrazine and generalized toxicity/genotoxicity (Sasaki et al. 2002; Davis, Fitzugh, and Nelson 1964), adverse immunosuppressive effects (Koutsogeorgopoulou et al. 1998), and cancer (Patterson and Butler 1982). The FDA’s position on Tartrazine is that it prompts “minor adverse reactions in some people” (Henkel 1993). In 2008 the Center for Science in the Public Interest filed a regulatory petition with the FDA requesting that this food dye be removed from the permitted food coloring list (Center for Science in the Public Interest 2008). To date, Tartrazine (FD&C Yellow dye #5) remains a permitted food dye in U.S. foods and while like other food dyes it is required to appear on ingredients listings, there are no warning labels on products containing it (Center for Food Safety and Applied Nutrition/U.S. Food and Drug Administration Color Additive Status List 2009a; U.S. Food and Drug Administration 2008a; 2003a).

A recent study on caramel food coloring suggests this food dye may pose serious health consequences for consumers. Caramel food dye is common in many processed foods such as soda. Synthetic caramel coloring is processed with the use of sulfites which are recognized by the medical and research community as potentially dangerous to people with asthma and other health conditions (Metcalfe, Sampson, and Simon 2008; Puglisi and Frieri 2007; Arai et al. 1998). Toxicological data from clinical trials and animal research studies indicate this food dye is an immunosuppressive and can trigger allergic reactions in some people (Greenhawt and Baldwin 2008; World Health Organization Technical Report 2001; de Heer et al. 1995; Thuander and Oskarsson 1994; Houben et al. 1993). A recent study by Moonand Shibamoto (2011) linked this food chemical to cancer. Following the release of this study the Center for Science in the Public Interest (2011), along with five independent food science experts, filed a regulatory petition with the FDA requesting that caramel coloring be removed from the permitted food coloring list, citing FDA policy which allows the use of colors the agency believes have “a reasonable certainty of no harm” while color additives that have been found to cause cancer in animals or humans are disallowed in FDA-regulated foods and drugs.

Previous studies on other food dyes/colorings have been linked to neurobehavioral effects (Ahearn and Weiss 2010; Ahearn 2010; Weiss 2008; Elhkim 2007; Bateman et al. 2004; Schab and Trinh 2004; Rowe and Rowe 1994; Pollock and Warner 1990; Sarantinos, Rowe and Briggs 1990; Weiss 1982; Conners et al. 1980; Swanson and Kinsbourne 1980; Weiss et al. 1980; Goyette et al. 1978; Lockey 1977; Feingold 1968). A recent public information report presented a review of the study findings on food dyes (Kobylewski and Jacobson 2010) revealing to consumers that clinical studies and laboratory research examining the link between several FDA-approved food
colorings and adverse consequences has been taking place for decades (Moon and Shibamoto 2011; Ahearn and Weiss 2010; Schab and Trinh 2004; Ward 1996; Rowe and Rowe 1994; Pollock and Warner 1990; Rowe 1988; Chung et al. 1981; Juhlin 1981; Swanson and Kinsbourne 1980; Weiss et al. 1980; Goyette et al. 1978; Price et al. 1978; Honohan et al. 1977; Feingold 1976; Michaelsson, Pettersson, and Juhlin 1974; Radomski 1974; Michaelsson and Juhlin 1973; Ryan, Welling and Wright 1969; Chafee and Settipane 1967; Radomski, and Mellinger 1962; Baer and Leider 1949). FD&C Blue #1 has been linked with triggering hypersensitivity reactions in some people (Juhlin 1981) and systemic toxicity and death when used in enteral feeding tubes (U.S. Food and Drug Administration 2003b). Animal studies on FD&C Blue #2 first indicated a statistically significant incidence of tumors as far back as three decades ago (Price et al. 1978) and has been determined by the World Health Organization to have toxicity risks in patient feeding tubes, “FD&C Blue No. 2, may have similar if not greater toxicity potential than Blue No. 1 and would not be appropriate replacements” (World Health Organization 2003). FD&C Red #40 has been linked with allergy-like hypersensitivity in a small number of adults and a potential trigger for hyperactivity in children (Buteman et al. 2004; Schab and Trinh 2004; Sarantinos, Rowe, and Briggs 1990; Conners et al. 1980; Conners, Petti, and Curtis 1978) and has been linked in animal studies to intrauterine developmental problems (Collins and Black 1980), behavioral and physical toxicity (Vorhees et al. 1983); genotoxicity (Sasaki et al. 2002) and colon DNA damage (Tsuda et al. 2001). FD&C Red #3 has been linked to cancer in animal studies (Lin and Brusick 1986), though the FDA has been clear that it does not agree that these findings are persuasive enough to reverse their position that these food dyes are safe for consumers (Blumenthal 1990). FD&C Yellow #6 (Sunset yellow) has been linked in a case study to anaphylactic shock (Trautlein and Mann 1978), in empirical research to allergic reactions and gastroenteritis (Gross et al. 1989), adverse reproductive and neurobehavioral effects (Tanaka 1996) and cancer (National Toxicology Program 1981). Despite the FDA’s acknowledgement of the findings on FD&C Yellow #6: “Industry-sponsored animal tests indicated that this dye, the third most widely used, may cause tumors of the adrenal gland and kidney. In addition, small amounts of several carcinogens, such as 4-aminobiphenyl and benzidine (or chemicals that the body converts to those substances) may contaminate dye Yellow #6. However, the FDA reviewed those data and found reasons to conclude that Yellow 6 does not pose a significant cancer risk to humans. Yellow 6 may cause occasional and sometimes severe hypersensitivity reactions in some people,” their final position is that this food dye is safe for public consumption (U.S. Food and Drug Administration 2007a; b).

There have been numerous screenings, tests and reviews concerning the safety of a variety of food colorings over the years (Sasaki et al. 2002; Hayashi et al. 2000; Peiperl et al. 1995; 1993; Center for Food Safety and Applied Nutrition 1993; Blumenthal 1990; Flamm et al. 1985; Lagakos and Mosteller 1981; Haveland-Smith and Combes 1980; FAO/WHO Expert Committee on Food Additives 1969) and based on numerous research findings The Center for Science in the Public Interest filed a Citizens Regulatory Petition requesting that the FDA ban these food dyes (2008). The FDA however, has concluded that the evidence weighs in favor of determining the aforementioned food dyes safe for consumers (U.S. Food and Drug Administration 2009a; 2008a; 2007a; b; 2004; 2003a; 2000; 1988; 1987; 1986; 1985; 1983; 1982a; b; c; FDA Agency Review of Toxicology Information in Petitions for Direct Food Additives and Color Additives Used in Food 2007), maintaining that colors found to be potentially hazardous have already been purged from the list of permissible additives (Henkel 1993) but in March 2011 they announced a review of the link between food dyes and child hyperactivity (Gleason, 2011). The FDA has since concluded that there is insufficient evidence linking food dyes and hyperactivity in some children.

The food additive monosodium glutamate (commonly known as “MSG”) has been linked in empirical studies and clinical trials to a myriad of adverse symptoms (Lau et al. 2006; Yang et al. 1997; Scher and Scher 1992; Olney 1987; 1984; Sauber 1980; Reif-Lehrer 1976; Rosenblum et al. 1971; Morselli and
Garattini 1970; Schaumburg et al. 1969) including headaches and migraines (Baad-Hansen et al. 2010; Scopp 1991; Merritt and Williams 1990; Raskin 1981; Schaumburg et al. 1969), diabetes/insulin resistance/impaired glucose tolerance (Roman-Ramos et al. 2011; Collison et al. 2010; Sasaki et al. 2009; Morrison et al. 2008; Nakanishi et al. 2008; de Campos et al. 2007; Nagata et al. 2006; Iwase et al. 1998; Cameron et al. 1976), brain lesions/abnormalities (Yu et al. 1997; Monno et al. 1995; Meister et al. 1989; Simson et al. 1977; Arees and Mayer 1970; Olney and Ho 1970; Olney 1969; Olney and Sharpe 1969), skin abnormalities, urticaria, angioedema and intestinal disturbances (Tarlo and Sussman 1993; Van Bever, Docx and Stevens 1989), developmental irregularities (Yu et al. 1997), changes in circadian rhythm (Manivasagam and Subramanian 2004), respiratory problems including bronchoconstriction, especially for people with asthma (Tarlo and Sussman 1993; Hong et al. 1989; Allen et al. 1987; Moneret-Vauchin 1987; Swan 1982), enhanced threat to people with vascular disease (Merritt and Williams 1990); reproductive problems (Rodriguez-Sierra et al. 1980; Pizzi, Barnhart, and Fanslow 1977), liver inflammation/injury/pathology (Roman-Ramos et al. 2011; Collison et al. 2009; Nakanishi et al. 2008), cognitive impairment (Collison et al. 2010), growth irregularities in offspring of mothers given MSG (von Diemen and Trindade 2010), dyslipidemia/hyperlipidemia (Collison et al. 2010; Iwase et al. 1998), hypertension (Iwase et al. 1998), endocrine dysfunction (Miśkowiak and Partyka 1993), burning sensations, pressure, and tightness or numbness in the face, neck, and upper chest and bronchospasm (Settipane 1987), and weight gain/obesity (Roman-Ramos et al. 2011; He, Staviglas, and Stamler 2009; Sasaki et al. 2009; He et al. 2008; Nakanishi et al. 2008; de Campos et al. 2007; Hermanussen et al. 2006; Nagata et al. 2006; Hermanussen and Tresguerres 2003; Gobatto et al. 2002; Guimarães et al. 2002; Balbo et al. 2000; Iwase et al. 1998; Yamamoto et al. 1998; Miśkowiak and Partyka 1993; Tanaka et al. 1978; Olney 1969). Scientists have known for some time about the link between MSG and weight gain; one of the most widely used models to induce obesity in laboratory rats and mice is by administering food additive-grade monosodium glutamate (Von Diemen, Trindade, and Trindade 2006; Dawson et al. 1997; Caputo et al. 1996; Yoshida et al. 1994). And despite results calling the MSG-weight gain link into question, including those studies sponsored by the MSG industry (Kondoh and Torii 2008), a number of studies linking MSG with weight gain appear to support the position of The Glutamate Association, a government lobbying group comprised of corporations who use and produce MSG for foodstuffs (Samuels 1999), that eating foods containing MSG increases appetite (Hermanussen et al. 2006) in their suggested promotion of MSG for populations like the elderly who have difficulty gaining weight due to lowered appetites (Bellisle et al. 1996). Despite the findings linking MSG with weight gain, increased appetite, and obesity, there remains no warning stating this possibility on food products containing MSG, which could potentially complicate a number of health-related issues such as obesity for some consumers.

The U.S. Food and Drug Administration (FDA) which has the responsibility of aggregating consumer complaints and investigating potentially problematic ingredients in the food based on those consumer reports, has received numerous complaints about synthetic and industrialized food chemicals over the past several decades. MSG alone has seen its fair share including severe headaches—over 43 percent of reported reactions from MSG to the FDA’s Adverse Reactions Monitoring System are for headaches (Samuels 1999) and breathing difficulties in asthmatics (U.S. Food and Drug Administration 1995). There is enough of a significant trend in clinical reports of adverse symptoms linked with MSG (including 41.2 percent of subjects in a glutamate industry-sponsored study; Kerr et al. 1979) that it has been assigned the name: “MSG symptom complex”. According to the Mayo Clinic website:
“Over the years, the FDA has received many anecdotal reports of adverse reactions to foods containing MSG. These reactions — known as MSG symptom complex — include: headache, flushing, sweating, facial pressure or tightness, numbness, tingling or burning in face, neck and other areas, rapid, fluttering heartbeats (heart palpitations), chest pain, nausea, weakness” (Zeratsky 2011).

Back in 1993 the FDA actually considered requiring food manufacturers to include the words “contains glutamate” on all products that contained protein hydrolysates with substantial amounts of glutamate (such as hydrolyzed soy protein) but rejected this possibility (U.S. Food and Drug Administration 1995). In 1994 the FDA received a Citizens Regulatory Petition concerning MSG. Based on the Petitioners’ reports of debilitating and life-threatening sensitivities the Petitioners had to monosodium glutamate (MSG) the petition requested the FDA to make changes to the label requirements for food containing MSG and all related substances. More specifically, the petition requested mandatory listing of all food items that contain free glutamic acid with an additional requirement that food manufacturers list the amount of free glutamic acid (MSG) along with a warning that MSG may be harmful to certain people (U.S. Food and Drug Administration 1995).

The FDA failed to respond to the petition within 180 days of filing as required by law and in August, 1995, twenty-nine individuals (including physicians, scientists and parents on behalf of their children) filed suit in Federal Court asking the court to intercede on their behalf and require that all MSG in processed food, including foods containing substantial amounts of glutamate (such as hydrolyzed soy protein) be labeled with a warning that MSG may be present (Samuels 1995). To date the FDA has not taken such action.

Despite the body of evidence by independent researchers that MSG may be potentially harmful to some consumers (earlier estimates placed adverse reactions to MSG at between 25 and 30 percent of people; Reif-Lehrer 1976; 1977) the U.S. Food and Drug administration permits MSG to be present in the food without a warning to consumers. Of course in theory consumers can simply read the ingredients labels and if they are already aware that they experience adverse health symptoms from MSG they can abstain from purchasing that product and thereby avoid ingesting MSG. Unfortunately, searching the label for the words, “monosodium glutamate” is often not enough. Free glutamic acid (monosodium glutamate) is frequently present in items that contain the ingredients listed as hydrolyzed vegetable protein, hydrolyzed protein, hydrolyzed plant protein, plant protein extract, hydrolyzed pea protein, sodium caseinate, calcium caseinate, yeast extract, textured protein and TVP, autolyzed yeast, hydrolyzed oat flour and corn oil, all the while the words “monosodium glutamate” or “MSG” may appear nowhere on the ingredients label (Federal Register 1977). As if that is not confusing enough for consumers, monosodium glutamate may also make an appearance in food that lists ingredients such as malt extract, malt flavoring, bouillon, broth, stock, flavoring, natural flavors/flavoring, natural beef or chicken flavoring, seasoning, spices, carrageenan, enzymes, soy protein concentrate, soy protein isolate and whey protein concentrate (Blaylock 1997), again, with no warning to consumers that the product may contain monosodium glutamate (MSG).

A number of other food additives, especially preservatives, have also been linked to potential adverse health outcomes for some people (Kaplan 2010; Stevenson et al. 2010; Lau et al. 2006; Schab and Trinh 2004; Weiss 1982) including Sodium Benzoate. Empirical studies and clinical trials indicate sodium benzoate may be linked in sensitive individuals to skin reactions including urticaria, pruritus and atopic dermatitis, and intestinal disturbances such as gastritis (Asero 2006; Schaubschläger et al. 1991; Van Bever, Docx and Stevens 1989; Juhlin 1981), nasal polyps, rhinitis, migraine headaches and arthralgia (Pacor et al. 2004; Juhlin 1981), shortness of breath, bronco constriction, asthma (Arai et al. 1998; Petrus
et al. 1996; Hong et al. 1989; Juhlin 1981; Freedman 1977), and with behavioral, mood and psychiatric disorders (El-Nouby et al. 2009; McCann et al 2007; Bateman et al. 2004; Schab and Trinh 2004; Juhlin 1981). While food items containing sodium benzoate must list its presence, there are no required warnings for consumers.

Sulfites (several forms of sulfites exist and are allowed for use in foods: sulfur dioxide, sodium metabisulfite, potassium metabisulfite, sodium bisulfite, potassium bisulfite, and sodium sulfite) have been linked with several idiosyncratic and allergic reactions including respiratory tract irritation, bronchospasm, oculonasal symptoms, skin reactions including urticaria and angioedema, flushing, hypotension and intestinal disturbances in sulfite-sensitive individuals and those with asthma (Environmental Health and Safety 2008; Arai et al. 1998; Corder and Buckley 1995; Lester 1995; Atkinson, Sim, and Grant 1993; Tarlo and Sussman 1993; Hong et al. 1989; Van Bever, Docx and Stevens 1989; Settipane 1987; Towns and Mellis 1984; Freedman 1977). The FDA banned the use of sulfites on fresh produce in 1986 and required listing of sulfites on some food labels, but there remains no requirement for explicit warnings on processed or packaged food labels of the potential dangers from sulfites.

Salicylates are another group of additives that have been linked with respiratory problems and bronchoconstriction, and can be especially hazardous for people with asthma (Corder and Buckley 1995; Hong et al. 1989; Towns and Mellis 1984; Stenius and Lemola 1976) and have also been linked with allergic reactions and cross-reactions (Park et al. 1991) skin reactions and intestinal disturbances (Van Bever, Docx and Stevens 1989). Other common food additives such as EDTA have been linked with allergic reactions in some people (van Laar et al. 1998). TBHQ (tert-butyldihydroquinone) has also been linked with allergic reactions (Aalto-Korte 2000) and possible toxicity (van Esch 1986). And Nitrites/Nitrates have been linked with the formation of carcinogenic nitrosamines (Parke and Lewis 1992), chronic liver disease (Freedman et al. 2010), as well as respiratory, skin and intestinal disturbances (Juhlin 1981), and Alzheimer’s disease, diabetes mellitus and Parkinson’s disease (de la Monte et al. 2009). Again, while these additives are required to be listed on food ingredients labels there are no required warnings.

While U.S. consumers may be hard pressed to find anything obvious about it on the label, the food additive Formaldehyde is used in preserved foods, medicines and vitamins (Agency for Toxic Substances and Disease Registry 2008), sugar production, as a preservative for grain and seed dressings and as a disinfectant for seeds (Product Stewardship Summary 2010), has been detected in beer and soft drinks (Lawrence and Iyengar 1983), as well as being present in the artificial sweetener Aspartame (Abegaz and Bursey 2009; Trocho et al. 1998), and when tested on products outside the U.S. has been detected in sources that can leach or migrate into food such as food packaging (Bradley et al. 2005), tableware and cooking utensils (Lund and Petersen 2006). According to a recent report from the National Toxicology Program (2010), ingestion of food can be a significant source of exposure to formaldehyde—in addition to low levels of formaldehyde occurring naturally in a variety of foods such as fruit, food may contain small amounts of formaldehyde from its use as a fumigant, fertilizer and preservative (Agency for Toxic Substances and Disease Registry 2008). Much of the research on formaldehyde has centered on inhalation and it has been linked to a variety of adverse reactions including respiratory problems for people with asthma (McGwin, Lienert, and Kennedy 2010), migraine headaches (Abegaz and Bursey 2009), insomnia, memory loss, mood alterations, nausea, fatigue (National Toxicology Program 2010) and leukemia/cancer (National Toxicology Program 2010; Zhang et al. 2009). The International Agency for Research on Cancer (IARC 2004) has determined that
formaldehyde may reasonably be anticipated to be a human carcinogen. The FDA position on formaldehyde is that “The Food and Drug Administration (FDA) do not believe that the very low levels that are used in food and cosmetics present a significant safety concern,” (Scheuplein 1985, 245).

The preservatives BHT and BHA are commonly used in food items such as breakfast cereals. The oxidative characteristics and/or metabolites of BHA and BHT have been found to contribute to carcinogenicity or tumorigenicity as tumor promoters (Kahl and Kappus 1993). (It should be noted that there exist some evidence suggesting that under certain conditions these additives may also have the opposite effect in that they may be anti-carcinogenic, Williams et al. 1999; Lindenschmidt et al. 1986.) Additionally, there is evidence that certain persons may have difficulty metabolizing BHA and BHT, resulting in health and behavioral changes, respiratory, skin and intestinal disturbances (Juhlin 1981). Of note, in animal studies BHT (Butylated hydroxytoluene) has been linked to having a toxic effect on the lungs (Kahl and Kappus 1993), having a significant adverse effect on body weight to developing fetuses and later during the lactation period (Meyer and Hansen 1980), and adverse effects to adipose cells (Simán and Eriksson 1996), as well as acting as a developmental neurobehavioral toxin (Butcher et al. 1981) including promoting behavioral abnormalities during pregnancy, as well as to offspring, leading to severe deficits in learning, decreases in sleeping, as well as increases in aggression and social isolation (Stokes and Scudder 1974), promoting liver abnormalities and toxicity (Safer and al-Nughamish 1999; Simán and Eriksson 1996), and promoting cancerous tumors (Malkinson 1999; Parke and Lewis 1992). To date, BHT continues to be used as a food additive/preservative in the U.S. BHA (Butylated hydroxyanisole) has been linked in animal studies as a developmental toxin (Butcher et al. 1981), and as promoting decreases in sleeping, orientation reflex and learning (Stokes and Scudder 1974) and is now considered as “reasonably anticipated to be a human carcinogen” (National Institutes of Health Report on Carcinogens, Public Health Service National Toxicology Program Report on Carcinogens 2002; U.S. Department of Health and Human Services’ Report on Carcinogens (BHA), Eleventh Report on Carcinogens; Parke and Lewis 1992). Citing numerous animal studies, Glenn Scott, M.D. filed a Citizens Regulatory Petition with the FDA back in 1990, asking the agency to prohibit the use of BHA in food. To date BHA continues to be used as a food additive/preservative in the U.S. While these additives are required to appear on the ingredients listings, there are no explicit warnings required on food products that contain these additives to alert consumers (Code of Federal Regulations - BHT 2010; Code of Federal Regulations - BHA 2010; U.S. Food and Drug Administration 2003a).

The same is true for an absence of warnings on high pesticide residues on or in certain foods such as produce, meat and dairy products (LeDoux 2011; Environmental Working Group 2009; Rutherford et al. 2000). Neither the FDA nor the USDA have required warning labels for consumers on foods tested to contain high pesticide levels despite the fact that many pesticides have been linked in empirical studies with maternal and developmental toxicity (Farag et al. 2011), dysfunctional development during puberty (Roy et al. 2009; Wolf et al. 2008), neurobehavioral changes (Lim et al. 2011), ADHD in children (Shaw 2009), adverse effects on semen quality (Hauser et al. 2006; Swan et al. 2003), anti-androgenic potency effects; blocking androgens/ male hormones (Cone 2011; Orton et al. 2011), and other endocrine-disrupting effects (Schilirò 2011) leading to reproductive disorders and testicular and breast cancer (Prins 2008). Human studies have linked exposure to PCB (Polychlorinated Biphenyls) mixtures for instance, with numerous adverse health consequences including immunological, reproductive, and dermatological effects, as well as cancer (Faroon, Smith-Simon, and De Rosa 2005). The same holds true for animal antibiotics/antimicrobials present in meat and dairy products (McEwen and Fedorka-Cray 2002) for which the FDA estimates livestock receives 29 million pounds per year (FDA Summary Report 2009) and for which the U.S.
Centers for Disease Control and Prevention (2011) cited studies that have correlated the use of antibiotics [cephalosporins] on food animals with higher rates of drug-resistant Salmonella infections in humans (U.S. Food and Drug Administration Draft Report 2010c; U.S. Food and Drug Administration Report 2004), and other drugs and animal growth hormones in meat and dairy products (Toldrá and Reig 2006; Chirièl and Dietz 2003; Anadón and Martínez-Larrañaga 1999; Epstein 1996; 1990; Prosser, Fleet, and Corps 1989) which have been linked in studies to increased risks of breast, colorectal, prostate, bladder, and other cancers (Rohrmann et al. 2007; Moorman and Terry 2004; Malawa 2002; Epstein 2001; Manousos et al. 1999; Bohlke et al. 1998; Chan et al. 1998; Hankinson et al. 1998; Outwater, Nicholson, and Barnard 1997; Peyrat et al. 1993; Epstein 1990). A Citizens Regulatory Petition was filed in 2007 by Dr. Samuel Epstein and others requesting that the FDA withdraws approval of Recombinant Bovine Growth Hormone (rBGH). The petition reads in part:

“This petition is based on scientific evidence of increased risks of cancer, particularly breast, colon, and prostate, from the consumption of milk from cows injected with Posilac®, the genetically modified recombinant bovine growth hormone (also known as rBGH, sometribove, recombinant bovine somatotropin, or rbST). Posilac® is the trademark for Monsanto’s rBGH product, registered with the U.S. Patent and Trademark Office, and is approved for marketing by the Food and Drug Administration (FDA). This petition is also based on abnormalities in the composition of rBGH milk, resulting from the recognized veterinary toxicity of rBGH, particularly increased levels of IGF-1.” (Epstein 2007, 1)

While some manufacturers of milk and dairy products have voluntarily stopped selling products containing recombinant bovine growth hormone (rBGH) in recent years, this remains an approved substance in food products in the U.S. and the FDA (2010b) does not require rBGH food products to carry warnings on the labels for consumers.

Another chemical that has been linked in numerous studies to a variety of adverse health outcomes is bisphenol-A, otherwise known as BPA. BPA, like the other food additives1 examined here, makes an appearance on U.S. grocery shelves with no packaging warnings to consumers. BPA, developed in 1891 as a synthetic estrogen, came into widespread use in the 1950’s when scientists realized it could be used to make and strengthen polycarbonate plastic and some epoxy resins to line food and beverage cans. In recent years BPA has been found to leach into food by way of cans (canned food) (Schecter et al. 2010; Environmental Working Group 20082), the lids of canning jars and plastic food and drink containers (Schecter et al. 2010; Wang and Schnute 2010) including baby bottles and toddler sippy-cups (Nam et al. 2010; Wang and Schnute, 2010; Maragou et al. 2008), and has been detected in infant formula and baby food (Gibson 2007; Houlihan and Lunder 2007; Biles, McNeal, and Begley 1997) as well as dental fillings (von Goetz et al. 2010). BPA is a reported endocrine-disrupting chemical (Leranth et al. 2008; Takeuchi et al. 2004; Markey et al. 2003; Rubin et al. 2001) and numerous peer-reviewed studies conducted by independent scientists have linked exposure to BPA to a variety of adverse health consequences (Lang et al. 2008; Vom Saal et al. 2007) such as an increased risk for endocrine-related cancers (Prins 2008), including breast cancer (Jenkins et al. 2009; Dairkee et al. 2008) and prostate cancer (Prins et al. 2008a,b; Ho et al. 2006), heart disease (Melzer et al. 2010; Lang et al. 2008), abnormalities in liver function (Vom Saal et al. 2007), low sperm counts in men (Li et al. 2011), metabolic abnormalities, weight gain and increased serum cholesterol levels (Hugo et al. 2008; Miyawaki et al. 2007; Rubin et al. 2001), neurological damage/altered brain development (Palanza et al. 2008) including a link with schizophrenia (Brown 2009), puberty advances/disruptions/abnormalities (Wolf et al. 2008; Wadia et al. 2007; Howdeshell et al. 1999), insulin resistance and diabetes (Lang et al. 2008), and adverse reproductive and developmental effects (Benachour and Aris 2009; Rubin and Soto 2009;
Honma et al. 2008; Lenie et al. 2008; Leranth et al. 2008; National Toxicology Program-CERHR 2008; Susiarjo and Hunt 2008; Dolinoy, Huang, and Jirtle 2007; Newbold, Jefferson, and Banks 2007; Richter et al. 2007) including recurrent miscarriages (Sugiura-Ogasawara et al. 2005). BPA appears to be pervasive in the bodies of people living in the U.S. It was found to be present in the urine of over 90 percent of Americans tested, in the breast milk of nursing mothers (Lang et al. 2008; Kuruto-Niwa et al. 2007; Ye et al. 2006), and with prenatal exposure, where testing detected BPA in the biological fluids and placenta, as well as the urine and umbilical cords of newborns (Vökel et al. 2011; Braun et al. 2009; Calafat et al. 2008; Ikezuki et al. 2002; Schönfelder et al. 2002).

BPA is another food additive in which the FDA has failed to take action that would potentially protect the health and safety of consumers (U.S. Food and Drug Administration, FDA Draft Assessment of Bisphenol A for Use in Food Contact Applications). In 2010 the National Resource Defense Council (NRDC) filed a lawsuit against the U.S. Food and Drug Administration for its failure to act on a 2008 Citizens Regulatory Petition to ban the use of bisphenol-A (BPA) in food packaging, food containers, and other materials likely to come into contact with food (Environmental Working Group 2008). Among other things, the petition argues that BPA exposure has been associated in primate and other empirical animal studies with a wide range of adverse effects, including reproductive defects, chromosomal damage, nervous system harm, increased rates of breast and prostate cancer, and metabolic changes including obesity and insulin resistance (a condition that commonly precedes the development of diabetes) and studies in human tissue link BPA exposure with breast cancer and diabetes. The petition further states:

“In light of the data suggesting that BPA is harmful to human health, and in response to the well-founded concerns of experts in the field, FDA must prohibit BPA from use in human food and food packaging, including in can linings and in beverage containers like baby bottles. The FDA must further revoke all regulations permitting the use of any food additive that results in BPA becoming a component of food,” and that FDA’s Approval of BPA for ‘Use in Food Contact Substances’ violates the Federal Food, Drug, and Cosmetic Act” (National Resource Defense Council 2008, 3).

Several states have taken the issue of BPA in children’s products under consideration, and some states, cities and counties have decided to take the matter of public health and safety into their own hands and have banned BPA in baby bottles in their communities (Koch 2010). In March, 2011 the Environmental Protection Agency said it would consider adding BPA to its list of chemicals of concern (Szabo 2010a). In a change from its 2008 position on BPA, the U.S. Food and Drug Administration has since expressed that it has “some concern” and shares the National Toxicology Program’s concerns that BPA may alter the brain, behavior and prostate gland in children both before and after birth (U.S. Food and Drug Administration 2010a; 2008b; Szabo 2010b). While encouraging manufacturers to look for safer materials for baby feeding products, baby formula and to line metal cans, as well as reporting plans to conduct a new review of this chemical, to date the FDA has not recommended discontinuing use of products that contain BPA and has taken no action to recommend a complete or partial ban or to require warning labels on food that may contain BPA.

U.S. food consumers rely on governmental agencies like the FDA and USDA to oversee the safety of their food and to alert them when foods contain ingredients that may be hazardous for some people. For instance, approximately 11 percent of U.S. food consumers read the allergen labeling on food packaging while searching for potentially problematic ingredients (International Food Information Council Foundation 2010). This begs the question: Why are there no required warnings on food products that contain ingredients linked with adverse
Some symptoms like free glutamic acid (MSG), Tartrazine/yellow dye #5, sodium benzoate, Formaldehyde, BHT/BHA, BPA or other synthetic and industrialized food chemicals that may pose a health risk for some people?

**Other Countries’ Reactions to Research Findings about Potentially Dangerous Food Chemicals**

The U.S. government agencies may consider many of these synthetic and industrialized food chemicals safe enough for consumers that they do not warrant a warning on the ingredients labels or packaging, but other countries do not always share this level of confidence. Outside of the U.S. many countries either require warning indicators for their consumers to be placed on food labels containing some of these synthetic and industrialized food chemicals or they have banned them all together.

Several food dyes either require consumer warnings on food labels or have been banned outright in some countries. Following the European Food Safety Authority’s request that food manufacturers voluntarily remove six food dyes back in 2008, a European Union-wide mandatory warning is now required to appear on food and drink labels that contains any of these food dyes: quinoline yellow (E104), carmoisine (E122), allura red (E129), Tartrazine (E102), ponceau 4R (E124), sunset yellow FCF (E110). The label must carry the warning ‘May have an adverse effect on activity and attention in children’. This became mandatory across the European Union as of July, 2010 (Food Standards Agency, U.K. 2010) and was based in part on the findings from empirical research conducted by Cragg, Ross, and Dawson Qualitative Research Report (2007). Additionally, in March, 2011, the European Food Safety Authority’s panel on food additives and nutrient sources revised the Acceptable Daily Intakes (ADIs) levels for a group of caramel food dyes (E150a, E150c, E150d) used in food production (The European Food Safety Authority 2008; 2011). One of the food dyes required by the UK to carry a warning label is allura red (E129) (FD&C Red Dye 40) which is banned in Denmark, Belgium, France, Germany, Switzerland, Sweden and Austria (CBC 2010), Green Dye #3 is illegal throughout the European Union (Official Journal of the European Communities 1994) and Tartrazine (Yellow dye #5; E102), which is also on the EU list requiring consumer warning labels, is banned in Sweden and Finland, the latter banning Tartrazine (Yellow Dye #5) and sunset yellow (Yellow Dye #6) back in 1981 (Perera 1986). (It should be noted that Norway previously banned food dyes/additives containing coal tar and coal tar derivatives back in 1978, as well as nitrates/nitrites, but in 2001 agreed to reverse the bans in order to abide by the rulings of the European Economic Area.) Under public pressure spurred on by the findings of the EU study, Nestle Corporation announced in late 2008 that it would phase out six dyes from its foods produced in Australia: quinoline yellow (E104), carmoisine (E122), allura red (E129), Tartrazine (E102), ponceau 4R (E124), sunset yellow FCF (E110) (Burke 2009) and in 2009 some grocery retailers in Australia implemented a voluntary ban of the same six food dyes (Macey 2009).

Some countries also handle other food additives and preservatives differently than the U.S. For example, the preservative Sodium Benzoate is a commonly used preservative in foods, drugs and other products in the U.S. But parabens such as benzoic acid and Ethyl para-hydroxybenzoate, a derivative of benzoic acid, is banned in Australia, and methyl p-hydroxybenzoate and benzoic acid are banned for use in food in Taiwan, Canada and Europe (Food Safety Net 2010). Sulfites/Metabisulfites (E223) are listed in the U.K. as a preservative that may cause allergic reactions, particularly skin irritation, gastric irritation and asthma, and back in the 1980’s the U.K. banned bromates (such as potassium bromate) in baked goods after animal studies found they increased the incidence of kidney tumors (Food Standards Agency, U.K. 2010; Murphy 1997). Formaldehyde is banned as a food preservative in China, Vietnam and Hong
Kong (Flynn 2010; Ma 2010; Tang et al. 2009; The Centre for Food Safety 2009; The Standard 2008). The Chinese health ministry’s 2008 list of banned food additives (including boric acid as an emulsifier and sodium thiocyanate, used as a preservative in milk and dairy products) was expanded in 2011 when China’s officials banned the production of two new food additives, benzoyl peroxide and calcium peroxide, commonly used to bleach flour (Global Food Law 2011).

The growth hormone rBGH in milk/dairy and hormones in meat is also handled differently in some countries outside the U.S. There is a European ban on the marketing and sale of rBGH milk. Since January 2000 the growth hormone (rBGH) has been banned in milk and dairy products in all twenty-seven countries of the EU (European Commission Report on Public Health Aspects of the Use of Bovine 1999) as have hormones in meat (Stephany 2001; European Commission Report: Assessment of Potential Risks to Human Health From Hormone Residues in Bovine Meat and Meat Products 1999). Canada, Australia, New Zealand, and Japan have also prohibited the drug’s use (American Public Health Association 2009; Food Standards Australia and New Zealand 2006; Japan Ministry of Health, Labour and Welfare 2004; Health Canada Report 1998).

And BPA (bisphenol-A), a permitted food additive in the U.S., is banned (at least in baby bottles) in several countries across the globe. Among them are Canada, France, Denmark, Australia, Germany and New Zealand (Food Safety Net 2011). Malaysia’s ban on BPA in baby bottles becomes effective March, 2012 (Food Safety Net 2011) and in March, 2011 China created draft regulations to ban BPA in baby bottles and children’s products (Feiran 2011). The European Union banned BPA from being manufactured in plastic baby bottles in all EU countries effective March, 2011 and a BPA ban on all plastic baby product sales and imports in EU countries became effective June 2011 (European Commission 2010; USA Today 2010). The United Arab Emirates (UAE) in also banning BPA in baby bottles and all children’s products (Emirates News 2010). In late 2010 Environment Canada placed bisphenol-A (BPA) on the country’s list of toxic substances. The Canadian government first banned polycarbonate baby bottles back in April 2008 (Global Food Law 2011).

Beyond other countries requiring warning labels for consumers or banning certain synthetic or industrialized food chemicals that are permitted by the U.S. Food and Drug Administration, many countries outside the U.S. have developed systems for determining and assuring consumer food safety that varies dramatically from that of the U.S. For example, in India the Supreme Court recently banned food industry representatives from being a part of the food safety advisory committee. The Indian Food Safety and Standards Authority (FSSA) blocked representatives from the food and beverage industry from being included on an advisory scientific panel on food safety and standards. The Indian Supreme Court found that involvement of food industry figures breached the Food Safety and Standards Act because such panels could not be said to be manned by independent experts (Food Production Daily 2011; Global Food Law 2011).

AN ASSESSMENT OF THE NEED FOR LABELING

As the preceding section describes, there is considerable evidence of at least the potential for harm from a number of synthetic and industrialized food chemicals. However, at the same time there also exist studies that do not find evidence of harmful effects. And in fact, the FDA has categorized many of the additives discussed here as “Generally Recognized As Safe” (GRAS). For example, regarding BHA and BHT, the FDA’s Select Committee on GRAS Substances (SCOGS) concludes that, “While no evidence in the available information on BHA/BHT demonstrates a hazard to the public when it is used at levels that
are now current and in the manner now practiced, uncertainties exist requiring that additional studies be conducted.” And regarding MSG and sulfites, the SCOGS concludes that, “There is no evidence in the available information on MSG/sulfites that demonstrates a hazard to the public when used at levels that are now current and in the manner now practiced. However, it is not possible to determine, without additional data, whether a significant increase in consumption would constitute a dietary hazard.”

This leads to two questions: (1) How can the evidence of potential harm cited be reconciled with the conclusions of the FDA? ; (2) What does this suggest about what public policy should be regarding labeling? There are a number of possible interpretations regarding the FDA’s position on the substances discussed here. One is that the FDA has acted as an objective evaluator of all possible scientific information and is making optimal, unbiased, rational decisions regarding the safety of these additives. Therefore, it would follow that an objective reading of the current state of research on each individual food additive would conclude that the evidence of harm is strongly outweighed by other studies showing no harm. A second possibility is that the FDA is trying to act as an objective evaluator but for some reason comes out with biased conclusions. A third possibility is that decision-makers are not even attempting to be objective and instead are operating under ‘regulatory capture”—a process in which decision-makers serve industry interests rather than the public interest. The idea that regulatory capture has been taking place at the FDA is not a new one, though most of the evidence presented publicly has been in the area of drug approval (Egilman et al 2007; Abraham 2002; Olson 1995).

But even if FDA decision-makers are not consciously steering decisions to favor industry interests, the second possibility—that bias in decisions is present—could still occur for a number of reasons. One explanation would be that the selection process leads to hiring decision-makers who have certain leanings, and even if they try their best to make objective decisions they have a tendency to favor a particular viewpoint. Another source of bias could be incentives that favor certain conclusions, either within the FDA, or through career paths that involve interchange with industry (either being directly employed by industry or being employed at third party institutions with research funded by industry) that unconsciously influence perspectives. A third source of bias could simply be the substantial resources available to industry to produce material and results that favors one set of conclusions; this factor, combined with decision-makers who fail to adequately discount biased input, can influence their decisions. This could occur if decision-makers from the FDA attempt to judiciously weigh the evidence for or against a substance’s safety but fail to fully discount how the quantity of evidence on a particular side and the strength of its conclusions may be influenced by the source of that study. For example, decision-makers may be too influenced by numerous studies funded by industry that show additives cause no harm. A judicious decision-maker may discount this evidence for a number of reasons. First, as described by Michaels (2008), the powerful and well-funded product defense industry has evolved for defending potentially unsafe products and chemicals; it has been developed with the sole goal of creating science that is considered credible, but that is biased and unreliable and inevitably favors the interests of its funders. Industry has also adopted the practice of ghostwriting research articles on behalf of allegedly objective scientists to gain regulatory approval of products and substances (Fugh-Berman 2010; McHenry and Jureidini 2008). Even aside from the alleged creation of a product defense industry and ghostwriting of research, health-related research results have been shown to be correlated with the source of funding (Bourgeois et al. 2010; Tereskerz et al. 2009). The magnitude of differences in results by funding source can be striking in its size. For example, Lexchin et al. (2003) found that industry sponsored research was four times more likely to reach conclusions favorable to industry, while Friedberg et al. (1999) found that
non-sponsored research was seven times more likely to report unfavorable qualitative conclusions. Research results that are compiled into reviews of health-related issues may also be influenced by reporting bias, with industry-funded studies failing to report results that are contrary to their interests (Smyth et al. 2011; Kirkham et al. 2010). Samuels (2010) gives an account of the approval of one of the chemicals discussed here, MSG, that implicates both industry bias and information suppression, as well as bias in the FDA’s actions as causing the continued presence in U.S. food products of a substance many have argued to be harmful to consumer health. And Barbee (2004, 13) points out that conflicts of interest occur frequently in FDA approval committee meetings, concluding that when it comes to the FDA, “if you have the money and the influence, you can frequently get what you want”.

The evidence that decisions regarding what is considered to be a harmful substance vary considerably across developed countries casts further doubt on the regulatory process. The variance could be interpreted as decision-makers not making an objective reading of the evidence on the substances discussed here. Or, an alternative inference is that interpretations of the evidence can vary considerably among knowledgeable decision-makers holding different perspectives.

This leads us to the second question posed, ‘What does this suggest regarding public policy?’ If either objectivity is open to reasonable questioning or there is considerable variance in interpretation of the evidence, then it suggests that consumers should be provided with the information to make such decisions themselves. The public appears to agree with this perspective. According to an International Food Information Council Foundation (2010) survey, 77 percent of U.S. food consumers believe that insuring food safety is the responsibility of the government, with 70 percent claiming it is also the responsibility of the food industry. Approximately 31 percent believe food safety is a shared responsibility among five or more stakeholder groups including the government, farmers, food producers, retailers, and consumers.

Of course, a balance must always be attempted between information overload of the consumer and providing beneficial information. While it is sometimes useful to utilize government regulatory expertise as a way to distill complex information into labels that the consumer can easily digest, extra care must be taken when there is a known wide range of consumer beliefs regarding the importance of product properties. In the realm of synthetic and industrialized food chemicals, a growing portion of the U.S. population will pay a significant premium to buy organic products or to otherwise avoid certain food chemicals (U.S. purchases of organic foods have increased 70 percent over the past four years, Chase 2011). This suggests that rather than government bodies alone, some level of consumer sovereignty should prevail with adequate information on the label to allow consumers to reach their own conclusions in terms of whether a substance is safe or not.

Food chemical safety conclusions reached by the FDA also tend to be focused on the most serious health consequences (such as cancer and birth defects) and focus on an individual of “average” sensitivity. For example, in concluding that MSG is “generally recognized as safe” the FDA noted that a portion of the population is known to experience adverse symptoms from its consumption. This portion of the population is so large in fact, as to exert enough economic influence to cause numerous Chinese restaurants across the U.S. to make explicit mention of the fact that they do not use MSG. Additionally, several conventional food manufacturers have begun to promote their soups, sauces and other food items by advertising that they contain “No MSG”. Yet, according to the FDA, the percentage of people with adverse reactions to this food additive is not large enough to counter the conclusion that the
substance is generally recognized as safe, despite the fact that the FDA acknowledges that some consumers can have strong adverse reactions to minute quantities. As previously noted, reactions of sensitive individuals (such as asthmatics) can be serious and life-threatening. This raises a question as to why if we label peanut residue in food for the sake of a small portion of sensitive individuals with serious adverse consequences, do we not also warn of hidden and inconsistently labeled substances that can also lead to severe consequences?

Labeling is not just for the average consumer who seeks to avoid life-threatening health consequences. Consideration must also be given to empowering those known to be sensitive to synthetic/industrialized food chemicals, as well as empowering those who do not yet know they are sensitive so they and their healthcare providers can learn about the connection through experience. Our food supply system should consider the needs of all consumers—including individuals who have sensitivities to synthetic and industrialized food additives. Additionally, it should consider the needs of not only those who wish to avoid the potential of serious health problems, but also those who wish to avoid foods that consistently cause them to have headaches, nausea, edema, and a variety of other known short-term adverse consequences.

A Behavioral Economic Model of Consumer Confusion

This section uses theoretic behavioral economic principles to describe how consumer biases and cognitive limits can cause consumer confusion and how the directed actions of industry that seeks to capitalize on this can enhance this consumer confusion, increasing the need for intervention by regulators in providing consumers with systematic, consistent information about potential harm.

In addition to issues surrounding food additives and potentially harmful chemicals discussed here, there are numerous cases where consumer confusion exists regarding food characteristics. There has been confusion over labeling of eggs as well as other animal products with higher animal care standards (Frank 2006; Paulson 2006; Fulmer 2001), confusion over the presence of genetically modified organisms (Scandizzo 2002), confusion over what it means for something to be natural or organic (Eng 2009), and confusion over the healthy qualities and benefits of food (Labiner-Wolfe, Jordon, and Verrill 2010), among many other issues. In some cases, efforts seem to have been made by some in the food industry to intentionally label products that add to consumer confusion, while in other cases it is less clear whether the confusion to consumers is intentional.

The fact that confusion can be beneficial to a firm that seeks to seize on a trend in demand (such as the growing market for organic food) by changing a label without changing their production process or ingredients, is self-evident and does not require further explanation. But what may be less clear is why confusion among consumers is so prevalent. Sometimes the information search costs required to make the proper choices are quite modest. Limited resources and cognitive capacity can explain part of it, but we postulate that something more is going on. In particular, when threatened with unpleasant realities that conflict with current habits, a desire for denial (or dissonance reduction) may work to enhance confusing messages, causing the consumer to ignore the issue entirely. In addition, other behavioral factors such as satisficing (to be discussed later) may also play a role.

While the applicability of the main ideas presented in this section may extend to many other products beyond food, food is also special in the way we respond to it for a number of reasons, some of which are discussed in Frank (2007):
1) Few habits are as deeply ingrained or as often repeated as our eating habits. Therefore existing food preferences may be particularly hard to change based on rational health or ethics-based arguments.

2) Food consumption is embedded in important ways into our social interactions. When changing food preferences threatens to disrupt current social interactions (such as by limiting restaurant options or requiring special dietary requests when one meets with friends or coworkers), there may be a strong resistance to changing preferences.

3) Existing choices may be reinforced culturally and socially causing further resistance to change (note: this is subtly distinct from the issue of disrupting social interactions. An example would be even if the restaurant we regularly attend with our friends has foods that accommodate our new diet so that there is no disruption of social interactions, the fact that our new choice of food differs obviously from the choices of our reference group may still exert pressure to deter change).

4) Food holds a special place in the law. There are unusual subsidies to food production and laws governing what can even be said about food. This creates an unusually strong institutional context with powerful actors seeking to prevent disruption of current markets.

5) Some of our behavioral responses to food may have developed through biological evolution and be partially hardwired in our brains. We may also have a limited reinforcement horizon with food, such as reacting instinctively to short-term digestive problems from food sources, but being less inclined to connect long-term adverse effects with certain foods. Humans may also be less inclined to connect food to problems related to modern chemical additives rather than to the toxic reactions that we have encountered throughout our evolutionary history.

Let us begin by assuming that a consumer gets utility of Ua from a current food consumption choice. But the consumer learns of a cost to this food consumption behavior that causes a utility cost of Ca. Assume that this cost also has the features of a credence good (Darby and Karni 1973). In other words, it is an intangible cost that cannot be observed at the time of consumption. Some examples of this include an ethical good (Frank 2006) such as humane treatment of animals in production or a health outcome that can be short-term but beyond the time of consumption (weight gain, headaches, etc.) or long-term (cancer, obesity or heart disease risk). The consumer can switch to good B which is a substitute for good A and yields utility Ub, and has no associated ethical or health cost (C�=0). We assume that in the absence of the cost, A is preferred to B (Ub > Ub) but that in the presence of the cost, B is preferred to A:

(1) \[ Ua - Ca < Ub \]

For the sake of simplicity, in some scenarios it may be helpful to generalize Ua and Ub as utilities net of price. In particular this may be a useful simplification when utilities from consumption are the same, but monetary costs differ. An example is A is a regular food product while B is the same product but produced using organic (or some other) methods. It may be the case that the same utility is received from both products (aside from Ca), but that B has a higher selling price than A. But rather than introducing separate price variables, if Ua and Ub are utilities net of selling prices, the assumptions above can remain unchanged. A rational consumer with perfect information would simply choose B over A given the added cost.

However, let us assume that the company producing B can legimately label their product as not having the potential for adverse health costs, while the company producing A can easily obfuscate that information by making their label appear similar or otherwise hide the source of the potential health costs of their food product. For example, foods known to cause adverse reactions in a large percentage of the
population (25-42 percent, Kerr et al. 1979; Reif-Lehrer 1977) such as monosodium glutamate (MSG) may be hidden despite the consumer checking the labels. While consumers who know they have adverse reactions to MSG can avoid this particular ingredient if they recognize it on food labels, by using a variety of pseudonyms such as “natural flavoring” or not stating that it is present within other ingredients such as hydrolyzed vegetable protein, the food manufacturer can attempt to keep this ingredient hidden from the consumer on their food labels.

Even if intentional obfuscation takes place, consumers may be able to make optimal decisions in some cases if they take some effort to learn what to look for or avoid. This information cost is labeled I. For a rational consumer, it would be worth it to make the effort to differentiate A from B if:

\[(2) \quad U_a - C_a < U_b - I\]

However, this is where the consumer is hypothesized to deviate from rational behavior. Before the obfuscation, the consumer was confronted by the fact of Ca, and therefore with the inevitability of switching their choices, even if their myopic preference is for A. If the mind is viewed from a dual process theory (Kahneman 2003), “System 1” would prefer product A, while “System 2” would reason that product B is preferable. When obfuscation takes place, it creates a plausible opportunity for denial or motivated reasoning. In other words, if a consumer at some level wants A to be the right answer, they can ignore the opportunity for obtaining information and simply rationalize that there is no way to avoid Ca and therefore they might as well ignore the potential adverse health cost. In other words, it becomes an excuse to ignore the adverse health consequences of our choices, even if these costs are avoidable. The opportunity to seek out information may be ignored, or the cost, “I” may be unreasonably exaggerated in the mental calculus.

This is consistent with the considerable evidence on motivated reasoning and mechanisms to reduce cognitive dissonance. The case for motivated reasoning is well established, both theoretically (Kunda 1990) and empirically (Agrawal and Maheswaran 2005; Chernov 2001; Jain and Maheswaran 2000). Kunda in particular argues that though people are more likely to arrive at conclusions that they want to arrive at, they are constrained in their ability to do so by their ability to construct seemingly reasonable justifications for these conclusions. This is tied closely to what is hypothesized here. Namely, by expending a small amount of effort, food companies can enhance the ability of consumers to construct reasonable justifications for their conclusions, even if they are wrong (or unhealthy) conclusions. In other words, consumers who would prefer to discount from consideration an intangible or long-term health cost of a particular food item are enabled by the food manufacturer to do so. In particular, the firms create some degree of uncertainty about an adverse health cost (Ca) or the effectiveness of mitigating a cost. A consumer who would at some level prefer to myopically make choices in ignorance of this cost can then seize on this uncertainty and cognitively exaggerate its importance to the decision-making process. For example, competing ethical claims allows consumers to throw up their hands and rationalize that they are powerless to mitigate the ethical costs by making responsible consumption choices. The same is true for confusing claims about food products being ‘natural’, ‘organic’ or otherwise free of unwanted synthetic and industrialized food chemicals. Confused consumers who would rather not confront issues like how their personal food choices may adversely affect their long-term health can easily justify not even trying to make healthier food choices. Using motivated reasoning, weak evidence that counters inconvenient but strong findings regarding a health cost can likewise be seized upon as a source of uncertainty.

Introducing complexity into the food marketplace through intentional obfuscation may also play into what is called, “satisficing” (Simon 1957). Simon originally conceived of satisfying to explain the behavior
he observed of managers who, when faced with too many decisions to make, did not optimize their choices but simply settled for a ‘good enough’ decision that met some minimum standard, and then they moved on to focus their limited cognitive attention on other issues. Consumers likewise are often faced with too many options and decision points and may resort to satisficing. That is, when consumers are faced with confusing or contradictory information via marketing or product defense industry obfuscation, consumers may default to the “good enough” choice. This stems in part because there is information-overload on what is good and bad to eat. If experts overwhelmingly speak on one side of a debate, consumers may have little trouble incorporating a change in their behavior. However, when a claim is contested, consumers with limited resources to research the credibility and motivations of both sides will often simply satisfice. The “good enough” solution in this case may be to simply continue eating what one has already been eating if there is no perceived clear tangible and immediate harm. Since the cost Ca is assumed to be long-term, intangible, or otherwise hard to connect directly to the consumption behavior, it will likely be ignored in the satisficing decision.

What does all this mean for food consumption choices? It implies that established consumer consumption patterns may be hard to change even when evidence exists that challenges these choices. This is particularly true when food manufacturers have a vested interest in continuing current consumption patterns. Conventional food manufacturers will not need to have the weight of evidence on their side about potential health risks that may or may not be associated with food additives in their products. A little effort to confuse the issue can go a long way in keeping consumers from changing their behaviors.

**Does Industry Intentionally Obfuscate Food Content?**

If it takes little effort on the part of industry to thwart consumer intentions for changing their consumption behavior, is their evidence that intentional deception on the part of the food manufacturer takes place? In some cases there is. But far more prevalent is evidence that labels are misleading, while the intention of the producer remains open to interpretation. As already discussed, MSG can make an appearance under a large number of aliases, most of which give no indication of the presence of this food additive. In some cases it is possible that labeling of MSG by other names may be unintentional (for example when MSG is a byproduct rather than added to the final food product). However, it is a possibility that at least in some cases, if not many, additives containing MSG appear on the label with no mention of it to the consumer, and that this occurs with the full recognition of the manufacturer. While that inference can certainly be disputed, what it is indisputable is that including MSG in products labeled “No Added MSG,” “No MSG Added,” and “No MSG” is an intentional obfuscation. Yet, according to Samuels⁵, this does in fact happen. Placing “No MSG,” “No MSG Added,” or “No Added MSG” on food labels has been deemed by the FDA to be false and misleading under the U.S. Federal Food, Drug and Cosmetic Act—especially when the label also lists any hydrolyzed protein as an ingredient since it always contains MSG. According to Samuels (1999), at one time, the FDA responded to the illegal use of the term “No MSG Added,” with both a Regulatory Letter and threat of seizure and injunction in case of non-
compliance. But over time the FDA began to look the other way (as did State Attorneys Generals who previously had prosecuted these cases), leading the deceptive and misleading practice of labeling products “No MSG” and “No Added MSG” to once more proliferate.

To make things even worse for consumers, while the FDA announced in 1995 that it considers food labels stating, “No MSG” or “No Added MSG” to be misleading if the food contains ingredients that are sources of free glutamates, the United States Department of Agriculture (USDA) took no such action. The USDA actually approves labels of meat and poultry products that claim “No MSG,” “No MSG Added,” or “No Added MSG” despite the presence of sources of free glutamates such as hydrolyzed vegetable protein (Samuels 1999).

Unfortunately, label confusion for consumers does not stop there. Many other potentially harmful additives discussed in this paper can come under a variety of names. For example, sulfite preservatives may be listed on food labels as Sulfur Dioxide, Sodium Sulfite, Sodium Bisulfite, Sodium Metabisulfite, Potassium Bisulfite, and Potassium Metabisulfite. Or even worse for consumers, it may come with no label at all. For example, sulfites without any label are not uncommon in some dried fruit and wine, among other foods. This absence of a label on a food additive known to cause adverse reactions may or may not be an example of intentional obfuscation. Either way, the consumer loses. Another example of labeling that may be intentionally confusing to consumers is BHA/BHT on cereal boxes which sometimes does not appear in the ingredients listing but is noted elsewhere on the box with a statement that it was ‘added to the packaging’. For consumer information purposes, it is not relevant at what stage in the process the preservative was added—the fact is that it ends up in the final food product which is consumed, and therefore should be labeled in the place consumers expect to find such information.

But the problem of consumers being intentionally misled can go well beyond the food ingredients label. Corporate obfuscation (such as funding bias and ghostwriting) can occur not only at the product labeling level but also in the science defining the risk of the product—a practice that requires complicit cooperation from others in the chain of the approval process. Samuels (1999) lays out a particularly compelling and damning case regarding industry influence on the risk assessment of MSG. In addition to industry involvement, Samuels also presents evidence that personnel at government institutions such as the U.S. Food and Drug Administration (FDA) and National Institute of Health (NIH) have been complicit in this influence. The American Medical Association (AMA) has also had a role in maintaining public ignorance regarding synthetic and industrialized food chemicals like MSG in food. At the AMA 1991 annual meeting the organization refused to implement a resolution passed by its own membership to encourage all appropriate regulatory agencies, including the FDA, to mandate labeling of all foods containing even small amounts of MSG (American Medical Association 1991).

The FDA has acknowledged that MSG holds the potential to cause some people to have serious adverse health outcomes which is the reason they require MSG to be listed on food ingredients labels (U.S. Food and Drug Administration 1995). But requiring MSG to be listed on the label is meaningless to the consumer if the food industry lists MSG under other names and then fails to require warnings on the food label that MSG is or may be present. If the FDA acknowledges the potential for adverse health consequences from MSG in some people, it begs the question, ‘Why do they permit food corporations to obfuscate the fact that their products contain monosodium glutamate or free glutamic acid?’ It also remains unclear why there are no required warnings on food products that contain other additives linked with adverse health reactions such as Tartrazine, caramel food dye, sodium benzoate, formaldehyde, BHT, BHA, BPA, and so on.
Yet another method of corporate obfuscation can come in the form of promoting consumer information overload. Information overload is a legitimate concern in food labeling. However, while industry often argues that labeling of legitimate health risks will overload the consumer, at the same time food manufacturers often overload the consumer with irrelevant or misleading information on food labels (Laskawy 2010). These can include meaningless claims of being “natural” without being USDA certified organic or complying with USDA requirements for organic foods, or claims of “no transfats/no added sugar” on products for which these claims are irrelevant. Information overload can also come in the form of scientific studies overload (sometimes industry-sponsored), which may affect experts and reporters, as well as the consumer. Research overload can come in the form of overwhelming or confusing evaluators with the sheer volume of contradictory scientific information (Lengle 2008). This can often lead the evaluator (or consumers who read news articles on the subject) to conclude that the harm or benefit of certain food products or additives are completely unknown. Consumer doubt of scientific evidence may lead to the continued use of products even when there is arguably evidence of potential harm, simply because the seeds of doubt have been sown. As previously discussed, the scientific defense of industry’s interests has become an industry in itself—one that has the resources to fulfill the objective of confusing and complicating evaluation of the science on a topic—including synthetic and industrialized food chemicals.

**Obstacles to Achieving Bans or Label Warnings for Potentially Dangerous Synthetic/Industrialized Food Chemicals**

One of the problems fueling consumer skepticism about the healthiness and safety of their food may be perpetuated by the obstacles governmental overseer agencies like the FDA and USDA must deal with. Governmental oversight agencies’ efforts are often challenged by powerful lobbying groups representing the chemical and food industries, making any attempted changes a game of tug-of-war. Some U.S. political representatives must fight these same obstacles when presenting legislation that is counter to the interest of the chemical and food industries. For example, Senator Dianne Feinstein has gone on record as stating that the chemical industry, namely The American Chemistry Council (formerly known as the Chemical Manufacturers Association) was behind the failure of the recent legislative bill to ban BPA in the U.S. (USA Today 2010). Some of the largest chemical companies in the world including BASF, Dow, and DuPont, among other plastics manufacturers, make up the members of the American Chemistry Council (ACC)—an organization that has spent millions of dollars working to defeat efforts to restrict the use of bisphenol-A in infant formula, baby food, baby bottles and sippy-cups at the state level (Rosenberg 2010; Kissinger and Rust 2009; Layton 2009; Rust and Kissinger 2008). Also working to fight against changes in food labeling that would offer consumers warnings and more information about synthetic and industrialized food chemical ingredients is the Grocery Manufacturers Association (GMA)—another powerful organization with well orchestrated and well funded lobbying efforts to protect their interests. While having less of a stake than the chemical industry, the GMA nonetheless reportedly teamed up with major food corporations and the ACC to make strident efforts to help defeat the bill that would restrict the use of BPA in the U.S. (Rosenberg 2010; Kissinger 2009).

Funding limitations is another obstacle faced by governmental overseers of food safety, causing these agencies to prioritize their focus on only those issues deemed an immediate threat or public health problem. An FDA advisory panel of outside experts reportedly concluded that the U.S. Food and Drug Administration is “so underfunded and
understaffed that it puts U.S. consumers at risk when it comes to food and drug safety” (Weise and Schmit 2009). Much needed structural changes to permit agencies like the FDA to function effectively with modern-day issues and challenges are also in order. Outdated policies causing bureaucratic entanglement have tied the hands of administrators and created bottlenecks in the process of implementing critical policies in agencies like the FDA. When the financial and human resource limitations of the governmental overseeing body are coupled with industry-funded studies and the well-orchestrated efforts of the product defense industry, the consumer may suffer.

Also at issue is the sheer amount of chemical substances that are being registered every day in the U.S.—far more than agencies like the FDA can properly evaluate, say some scientists. According to Patricia Hunt, a professor in the Washington State University School of Molecular Biosciences, “…things get rapidly into the marketplace and the testing of them is tending to lag behind.” Hunt is the author of an open letter to the FDA and EPA on this very topic published in the journal Science:

“…eight societies from the fields of genetics, reproductive medicine, endocrinology, developmental biology and others note that some 12,000 new substances are being registered with the American Chemical Society daily…top federal regulators, the U.S. Food and Drug Administration and the Environmental Protection Agency, often lack information about the hazards of chemicals produced in high volumes.

“Scientific societies representing 40,000 researchers and clinicians are asking that federal regulators tap a broader range of expertise when evaluating the risks of chemicals to which Americans are being increasingly exposed,” (Hunt 2011; Layton 2011).

The Effect Corporate Obfuscation and Governmental Inaction Has on Consumer Confidence and Behavior

Reports about empirical research findings linking food chemicals to adverse health consequences have affected perceptions of U.S. food consumers in recent years as they continue to lack confidence in the safety of their food. A 2009 survey conducted by Survey Sampling International (SSI) and sponsored by IBM reported that “Consumers are increasingly wary of the safety of food purchased at grocery stores, and their confidence in – and trust of – food retailers, manufacturers and grocers is declining.” The survey results found that less than 20 percent of consumers trust food companies to develop and sell food products that are safe and healthy. The survey also found that 60 percent of consumers are concerned about the safety of food they purchase, and 63 percent of consumers reported being knowledgeable about the content of the food they buy. The survey also found that there is a significant gap between consumer expectations and what retailers/manufacturers are providing. For example, 77 percent of consumers reported that they want more information about the content of the food products they purchase, and 76 percent would like more information about the food ingredients’ origins. Another 74 percent are willing to do research and seek more data on their own about how the food products they are considering are grown, processed and manufactured. The survey also found that “consumers are spending more time pouring over food labels to know which ingredients were used, questioning supermarkets and product manufactures about product detail…and doing more in depth background checks on specific food brands and their origin” (IBM 2009,1).

CONCLUSION

There is a critical and immediate need to stop corporate obfuscation of food product labels and to develop a system whereby the FDA can swiftly and efficiently act on protecting consumers from potentially dangerous
synthetic and industrialized food chemicals. People are exposed to multiple chemicals each day—many of which have been theorized to have cumulative and synergistic adverse effects (Lau et al. 2006) and deciphering whether and which substances may be linked to or perpetuating their illness is a tricky process that can take months or even years to determine. Since 1999 the U.S. Center for Disease Control and Prevention (CDCP) has measured 219 chemicals in blood and urine samples from thousands of study participants and their 2005 study found that study participants living in the U.S. had traces of more than 60 toxic chemical compounds in their blood and urine (2005). Additionally, The CDC tested over 2,500 urine samples from people over the age of six and found nearly 93 percent of samples contained BPA metabolites (Calafat et al. 2008). The construct of people having a ‘chemical body burden’—the level of accumulated toxins one has in the body—has become something the general public is starting to attend to (Moyers 2010). Given the pervasiveness of synthetic and industrialized chemicals in the food, personal care products, household products and general environment and the potential hazards some of these chemicals carry, consumers in the U.S. have the right to know what is in their food without having to conduct arduous research on their own to uncover it. This is especially true given that food additives are likely to be consumed by nearly all segments of the population, including infants and children (potentially over the full course of their lifetime) as well as those people with health conditions and the elderly. This increased likelihood of exposure requires a more conservative approach to assessing safety for food additives (Lars 1999). It is incumbent upon political leaders on both sides of the aisle to work together in a united, bipartisan fashion to overhaul, update and modernize the agencies overseeing food safety for consumers and streamline the process for requiring and reviewing empirical evidence about synthetic and industrialized chemicals in the food, and then of course, the agencies themselves to carry the ball and make that happen.

Another step of significant value in taking consumers out of the dark would be the development of a government-run national food chemical public database. The database could be live and searchable on the internet and constructed to function in much the same way the recent product safety database does (U.S. Consumer Product Safety Commission 2011), allowing for health-related reactions and complaints to be registered by consumers and permitting consumers to search the database by food ingredient name/name of synthetic or industrialized chemical used in food for more detailed information as well as offering links to empirical research findings about the synthetic/industrialized chemicals used in food ingredients. Such a publicly-accessed, centralized database could also allow for streamlining of the current FDA complaint and symptom/adverse reaction reporting system as well as a more efficient way to aggregate and report data on each food chemical.

And finally, political leaders must work together to develop and encourage an updated, fluid and transparent system whereby the governmental overseeing agencies like the FDA return to focusing on a single primary goal: to watch out for the consumer by actively investigating and taking action on every ingredient that may affect the health safety of our food. The milieu that permits turning a blind eye or helps facilitate obfuscation of food labels by members of the chemical and food industries should be replaced with one of transparency and the FDA and USDA should be broadly shielded from any overt or covert pressure by corporate entities that benefit from keeping the consumer in the dark.

Addendum:

*How can there be potentially dangerous synthetic chemicals in our food supply? Isn’t the government monitoring this? Please see:*
Report: Industry decides US food ingredient safety
SAN FRANCISCO (AP) — Thousands of ingredients that go into food have been classified as safe by private industry alone, without any U.S. government oversight, according to a new report published Wednesday.

Since the early 1960’s, private companies and industry trade associations have determined at least 3,000 ingredients are safe, with no federal scrutiny, the study found. The ingredients include everything from artificially synthesized chemicals used in chewing gum to grape seed extract used in cheese and instant coffee.

The peer-reviewed report published in the Comprehensive Reviews in Food Science and Food Safety journal draws on research funded by the Pew Health Group, the health and consumer safety arm of the nonprofit Pew Charitable Trusts.

“We don’t know the names of a lot of these chemicals because the companies have never told FDA or the public about them,” said Erik Olson, Pew Health Group’s director of food and consumer safety programs and one of the study’s authors. “Often there is not publicly available data on the potential health impacts because FDA has never evaluated them.”

The Grocery Manufacturers Association says the industry only classifies ingredients as safe after a battery of rigorous biological tests but agrees that more transparency would help build consumer confidence.

“The system is less transparent than it should be so we’re looking to open that dialogue,” said Leon Bruner, the association’s chief science officer, who agreed the study’s estimates were reasonable. “We are completely comfortable with increasing the transparency or the visibility of ingredients that go through the process.”

The Federal Food, Drug, and Cosmetic Act makes food manufacturers responsible for ensuring food ingredients are safe. Companies can classify an ingredient as “generally recognized as safe” for use in a specific product but aren’t required to tell the Food and Drug Administration about what they find.

Some do, through a voluntary notification program that gives the FDA a chance to review the findings.

Officials have said that if a company markets a food or beverage the agency believes is unsafe, the government can always issue warning letters or seize the product.

FDA Deputy Commissioner Michael Taylor said Wednesday the study raised important issues.

“Transparency in decision-making is a high priority for FDA, and FDA considers it timely to explore whether the statutory and regulatory framework for food additives adequately addresses today’s need for transparency,” Taylor said.

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Many Additives Go Into Foods Without Federal Scrutiny, Report Finds

Report: Industry Decides Food Ingredient Safety

Food industry often self-polices chemicals

ENDNOTES

1. The Federal Food, Drug, and Cosmetic Act (FFDCA) defines “food additive” to mean “any substance the intended use of which results or may reasonably be expected to result, directly or indirectly, in its becoming a component or otherwise affecting the characteristics of any food (including any substance intended for use in producing, manufacturing, packing, processing, preparing, treating, packaging, transporting, or holding food).” 21 U.S.C. §321(s).

2. According to the Environmental Working Group, “The FDA has not tested food for bisphenol A contamination since the early 1990s, when it tested select canned vegetables purchased in Washington D.C. See FDA, Draft Assessment of Bisphenol A for Use in Food Contact Applications(August 14, 2008). The FDA tested only six samples (three canned mushrooms, and one sample each of artichokes, tomatoes and mixed vegetables). Bisphenol A levels in those samples ranged from 5 to 39 ppb, with an average of 16 ppb. In its draft assessment, the FDA also considers a study conducted by Brotons et al., published in 1995, that tested 10 samples and found an average level of contamination of 22 ppb. Id. The FDA concluded that a “conservative estimate” of exposure from canned food was therefore 22 ppb, but this is not in fact a conservative estimate, and is much lower than the average found by EWG for consuming tomato based products (63.5 ppb).

3. FDA GRAS Substances (SCOGS) Database: http://www.fda.gov/Food/FoodIngredientsPackaging/GenerallyRecognizedasSafeGRAS/GRASSubstancesSCOGSDatabase/default.htm

4. While optimal public policy on banning substances is also a valid question, it goes beyond the scope here. Our goal is to focus on the issue of labeling and provision of information to consumers.

5. From http://www.truthinlabeling.org/hidden sources.html

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Adrenergic Receptor Blocker Arotinolol Activates the Thermogenesis of Brown Adipose Tissue in Monosodium-
Monosodium Glutamate (MSG) at a Late Stage of Pregnancy on Developing Mouse Fetal Brain. Brain
Zhang, Luoping, Laura Beane Freeman, Jun Nakamura, Stephen S. Hecht, John J. Vandenberg, Martyn T.
Enzymes are important because they assist in the digestion and absorption of food. If you eat food that is enzyme-less, your body will not get maximum utilization of the food. This causes toxicity in the body.

Raw and Living Foods are foods that contain enzymes. Enzymes are para-magnetic and are thus destroyed by heat. In general, the act of heating food over 116 degrees F destroys many enzymes in food. (Fatty acids start to degrade in as little as 106 degrees F). Foods boiled in oil have almost no enzyme activity. All over cooked food is devoid of enzymes, furthermore even medium cooking food changes the molecular structure of the food and can render it toxic. Living and raw foods also have enormously higher nutrient values than the foods that have been cooked.

Some foods are improved by cooking such as potatoes and some grains. But light cooking or as little as possible is helpful.

Stomach acid merely deactivates food enzymes. The enzymes are then reactivated in the more alkaline small intestine in the presence of emulsifiers and the electrified micelle balance. Many people who eat all raw foods, sense a world of healthful difference in our energy, digestion and connectedness with nature by eating enzyme-rich living foods. When we stopped eating cooked protein foods which require large secretions of stomach acid (which is not healthful for several reasons) our stomach doesn’t produce much stomach acid. Many people who eat raw foods eat a low protein diet and are free from the stomach acid secretions and have much more energy and a lighter disposition.

Living and Raw foods both contain enzymes. In living foods, the enzyme content is much higher. Raw, unsprouted nuts contain enzymes in a "dormant" state. To activate the enzymes contained in almonds, for example, soak them in water for as just 24 hours. Once the almonds begin to sprout, the enzymes become "active" and are then considered living. In the context of this web site, the terms are used loosely.

**Entropy**

In many processes in modern technology, for example conversion of energy from one form to other the net availability of energy decreases. This decrease of available energy is called entropy. It is on this principle the engines worked. All such processes have efficiencies less than one. That is the net output energy is always less than input. As a rule the entropy is increasing. We are moving from organization to disorganization or from order to disorder. The second Law of Thermodynamics states that the entropy of a system tends to get higher as time progresses because disorganization increases. The law of entropy is considered to be a basic law of nature and the universe. Thermodynamics are the laws of death.

**Negative Entropy**

However living things behave in opposite manner. Living things disobey the laws of thermodynamics. All living things attempt to modify their environment for their own needs against entropy decay, by
creating what for them is order. In 1943 Erwin Schrödinger, Nobel Laureate in Physics, first used the concept of “negative entropy” in his popular-science book *What is life?*. A living system imports neg-entropy and stores it. Life feeds on negative entropy! So eating live foods with living energy is nutritional good sense. Sprouts, edible algae or spirulina, fresh vegetables, fresh juices, and other living neg-entropy foods will greatly help your energy and health.

The creation of order is one definition of negative entropy. One of the definitions of life might be the ability of a life form to create order. Rocks or other inanimate objects do not possess this property called negative entropy. Death might be defined as entropy, thermodynamic entropy or the inability of a living thing to continue to create negative entropy for its use.

As long as a life form exists, it creates negative entropy, which we observe as the creation of order. The creation of negative entropy is a reversal of the law of entropy. Neg-entropy is under the laws of Quantum physics. Quantum physic defines the rules of life. This is defined in intricate detail in my book the PROMORPHEUS.

What is the source of negative entropy? The Sun’s energy is highly organized and carried by photons. Our Biosphere absorbs this energy and then releases it back to the Universe -the global balance of energy is zero. The black body radiation of the Sun at a temperature of 5800 degrees Kelvin is absorbed by the Biosphere and the black body radiation from the Biosphere and Earth at 280 degrees Kelvin flows to the Universe, which is at a temperature of 3 degrees Kelvin.

How does life steal energy from the Sun? This is done through a process called photosynthesis. With this process the green matter in plants converts the Sun’s energy to usable energy for the plant growth. Taking ionic bound minerals and elevating the electron energy creating covalent bonds for life. Herbivores and carnivores sustain and reproduce themselves by using the Sun’s energy through plants. This process is not available to non-living things.

Thus biological processes creating negative entropy, unlike the mechanical processes, produces more energy that they take. The efficiency is always greater than one. Typically it is about 2.5. That is for one unit of energy (calories) input say in a ‘primitive’ sustainable farm in the form of human and animal energy we get two calories of consumable energy output! How do we get more output from less input? As we said above we are not including the input from the Sun. And this is not available to non-biological processes.
Compare this with American ‘agribusiness’, which in 1976 took 5 calories of fertilizers, tractor fuel and depreciation, human labor and chemical sprays to produce one calorie of food and an incredible extra 20 calories of energy to clean, package, transport and cook the food ready for eating in the city. Thus the primitive self-sufficient peasant life is at least 50 times more efficient than industrialized food production. The reason is that the primitive agriculture uses mainly biological or life processes, which have normally efficiencies greater than one whereas industrial processes use mainly non-biological input and processes.
Further Proof of the Bio-Incompatibility of SYNthetic Chemicals

AS we have pointed out, photons strike the electrons and make the go to a higher energy state. When a photon is released the electron goes to a lower state. This is the principle of Quantum Electro-Dynamics. This process is the master equation of life and is in the master equation we see light, photons as the key ingredient. This is the process the chemical companies have not mastered. Here lies the proof that the synthetic compounds are not only different from real natural compounds but that the synthetic compounds are incompatible with the human body.
My first professor of pharmacology is medical school started the course with an announcement. He stood up and said in a deep serious voice “To use a Synthetic anything is an insult to the body”. He clarified this by explaining that the human body knows when it is given a synthetic. The body natural can recognize a synthetic and it is an insult. It is not the same it is similar but not as good or as complete as the natural compounds. Whether it is a vitamin, hormone, enzyme or anything synthetic it is an insult to the body.

“Now” he explained “We will spend the rest of this course learning how to Insult the Body”. For this is what modern medicine makes money on is SINthetics.
There are quantum energy levels in the electrons of an atom.

Quantum Numbers

- \( n \) – principal quantum number
- \( \ell \) – orbital angular momentum
- \( m_\ell \) – magnetic quantum number
- \( m_s \) – spin quantum number

Hydrogen 1s\(^1\)

There are also subtle energy states that the electrons can get into from photosynthesis. This is how glucose gets those hot high energy electrons. Ionic chemical bonds dominate the mineral kingdom. The outer electrons are in low energy orbits. The energy of light EMR takes the electrons to higher energy states thru a guided process of photosynthesis. Then there are higher energy covalent bonds. The plant makes these bonds best, but chemical companies can make inferior counterfeits with chelation. But Nature does it best. Food is our best medicine and the SINthetic experiment has failed. We all know now that synthetics are not the same or even close the same as SINthetics. As we study Quantum theory we find the proof of the failure of SINthetics. The following articles are just to further define our basic premise, only Nature Knows.

We will see more evidence of the incompatibility of the SINthetics. Food grown with love and nature science without chemicals is the best medicine for all of our ails. There is today a massive problem with nutrition and only a true appreciation for the science of atomic theory quantum science can help us.
We are taught chemistry with a poor rod and ball analogy. There are no Rods and no Balls, there are quantic energy fields. The Rods and Balls faulty analogy misleads us into a perception of how Synthetic Chemistry can assemble new molecules. The energy state of these molecules is different in nature than in the synthetic world. The Angel discovered this in 1982 and published the first book on Quantum Biology the Promorphous proving the incompatibility of the Synthetic Chemicals in Biology.

**There are no Rods and no Balls!!!**

**Just energy fields**

The Angel discovered that Quantum Electro Dynamics ability to describe the photon electron and proton interaction, means that the energy state of a natural made substance is different from the petrochemical SINthetic Chemistry of the Drug Co.

Modern science has de-emphasized the energy states of the electrons in glucose and the OED connection largely because it refutes the idea of SINthetic chemistry but the Angel noted the hypocrisy and has made a new medicine to help people. For this, the Drug Co. have attacked her.

Plants take in water, carbon dioxide, nutrients and photonic energy (light).
They give off organic material and oxygen.

Animals take in the organic material and oxygen.
They give off fertilizer nutrients carbon dioxide, water and photonic energy (body heat)

The Photosynthetic Organism can use the energy of sunlight to take electrons to higher energy states.

**Sunlight +**

\[ \text{H}_2\text{O} + \text{CO}_2 + \text{Nutrients} \]

**Body Heat**

\[ \text{CH}_2\text{O}_3 + \text{O}_2 \]

Water Carbon Nitrate NO\(_3\) Phosphate PO\(_4\)
Dioxide Iron Silicile

The Sunlight comes in at wavelength of 400 to 700 nm and the body gives off heat radiation at wavelength 50 to 75 nm. The difference is the energy used for life. DNA gives off radiation and receives radiation in the infrared and visible light with just a touch of UV.

Desire used this advanced science for good.
"Oh My God You're Right, there are No Rods and Balls"
Atoms all have Protons and possibly Neutrons in the center with Electrons around the large Electrical-Magnetic-Static Charge they have that repels each other.

Atoms join to make Molecules by the need to fill the Outer Quantic Valent Shell. If they have low energy electrons in the outer shell they make simple IONIC bonds such as in the Mineral Kingdom. The Electrons of each atom making up a Molecule never touch each other because they repel each other.

What holds together the atoms and the molecules are Quantic Valent Attraction forces and Electro-Magnetic-Static fields. There is undeniably irrevocably an energetic field around all Atoms and Molecules.

All Molecules interact with each other through their fields. The outer Electrons never touch, they repel each other. All of biology is a study in field interaction. This is a basic scientific fact.

Voltammetry (Electro-Analytical-Chemistry) is the study of the nature of the field of a substance and the shape of the interactive field.

Field lines of the van der Waals force between two atoms or molecules.

The van der Waals force usually causes things to stick; the force is attractive; and it acts only across short ranges.

This is a basic universally accepted form of science. The Body Electric has many global important measures. These include Volts, Amps, Resistance, Hydration, Oxidation, and Proton and Electron pressure. There are oscillatory norms of these values as well. The electrical vital signs are measured and read easily. If we can recognize the causes of disease with behavioral medicine, provide good nutrition to supply needed homeostasis, repair the damage to organs, and unblock the blockages to energy flow, we have the start of a good truly modern medicine. Seltok has proved that by reducing stress and the stressors we can subdue the early progression of disease, and dramatically reduce degenerative disease. But this is drugless and threatening to the profits of the drug companies. We need to prefer people over profit.

The over emphasis on drugs ( Synthetic drugs) and surgery and the under emphasis on lifestyle has created a monster. The regulatory bodies, FDA, let Big Tobacco, Big Sugar, Big Plasma, run rampant while spending time and money on attacking safe, scientific, tested and effective natural medicines. This is a tragedy of modern times and profit corporations out of control.

We were all taught in High School that all things are made of atoms. They used the Rods and Balls analogy to teach us, but there are definitely no rods and no balls, just quantic energy states.

THERE ARE ENERGIES THAT HOLDS TOGETHER ALL SUBSTANCES

EVERYTHING IS MADE MOSTLY OF ELECTRONS AND PROTONS

THUS EVERYTHING HAS AN ELECTRICAL NATURE

Inside an Atom

This computer-generated graphic shows how electronic charges are distributed across the surface of a molecule made of two cobalt atoms.

Ionic Weak Bond

NaCl

Stronger Co-Valent Sigma Bond

Empty space is not empty, but is filled with the quantum vacuum, with endless virtual processes. The energy of the quantum vacuum, the zero-point energy is infinite according to our present theories. Clearly, this infinity is an artifact - it would make the electromagnetic field infinitely massive, because energy and mass are related according to Einstein’s $E=mc^2$. The empty electromagnetic field would collapse under the weight of its own gravity. Some unknown mechanism beyond quantum electromagnetism must regularize the infinity of the electromagnetic vacuum energy. Nevertheless, the zero-point energy results in perfectly finite and experimentally confirmed facts, for example the Casimir force.
Further Proof of the Bio-Incompatibility of Synthetic Chemicals

As we have pointed out, photons strike the electrons and make the go to a higher energy state. When a photon is released the electron goes to a lower state. This is the principle of Quantum Electro-Dynamics. This process is the master equation of life and is in the master equation we see light, photons as the key ingredient. This is the process the chemical companies have not mastered. Here lies the proof that the synthetic compounds are not only different from real natural compounds but that the synthetic compounds are incompatible with the human body.

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“Now” he explained “We will spend the rest of this course learning how to Insult the Body”. For this is what modern medicine makes money on is SINthetics.
A new moment in time and a new quantum particle in space

\[
\text{carbon dioxide} + \text{water} \rightarrow \text{carbohydrates} + \text{oxygen}
\]
\[
\text{light energy} \quad \text{chlorophyll}
\]
\[
\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2
\]
\[
\text{light energy} \quad \text{chlorophyll}
\]
\[
6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2
\]

The Photon energy of the Sun makes the electrons go to higher energy states, Glucose has 16 Hot electrons from this energy. These Hot electrons make 16 molecules of ATP.
Photons come into the plant and thru photosynthesis (Calvins Cycle) they make the energy of the atom greater. This makes the sixteen hot electrons of sugars. The body thru Krebs Cycle takes these hi-energy electrons and makes energy. The Drug companies do not know how to put energy into the electrons thus their synthetic are not the same.

The chemical companies can build molecules that are similar but energetically or in the quantic electron states there are major differences. Let us look at some vitamins that have been crystallized in the natural state and then look at similar crystals form their synthetic form. The shimmer and color of the natural is from the outer electrons being in high energy orbits. The sun during the day makes the electrons in the sky vibrate at the frequency blue. At night they cool down and become see thru. The SINthetic vitamins have lower electron energy. Thus we see different low level colors. Also there are even shape differences from the SINthetic process.
Ascorbic Acid (Vitamin C)

Birefringent specimens often reveal a spectacular display of color and crystal form upon illumination with polarized light. When Hoffman modulation contrast is added to the mixture, the colorful image takes on a three-dimensional appearance as illustrated below with crystallites of vitamin C.
Vitamin C is one of the most ubiquitous vitamins ever discovered. In natural vitamin C most of the outer electrons are in high quantum energy states, so they play with the light and make the shimmer.
In synthetic vitamin C the electrons are in lower stats and are photonic duds.

Besides playing a paramount role as an anti-oxidant and free radical scavenger, Vitamin C has been suggested to be an effective antiviral agent by some very respected scientists. Although the antiviral properties of vitamin C remain the subject of great debate in some circles, this water-soluble vitamin remains one of the most popular and important vitamins. Vitamin C is commonly found naturally in peppers, citrus fruits, tomatoes, melons, broccoli, and green leafy vegetables such as spinach, turnip, and mustard greens. The primary function of vitamin is to assist in the production of collagen, although it is becoming rapidly identified as a key player in detoxifying the body from foreign substances. Other reported uses of vitamin C are healing wounds and burns, accelerate healing after surgery, decreasing blood cholesterol, reduce blood clotting, offer protection against cancer agents, and extend life.

Photosynthesis

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunlight + H₂O + CO₂ + Nutrients</td>
<td>“CH₂O” + O₂</td>
</tr>
</tbody>
</table>

Water, Carbon dioxide, Nitrate NO₃, Phosphate PO₄, Iron, Silica, ...

“Organic matter” Oxygen

Same rule applies to marine life that applies to terrestrial life.
Above - Natural Vitamin C Crystallized all the colors come from the high energy states of the outer electrons

SINthetic Vitamin C crystallized but low levels of electron energy make more black
Vitamin E (alpha-Tocopheryl)

Known to millions as vitamin E, d-alpha-tocopheryl acetate is a fat-soluble vitamin, which is stored in the liver, muscle, adipose tissue, red blood cells, and several vital organs and glands. Vitamin E, a strong antioxidant, plays a starring role in protecting body tissues from damaging free radicals as well as critical functions in cellular respiration and for prolonging the life of red blood cells. In natural vitamin E most of the outer electrons are in high quantum energy states, so they play with the light and make the shimmer. In synthetic vitamin E the electrons are in lower stats and are photonic duds.

View an image of crystallized Natural vitamin E.

SINthetic Vitamin E low electron energy levels make for less reflected light
Naturally, vitamin E occurs in wheat germ oil, nuts, seeds, vegetable oils, whole grains, egg yolks, and leafy green vegetables. Discovered in 1922 by American anatomists and physiologists Herbert McLean Evans and Katherine Scott Bishop, \textit{alpha}-tocopherol was known as food factor \textit{X} and found essential for rat pregnancy. In the same year, food factor \textit{X} was discovered in yeast and lettuce. By 1924, it was renamed vitamin E and in 1936, Evans and his colleagues extracted and isolated \textit{alpha}-tocopherol from wheat germ oil. Synthesis was completed in 1938 by the Swiss Nobel laureate for Chemistry, Paul Karrer, and in 1968, the United States Food and Drug Administration set the recommended dietary (or daily) allowance (RDA) for vitamin E at a conservative 20 milligrams or 30 international units (IU). Over-the-counter synthesized forms as dl-\textit{alpha}-tocopherol acetate (or succinate) are often 200 international units (or 165 milligrams) or 400 international units (13.3 times the recommended daily allowance), with a dosage of one capsule per day.

Research on the many uses of vitamin E started in 1950 with its use in a topical skin cream formulation for treating frostbite, and then as antioxidant fighting free radicals and reducing the risks of heart disease. Vitamin E is unstable when exposed to heat, light, and oxygen, but may help prevent and fight cancers, protect cell membranes from breaking down, and may play a role in therapy for Alzheimer's patients. Interestingly, \textit{alpha}-tocopherol helps the body effectively use and store vitamin A and protects B-complex and vitamin C from oxidation reactions. The human body does not make its own vitamin E, so it must be taken from nutritional sources or as a dietary supplement. While the acetate form is fat soluble, the succinate compound is water-soluble. As a crystalline solid, d-\textit{alpha}-tocopheryl acetate has a melting point of 28 degrees Celsius and a boiling point of 184 degrees Celsius. \textit{Alpha}-tocopherol is only one of a group of the lipid-soluble compounds known as tocopherols and tocotrienols (or tocols), but it is considered the most biopotent or powerful. The synthesized version, dl-\textit{alpha}-tocopherol acetate exists in equal amounts of eight isomers while the natural extraction from vegetable oils, d-\textit{alpha}-tocopherol acetate, exists only as one isomer. Some indications are that the natural version is a better alternative to the synthesized form of the vitamin for increasing levels in body tissues and extending retention time.
Natural Vitamin A

Natural Glucose crystals (no such thing as SINthetic Glucose)
Natural Glucose crystals (no such thing as SINthetic Glucose)

SINthetic Vitamin B12

Natural Vitamin B12
This graphic shows how electronic charges are distributed across the surface of a molecule made of two cobalt atoms of mineral low level of energy. Sunlight photons act thru photosynthesis to make the plant and animal electrons have a higher energy level.

This graphic shows how electronic charges are distributed across the surface of a molecule made of two cobalt atoms after it has been in a plant and the energy of the sun makes the electronic charges more powerful and dynamic.
There are many examples of the differences between SINthetic versus natural compounds not just vitamins. But at all levels one thing is clear we should have a choice. If we were to go to a restaurant where there were synthetic wine or beer or other food we would most likely not choose the synthetic. We all know now as a society that the synthetic foods are incompatible. But when we go to the doctor there is no choice. The doctor / hospital menu has only SINthetic on it. This should change and let people choose more natural methods of healing and therapy.

The nature of light (Photons)

White light is separated into the different colors (=wavelengths) of light by passing it through a prism. Wavelength is defined as the distance from peak to peak (or trough to trough). The energy of is inversely proportional to the wavelength: longer wavelengths have less energy than do shorter ones.

Wavelength and other aspects of the wave nature of light

The order of colors is determined by the wavelength of light. Visible light is one small part of the electromagnetic spectrum. The longer the wavelength of visible light, the more red the color. Likewise the shorter wavelengths are towards the violet side of the spectrum. Wavelengths longer than red are referred to as infrared, while those shorter than violet are ultraviolet.
Light behaves both as a wave and a particle. Wave properties of light include the bending of the wave path when passing from one material (medium) into another (i.e. the prism, rainbows, pencil in a glass-of-water, etc.). The particle properties are demonstrated by the photoelectric effect. Zinc exposed to ultraviolet light becomes positively charged because light energy forces electrons from the zinc. These electrons can create an electrical current. Sodium, potassium and selenium have critical wavelengths in the visible light range. The critical wavelength is the maximum wavelength of light (visible or invisible) that creates a photoelectric effect.

**Chlorophyll and Accessory Pigments**

A pigment is any substance that absorbs light. The color of the pigment comes from the wavelengths of light reflected (in other words, those not absorbed). Chlorophyll, the green pigment common to all photosynthetic cells, absorbs all wavelengths of visible light except green, which it reflects to be detected by our eyes. Black pigments absorb all of the wavelengths that strike them. White pigments/lighter colors reflect all or almost all of the energy striking them. Pigments have their own characteristic absorption spectra, the absorption pattern of a given pigment.
Absorption and transmission of different wavelengths of light by a hypothetical pigment

Chlorophyll is a complex molecule. Several modifications of chlorophyll occur among plants and other photosynthetic organisms. All photosynthetic organisms (plants, certain protistans, prochlorobacteria, and cyanobacteria) have chlorophyll a. Accessory pigments absorb energy that chlorophyll a does not absorb. Accessory pigments include chlorophyll b (also c, d, and e in algae and protistans), xanthophylls, and carotenoids (such as beta-carotene). Chlorophyll a absorbs its energy from the Violet-Blue and Reddish orange-Red wavelengths, and little from the intermediate (Green-Yellow-Orange) wavelengths.

Carotenoids and chlorophyll b absorb some of the energy in the green wavelength. Why not so much in the orange and yellow wavelengths? Both chlorophylls also absorb in the orange-red end of the spectrum (with longer wavelengths and lower energy). The origins of photosynthetic organisms in the sea may account for this. Shorter wavelengths (with more energy) do not penetrate much below 5 meters deep in sea water. The ability to absorb some energy from the longer (hence more penetrating) wavelengths might have been an advantage to early photosynthetic algae that were not able to be in the upper (photic) zone of the sea all the time.

The action spectrum of photosynthesis is the relative effectiveness of different wavelengths of light at generating electrons. If a pigment absorbs light energy, one of three things will occur. Energy is dissipated as heat. The energy may be emitted immediately as a longer wavelength, a phenomenon known as fluorescence. Energy may trigger a chemical reaction, as in photosynthesis. Chlorophyll only triggers a chemical reaction when it is associated with proteins embedded in a membrane (as in a chloroplast) or the membrane infoldings found in photosynthetic prokaryotes such as cyanobacteria and prochlorobacteria.
Absorption spectrum of several plant pigments (above) and action spectrum of elodea (below), a common aquarium plant used in lab experiments about photosynthesis.
Stages of Photosynthesis

Photosynthesis is a two stage process. The first process is the Light Dependent Process (Light Reactions), requires the direct energy of light to make energy carrier molecules that are used in the second process. The Light Independent Process (or Dark Reactions) occurs when the products of the Light Reaction are used to form C-C covalent bonds of carbohydrates. The Dark Reactions can usually occur in the dark, if the energy carriers from the light process are present. Recent evidence suggests that a major enzyme of the Dark Reaction is indirectly stimulated by light, thus the term Dark Reaction is somewhat of a misnomer. The Light Reactions occur in the grana and the Dark Reactions take place in the stroma of the chloroplasts.
Overview of the two steps in the photosynthesis process

**Light Reactions**

In the Light Dependent Processes (Light Reactions) light strikes chlorophyll a in such a way as to excite electrons to a higher energy state. In a series of reactions the energy is converted (along an electron transport process) into (ATP) and NADPH. Water is split in the process, releasing oxygen as a by-product of the reaction. The ATP and NADPH are used to make C-C bonds in the Light Independent Process (Dark Reactions).

In the Light Independent Process, carbon dioxide from the atmosphere (or water for aquatic/marine organisms) is captured and modified by the addition of Hydrogen to form carbohydrates (general formula of carbohydrates is [CH2O]n). The incorporation of carbon dioxide into organic compounds is known as carbon fixation. The energy for this comes from the first phase of the photosynthetic process. Living systems cannot directly utilize light energy, but can, through a complicated series of reactions, convert it into C-C bond energy that can be released by glycolysis and other metabolic processes.
Photosystems are arrangements of chlorophyll and other pigments packed into thylakoids. Many Prokaryotes have only one photosystem, Photosystem II (so numbered because, while it was most likely the first to evolve, it was the second one discovered). Eukaryotes have Photosystem II plus Photosystem I. Photosystem I uses chlorophyll a, in the form referred to as P700. Photosystem II uses a form of chlorophyll a known as P680. Both "active" forms of chlorophyll a function in photosynthesis due to their association with proteins in the thylakoid membrane.

**Action of a photosystem**

**Dark Reaction**

Carbon-Fixing Reactions are also known as the Dark Reactions (or Light Independent Reactions). Carbon dioxide enters single-celled and aquatic autotrophs through no specialized structures, diffusing into the cells. Land plants must guard against drying out (desiccation) and so have evolved specialized structures known as stomata to allow gas to enter and leave the leaf. The Calvin Cycle occurs in the stroma of chloroplasts (where would it occur in a prokaryote?). Carbon dioxide is captured by the chemical ribulose biphosphate (RuBP). RuBP is a 5-C chemical. Six molecules of carbon dioxide enter the Calvin Cycle, eventually producing one molecule of glucose.
No electrons ever touch each other but photons do touch them. The energetic forces are what we are. We are a sophisticated complex set of energetic fields. And only nature knows how to make items compatible for us.

Lesson #1 Only Nature Knows, use natural foods with no chemicals.

Lesson #2. Use levulose not dextrose, get good sugars not bad ones.

Lesson #3. Do not boil foods in oil, get good fatty acids not bad ones.

Lesson #4. Learn to get good amino acids and good protein.

Lesson #5. Learn to balance your minerals as your life changes your nutritional needs change.

Lesson #6. Get lots of good water and remember to hydrate often.

Lesson #7. Eat for nutrition. Do not eat for boredom, habit, social, or for stimulation.
Lesson #8. You can spice up your meals and make the entertaining and fun. Celebrate the meal.

Lesson #9. Food cooked and prepared with love is nutrition, cooked with hate it is poison.

Lesson #10. There is an energy of non-entropy in live foods. They have more enzyme action.

Lesson #11. Food is your best medicine. My other books will tell you how to treat your illnesses with good nutrition and natural medicine
The magnificent human body has been designed to be nourished simply by eating food. However, today, finding food that is truly nourishing is becoming harder and harder. Due to commercial production farming, we have seen our food sources become so altered - from toxic poisons and chemicals to gene splicing - that we are now eating food that eventually devastates our own health.

In the early 1970s, a U.S. government study found the mineral levels of our food was as much as 50% lower than when tested in 1950. It took only twenty years to create such a nutrient wipeout. We wonder what has happened during the last thirty years, since the 1970 study.

Sadly, our food is now saturated with new classes of dangerous chemicals, chemicals so common we rarely lift a hand to protest anymore. In 1986, the FDA released its long-range Total Diet Study. In the study, the FDA obtained food from grocery stores throughout the United States. They measured the total number of pesticide/chemical residues in certain fruits and vegetables. Here are a few typical examples of the stunning levels of toxics they found in vegetables: broccoli-45; potatoes-96; tomatoes-50; celery-78. Toxics found in fruits included: apples-80; peaches-97; grapes-63; raisins-110. Since the FDA study ended in 1986, we can only guess what the toxic levels of our vegetables and fruits are today. If you consider the EPA’s warning that exposure to pesticides is a top risk factor in cancer, the toxic residue numbers reflect one of the reasons cancer is increasing so rapidly today, and these toxic residue numbers are simply unacceptable.

To further pollute our food supply, splicing bacterial and viral genes into our God-given food seeds has created what many call "Franken-foods" - genetically tampered food - that can slowly poison and sicken consumers over time with a whole spectrum of uncharted symptoms. Current estimates are that up to 70 percent of the products on our grocery store shelves contain ingredients which have been genetically altered. Do you remember voting for bacterial genes to be spliced into the potatoes you eat? Or voting for fish genes in your tomatoes? These "Franken-foods" are a ticking time bomb that may prove to be an exploding health bomb - sooner or later.

What about eating "Organically Grown" food? Unfortunately, organically grown foods are often sprayed with chemicals after harvest, during transport, or in storage. We suggest finding a farmer's market and getting to know a farmer who does not use toxic chemicals and pesticides in their growing of fruits and vegetables.
If there are not enough critical nutrients, especially antioxidants, or your body is not able to replace them fast enough, your body cannot fight the incoming toxic barrage. Without antioxidant power, your body has no choice but to try to store the toxics in the fat of the body, in the brain, or other organs and body tissues. The body then creates more fat cells for the toxics to hide in. This is how the tired get more tired and how we gain more and more weight.

Considering the big picture - this ever-raging battle of nutrients vs. toxic chemicals and antioxidants vs. "free radicals" (cells that have become destructive to other cells) - we have to realize that lowered amounts of vital nutrients translates into exactly what we don't want: rapid aging, feeling tired, weight gain, greater risk of chronic disease, and deficiency symptoms (from poor memory to chronic fatigue to headaches).

Suppling the body with high levels of nutrients can mean feeling great. Low levels of nutrients can mean feeling half dead. Deficient nutrient levels also mean being at risk for the most dreaded chronic diseases such as arthritis, prostatitis, neuritis, tendonitis, diabetes, asthma, and even cancer.

To get protection from the efforts of toxic damage and stress, the smart person has to realize that regular food is not the answer. It is a real challenge today to get sufficient amounts of nutrients from food, including "organically grown" food. Many people have turned to nutritional supplements. The rapidly growing market of nutritional supplements is now a multibillion dollar industry. But are supplements giving you what you really need?

Vitamins originate mainly in plants. Vitamins are substances which are essential in small amounts for good health of the body, including growth, maintenance, repair, and reproduction. Many vitamins must be derived from food since they cannot be synthesized in sufficient quantities in the body. Each vitamin has a specific action and function and one vitamin cannot replace another.

Only since the 1920s have we begun extracting nutrients from food or synthesizing them in a laboratory, then putting them into pills to supplement our diets. But buyer beware! The body was designed to get nutrients from food, not a laboratory. In trying to isolate the active factors in food, USP (United States Pharmacopoeia) vitamins were created to mimic real vitamins. But synthetic USP vitamins are not food, even though they are often called "natural". USP vitamins are chemical isolates synthesized in a laboratory. In whole food, vitamins are never isolated. They are always present as a part of a larger nutrient complex. Vitamins which occur naturally in food have a wide spectrum of actions in the body whereas isolated USP vitamins are analogues of these vitamins and appear to have only some of these actions.

Synthetic vitamins are not the same as "life within", once living, food source vitamins. Synthetic USP vitamins are not a part of plant tissues and have never been proven to safely and fully replace natural vitamins and their complex activities. Many studies suggest that natural vitamins
in food complexes have better bio-availability than isolated USP synthetic vitamins.

Electron microscopy shows that isolated USP vitamins have a larger matrix with sharp jutting edges (crystal-like) compared to natural vitamins in food complexes, which are much smaller and appear spherical without angles.

![Synthetic Vitamin C](image1) ![Real Vitamin C](image2)

Smaller particle size means better bio-availability in the body. An important task of your digestive process is to break down food particles small enough so they can be absorbed through your intestinal villi.

Some people will tell you that your body can't tell whether a vitamin came from an organically grown food or from the chemist's lab. To return to your best possible health by having sufficient levels of vitamins, consider the following:

1. **Synthetically USP vitamins are not chemically identical to natural vitamins.**

2. **For best activity, vitamins must interact with cofactors and other nutrients. These associated factors are elegantly found in well-grown food, but missing in synthetic vitamins and are also missing in many hybrid or genetically engineered foods.**

3. **All forms of vitamins do not enter the bloodstream equally well. Vitamin complexes from once living "life within" plants and herbs have been shown to be better absorbed and better retained than synthetics.**

4. **Particle size is a key factor in nutrient absorption. Living source vitamins are easier to absorb because they (as the above photographs clearly show) are smaller in size.**

5. **The physiochemical form of the nutrient is a major factor in bio-availability. Living source nutrients are in a physiochemical form which the body recognizes and can more easily absorb.**
Compared to synthetic vitamins, living source nutrients have a more bio-compatible size and shape and therefore, better bio-availability. This does not mean that USP vitamins have no value, they clearly do, but living source "life within" complexes have been proven to outperform these synthetic counterparts. USP vitamins are only analogues of living source nutrients, not exact duplicates. Some analogues have been shown to have only partial vitamin action, and some have no vitamin action at all!

Some synthetic USP vitamins have been shown to act as vitamin antagonists, and some can even produce deficiency symptoms of the specific vitamin they seek to artificially duplicate.

To make the point, let us look at vitamin B.

Vitamin B is essential for life. Synthetic vitamin B is a coal tar derivative and is usually synthesized as thiamin hydrochloride (HCL) or thiamin mononitrate. However, neither of these substances is found in food. One study showed that living source "life within" vitamin B1 was absorbed 1.38 times better into the blood and retained 1.27 times longer than synthetic vitamin B1. Studies show that living source vitamin B3, in food complexes is 3.94 times better absorbed in the blood and 1.7 times better retained than USP vitamin B3. Vitamin B12 is made synthetically using cyanide! (USP cyanocobalamin). Living source vitamin B12, when ingested into the body, is non-toxic, while some forms of synthetic vitamin B12 when ingested have been shown to be antagonistic to vitamin B12 activity in the body. One study showed that living source B12 was absorbed 2.56 times better into the blood and was retained 1.59 times better than isolated USP vitamin B12.

We could elaborate on many more examples of the superiority of "life within" living source vitamins over their synthetic counterparts, but I think you get the idea, don't you? Humans are designed to eat food from living sources to receive their vitamins. Genesis 1:29 says God created "seed-bearing plants and trees that have fruit" for us to eat. You wouldn't eat synthetic apples and bananas, why take synthetic vitamins? And the same is true for minerals!

Plants are designed to thrive on soil-based rock mineral salts. For humans, the best minerals come from a living source, not rocks. Mineral salts require much more stomach acid for humans to break them down. Most of the mineral supplements on the market today contain minerals as mineral salts. These are either ground rock, such as calcium carbonate, found in limestone, calcium citrate, derived from limestone that has been processed with lactic or citric acid (not from citrus fruits), or they are chemically produced in accordance with the USP. Research shows that inorganic calcium carbonate can counteract the absorption of calcium. Other research shows that rock source calcium lactate or calcium gluconate can create high levels of calcium in the blood but are poorly utilized by the body's tissues; therefore, even with high blood levels of calcium, symptoms of low tissue calcium often continue (such as joint pain, poor flexibility, high blood pressure, depression, etc.) Rock source minerals are natural food for plants, but not natural food for humans. For example, living source calcium (such as the proper species of coral calcium) is 8.79 times better absorbed into the blood than mineral salts.
In some cases, isolated mineral salts can act as toxic elements, over taxing the body's systems. Then the body must work harder to throw off inorganic minerals. **To build the body, the best minerals are in the biochemical, life-producing, "life within" form as found in living source nutrients.**

German research has shown that all living food, including natural food complexes, have sophisticated cellular structures which incorporate spin-ahead and spin-reverse electrons that have aligned to produce pure light.

Living source nutrients produce this strong energy field. Synthetic vitamins do not!

---

*One tablet of one of the largest-selling “Natural” Multivitamins (USP) in the world*
One gelatin capsule of a top-selling “Chelated” Multivitamin in a Whole Food Concentrate

One 100% pure vegetable capsule multivitamin from a living source

When you consume 100% living source nutrients, they deliver not only life-essential nutrients, but also a spectrum of pure light energy which has been shown to facilitate DNA repair of the cell. The cell’s life can be greatly extended when its DNA is continually repaired and maintained. For the body, ongoing DNA repair, from living source nutrients, can mean a return to great health and prolonged life!
This scenario is in sharp contrast to using synthetic nutrients, which can boost the metabolism of the cell in the short run (which may help you feel better temporarily), but in the long run, allow the DNA to degrade. Unfortunately, DNA repair is not possible with synthetic source nutrients. This is what we refer to as the "Feels good, but isn’t" concept. It reminds us of an ancient scripture: "There is a way that seems wise to a man, that leads to destruction."

List of withdrawn drugs

WRITEN BY LAIMA JONUSIENE

To prove that the drug companies make mistakes with our lives we publish this list. Drugs are rushed onto the market for profit. The testing of the drugs is on the major indication. Side effects are NOT tested pre and post. Side effects are observed NOT tested. The expense of pre and post side effect testing is astounding. So it is not done. Side effects are then seen in the public use and a drug is removed from the market after killing or hurting people.

There is a special law that prohibits you from suing a drug company for damages unless you can prove they knew it was harmful and sold it anyway. This means there is even less need to test side effects and or report them during the testing process.
Some drugs have been withdrawn from the market because of risks to the patients. Usually this has been prompted by unexpected adverse effects that were not detected during Phase III clinical trials and were only apparent from postmarketing surveillance data from the wider patient community.

This list is not limited to drugs that were ever approved by the FDA. Some of them (Lumiracoxib, Rimonabant, Tolrestat, Ximelagatran and Zimelidine, for example) were approved to be marketed in Europe but had not yet been approved for marketing in the U.S., when side effects became clear and their developers pulled them from the market. Likewise LSD was never approved for marketing in the U.S.
<table>
<thead>
<tr>
<th>Drug name</th>
<th>Withdrawn</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lysergic acid diethylamide (LSD)</td>
<td>1950s–1960s</td>
<td>Marketed as a psychiatric cure-all; withdrawn after it became widely used recreationally</td>
</tr>
<tr>
<td>Diethylstilbestrol</td>
<td>1970s</td>
<td>Withdrawn because of risk of <a href="https://en.wikipedia.org/wiki/Teratogenicity">teratogenicity</a> = birth defects</td>
</tr>
<tr>
<td>Phenformin and Buformin</td>
<td>1978</td>
<td>Withdrawn because of risk of <a href="https://en.wikipedia.org/wiki/Lactic_acidosis">lactic acidosis</a></td>
</tr>
<tr>
<td>Ticrynafen</td>
<td>1982</td>
<td>Withdrawn because of risk of <a href="https://en.wikipedia.org/wiki/Hepatitis">hepatitis</a></td>
</tr>
<tr>
<td>Zimelidine</td>
<td>1983</td>
<td>Withdrawn worldwide because of risk of <a href="https://en.wikipedia.org/wiki/Guillain%E2%80%93Barr%C3%A9_syndrome">Guillain-Barré syndrome</a></td>
</tr>
<tr>
<td>Phenacetin</td>
<td>1983</td>
<td>An ingredient in &quot;A.P.C.&quot; tablet; withdrawn because of risk of cancer and kidney disease</td>
</tr>
<tr>
<td>Methaqualone</td>
<td>1984</td>
<td>Withdrawn because of risk of <a href="https://en.wikipedia.org/wiki/Addiction">addiction</a> and <a href="https://en.wikipedia.org/wiki/Overdose">overdose</a></td>
</tr>
<tr>
<td>Nomifensine (Merital)</td>
<td>1986</td>
<td>Withdrawn because of risk of hemolytic anemia</td>
</tr>
<tr>
<td>Triazolam</td>
<td>1991</td>
<td>Withdrawn in the <a href="https://en.wikipedia.org/wiki/United_Kingdom">United Kingdom</a> because of risk of <a href="https://en.wikipedia.org/wiki/Psychiatric_adverse_drug_reactions">psychiatric adverse drug reactions</a>. This drug continues to be available in the U.S.</td>
</tr>
</tbody>
</table>
| Flosequinan (Manoplax)     | 1993      | Withdrawn in the United States because of an...
increased risk of hospitalization or death

**Alpidem** *(Ananxyl)* 1996  
Withdrawn because of rare but serious **hepatotoxicity**.

**Chlormezanone** *(Trancopal)* 1996  
Withdrawn because of rare but serious cases of **toxic epidermal necrolysis**.

**Fen-phen** *(popular combination of fenfluramine and phentermine)* 1997  
Phentermine remains on the market, **dexfenfluramine and fenfluramine** – later withdrawn as caused **heart valve** disorder.

**Tolrestat** *(Alredase)* 1997  
Withdrawn because of risk of severe **hepatotoxicity**.

**Terfenadine** *(Seldane, Triludan)* 1998  
Withdrawn because of risk of **cardiac arrhythmias**; superseded by **fexofenadine**.

**Mibefradil** *(Posicor)* 1998  
Withdrawn because of dangerous interactions with other drugs.

**Etretinate** 1990s  
Risk of birth defects; narrow therapeutic index.

**Terodiline** *(Micturin)* 1991  
Prolonged QT interval.

**Tolcapone** *(Tasmar)* 1998  
Hepatotoxicity.

Withdrawn in **Sweden** and **Norway** because of diversion, abuse, and a relatively high rate of overdose deaths in comparison to other drugs of its group. This drug continues to be available in most of the world including the U.S., but under strict controls.

**Astemizole** *(Hismanal)* 1999  
Arrhythmias because of interactions with other drugs.

**Grepafloxacin** *(Raxar)* 1999  
Prolonged QT interval.

**Troglitazone** *(Rezulin)* 2000  
Withdrawn because of risk of **hepatotoxicity**; superseded by **pioglitazone** and **rosiglitazone**.

**Alosetron** *(Lotronex)* 2000  
 Withdrawn because of risk of fatal complications of constipation; reintroduced 2002 on a restricted basis.

**Cisapride** *(Propulsid)* 2000s  
Withdrawn in many countries because of risk of **cardiac arrhythmias**.

**Amineptine** *(Survector)* 2000  
Withdrawn because of **hepatotoxicity**, dermatological side effects, and **abuse** potential.

**Phenylpropanolamine** *(Propagest, Dextrim)* 2000  
Withdrawn because of risk of **stroke** in women under 50 years of age when taken at high doses (75mg twice daily) for weight loss.

**Trovafoxacin** *(Trovan)* 2001  
Withdrawn because of risk of **liver failure**.

**Cerivastatin** *(Baycol, Lipobay)* 2001  
Withdrawn because of risk of **rhabdomyolysis**.

**Rapacuronium** *(Raplon)* 2001  
Withdrawn in many countries because of risk of fatal bronchospasm.

**Rofecoxib** *(Vioxx)* 2004  
Withdrawn because of risk of **myocardial infarction**.

**Co-proxamol** *(Distalgic)* 2004  
Withdrawn in the UK due to overdose dangers.

**mixed amphetamine salts** 2005  
Withdrawn in **Canada** because of risk of **stroke**. See
**Adderall XR**

*Health Canada press release.* The ban was later lifted because the death rate among those taking Adderall XR was determined to be no greater than those not taking Adderall.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Year(s)</th>
<th>Reason for Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydromorphone extended-release (Palladone)</td>
<td>2005</td>
<td>Withdrawn because of a high risk of accidental overdose when administered with alcohol</td>
</tr>
<tr>
<td>Thioridazine (Melleril)</td>
<td>2005</td>
<td>Withdrawn from U.K. market because of cardiotoxicity</td>
</tr>
<tr>
<td>Pemoline (Cylert)</td>
<td>2005</td>
<td>Withdrawn from U.S. market because of hepatotoxicity</td>
</tr>
<tr>
<td>Ximelagatran (Exanta)</td>
<td>2006</td>
<td>Withdrawn because of risk of hepatotoxicity (liver damage).</td>
</tr>
<tr>
<td>Pergolide (Permax)</td>
<td>2007</td>
<td>Voluntarily withdrawn in the U.S. because of the risk of heart valve damage.</td>
</tr>
<tr>
<td>Tegaserod (Zelnorm)</td>
<td>2007</td>
<td>Withdrawn because of imbalance of cardiovascular ischemic events, including heart attack and stroke. Was available through a restricted access program until April 2008.</td>
</tr>
<tr>
<td>Aprotinin (Trasylol)</td>
<td>2007</td>
<td>Withdrawn because of increased risk of complications or death; permanently withdrawn in 2008 except for research use</td>
</tr>
<tr>
<td>Inhaled insulin (Exubera)</td>
<td>2007</td>
<td>Withdrawn in the UK due to poor sales caused by national restrictions on prescribing, doubts over long term safety and too high a cost</td>
</tr>
<tr>
<td>Lumiracoxib (Prexige)</td>
<td>2007-2008</td>
<td>Progressively withdrawn around the world because of serious side effects, mainly liver damage</td>
</tr>
<tr>
<td>Rimonabant (Accomplia)</td>
<td>2008</td>
<td>Withdrawn around the world because of risk of severe depression and suicide</td>
</tr>
<tr>
<td>Efalizumab (Raptiva)</td>
<td>2009</td>
<td>Withdrawn because of increased risk of progressive multifocal leukoencephalopathy; to be completely withdrawn from market by June 2009</td>
</tr>
<tr>
<td>Sibutramine (Reductil)</td>
<td>2010</td>
<td>Withdrawn in Europe because of increased cardiovascular risk. This drug continues to be available in the U.S.</td>
</tr>
</tbody>
</table>
Withdrawn in the U.S. due to increased risks of veno-occlusive disease and based on results of a clinical trial in which it showed no benefit in acute myeloid leukemia (AML)

FDA employees are trained in SINthetic drugs, and hope to get better paying jobs, grants, trips, favors to relatives and friends by Drug companies. They are unable to see the damages of evidence based SINthetic drugs.
FDA PROCESS FOR APPROVING NEW DRUGS...

My Uncle will get a Drug Co Job
Now, Holy Vioxx
I can get a drug co Grant
I'm promised a Fellowship and Dental

APPROVED!

And I can quit this mindless job and get a real cushy job with the Drug Co as their ethics supervisor
A long time has gone by since this cartoon was first published. Yes the Drug Companies and the FDA are sitting on the research that confirms beyond a shadow of doubt that the synthetic drugs are not safe and they do more harm than good. But since medicine has become so dependent on these drugs, the drug companies have soooo much money, it would be difficult to reteach all doctors medicine, the FDA and Drugs sit on the research, and drug caused iatrogenic disease increases Dramatically
The origins of Synthetic Pharmaceuticals came from doctors like Fleming and other doctors who thought that drug companies should not be built on Profit but on serving People at the lowest price possible. But these English ideas turned to Profit based ideas as the drug companies took hold in America. These ruthless corporations are ruled by Profit and Profit alone. And Greed Rules over all.
This list is from 1999. The following drug products were withdrawn or removed from the market because such drug products or components of such drug products were found to be unsafe or not effective. The following drug products may not be compounded under the exemptions provided by section 503A(a) of the Federal Food, Drug, and Cosmetic Act:

- **Adenosine phosphate**: All drug products containing adenosine phosphate.
- **Adrenal cortex**: All drug products containing adrenal cortex.
- **Azaribine**: All drug products containing azaribine.
- **Benoxaprofen**: All drug products containing benoxaprofen.
- **Bithionol**: All drug products containing bithionol.
- **Bromfenac sodium**: All drug products containing bromfenac sodium.
- **Butamben**: All parenteral drug products containing butamben.
- **Camphorated oil**: All drug products containing camphorated oil.
- **Carbetapentane citrate**: All oral gel drug products containing carbetapentane citrate.
- **Casein, iodinated**: All drug products containing iodinated casein.
- **Chlorhexidine gluconate**: All tinctures of chlorhexidine gluconate formulated for use as a patient preoperative skin preparation.
- **Chlormadinone acetate**: All drug products containing chlormadinone acetate.
- **Chloroform**: All drug products containing chloroform.
Cobalt: All drug products containing cobalt salts (except radioactive forms of cobalt and its salts and cobalamin and its derivatives).

Dexfenfluramine hydrochloride: All drug products containing dexfenfluramine hydrochloride.

Diamthazole dihydrochloride: All drug products containing diamthazole dihydrochloride.

Dibromsalan: All drug products containing dibromsalan.

Diethylstilbestrol: All oral and parenteral drug products containing 25 milligrams or more of diethylstilbestrol per unit dose.

Dihydrostreptomycin sulfate: All drug products containing dihydrostreptomycin sulfate.

Dipyrone: All drug products containing dipyrone.

Encainide hydrochloride: All drug products containing encainide hydrochloride.

Fenfluramine hydrochloride: All drug products containing fenfluramine hydrochloride.

Flosequinan: All drug products containing flosequinan.

Gelatin: All intravenous drug products containing gelatin.

Glycerol, iodinated: All drug products containing iodinated glycerol.

Gonadotropin, chorionic: All drug products containing chorionic gonadotropins of animal origin.

Mepazine: All drug products containing mepazine hydrochloride or mepazine acetate.

Metabromsalan: All drug products containing metabromsalan.

Methamphetamine hydrochloride: All parenteral drug products containing methamphetamine hydrochloride.

Methapyrilene: All drug products containing methapyrilene.

Methopholine: All drug products containing methopholine.

Mibefradil dihydrochloride: All drug products containing mibefradil dihydrochloride.

Neomycin sulfate: All parenteral drug products containing neomycin sulfate.

Nitrofurazone: All drug products containing nitrofurazone (except topical drug products formulated for dermatologic application).

Nomifensine maleate: All drug products containing nomifensine maleate.

Oxyphenisatin: All drug products containing oxyphenisatin.

Oxyphenisatin acetate: All drug products containing oxyphenisatin acetate.

Phenacetin: All drug products containing phenacetin.

Phenformin hydrochloride: All drug products containing phenformin hydrochloride.

Pipamazine: All drug products containing pipamazine.

Potassium arsenite: All drug products containing potassium arsenite.

Potassium chloride: All solid oral dosage form drug products containing potassium chloride that supply 100 milligrams or more of potassium per dosage unit (except for controlled-release dosage forms and those products formulated for preparation of solution.
prior to ingestion).

- Povidone: All intravenous drug products containing povidone.
- Reserpine: All oral dosage form drug products containing more than 1 milligram of reserpine.
- Sparteine sulfate: All drug products containing sparteine sulfate.
- Sulfadimethoxine: All drug products containing sulfadimethoxine.
- Sulfathiazole: All drug products containing sulfathiazole (except those formulated for vaginal use).
- Suprofen: All drug products containing suprofen (except ophthalmic solutions).
- Sweet spirits of nitre: All drug products containing sweet spirits of nitre.
- Temafloxacin hydrochloride: All drug products containing temafloxacin hydrochloride.
- Terfenadine: All drug products containing terfenadine.
- 3,3',4',5'-tetrachlorosalicylanilide: All drug products containing 3,3',4',5'-tetrachlorosalicylanilide.
- Tetracycline: All liquid oral drug products formulated for pediatric use containing tetracycline in a concentration greater than 25 milligrams/milliliter.
- Ticrynafen: All drug products containing ticrynafen.
- Tribromsalan: All drug products containing tribromsalan.
- Trichloroethane: All aerosol drug products intended for inhalation containing trichloroethane.
- Urethane: All drug products containing urethane.
- Vinyl chloride: All aerosol drug products containing vinyl chloride.
- Zirconium: All aerosol drug products containing zirconium.
- Zomepirac sodium: All drug products containing zomepirac sodium.

Dated: October 1, 1998.

THE SPECIAL LAW FOR THE PHARMECEUTICAL COMPANIES

In the real world of commerce, if a company sells you something that hurts somebody you can sue them for damages. The Toyota cars killed people, and they had to pay damages. But the drug companies have a special exemption to this liability. To sue them for damages you must prove they knew it would hurt before they sold it and sold it anyway. Just being hurt is not enough to get damages. You must prove that they knowingly sold a drug that could hurt.

This allows them to hurt people and make massive profits and not be held responsible for damages. But still they are sued for damages in the multi billions of dollars each year when lawyers feel they have a case and can possibly prove the company knowingly sold a harmful substance.

If we change this law and hold them responsible for all damages then the world changes.
Doctor Caused Disease
Now the Largest Killer
SINTHETIC DRUGS

Iatrogenic Disease

The history of medicine starts with the history of natural medicine. For eons medicine was natural. Over two hundred years ago medicines were mostly natural. Then came the synthetic revolution. Patents were available only for synthetic medicines. Patents allowed for control of the market to recoup the early investment in research and for the originality of an idea’s form. The history of the drug companies is of greed and side effects.

The greed of people drove all to use patented medicines and the press looked for each new wonder drug story. But as time went by each wonder drug had more negative side effects than positive remedies. Thousands of patented medicines are withdrawn from the market when the negative effects are brought out. But greed drives on. Profits from patents accelerate.

There is an average of over a trillion dollars of synthetic drugs sold each year, and an average of over 500 billion sought in damages from their sale in law suits directed at the drug company manufacturers. These synthetic drugs are insults to the body and they produce side effects. As greed drives up the sale of synthetic drugs, the iatrogenic disease they cause goes up.
New drugs

1983 - 1994

- Natural Drugs: 59%
- Modified Natural Drugs: 6%
- Synthetic Drugs based on Natural Models: 9%
- Synthetic Drugs: 26%

1994 - 2009

- Natural Drugs: 69%
- Modified Natural Drugs: 1%
- Synthetic Drugs based on Natural Models: 10%
- Synthetic Drugs: 20%

The Increasing drive for SYNthetic Patents
Major Causes of Death 1955

Major Death Categories 1985
Our Society has All Learned to Avoid Synthetic Foods
The Patent Medicine is Only SINthetic

You Can't Patent Nature
An enormous number of drugs have been made available by scientific research. They make a substantial contribution to our well-being. We can treat the majority of diseases, sometimes fully healing, sometimes alleviating their symptoms and their progress. Drugs enable to abolish physical pain and undergo surgical procedures, to replace missing or defective body functions and restore a normal life for people that would otherwise live a short and uncomfortable time.

The great number of easily available drugs puts, however, a definite risk of drug abuse. Even when properly used under careful medical guidance, drugs entail some risks anyway: contraindications, side effects, unexpected reactions. We must be aware that, whenever we take a drug, we are taking a chance for risk, which is balanced by the expected benefits. Summing up costs and benefits, drugs are an extraordinary resource we cannot do without.

The role of chemists is central in discovery and development of new drugs.
There are **natural drugs** and **synthetic drugs**. As seen in the figure, 41% of all new drugs that have been cleared for use from 1983 to 1994, are related in some way to natural sources.
If We See SYNTHETIC foods on the Menu, We Won't order them
## Table Of Iatrogenic Deaths In The United States
(Deaths induced inadvertently by a physician or surgeon or by medical treatment or diagnostic procedures)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Deaths</th>
<th>Cost</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse Drug Reactions</td>
<td>108,000</td>
<td>$12 billion</td>
<td>Lazarou (1) Suh (22)</td>
</tr>
<tr>
<td>Medical Error</td>
<td>98,000</td>
<td>$2 billion</td>
<td>IOM (3)</td>
</tr>
<tr>
<td>Bedsores</td>
<td>115,000</td>
<td>$55 billion</td>
<td>Xakellis (7) Barczak (9)</td>
</tr>
<tr>
<td>Infection</td>
<td>88,000</td>
<td>$5 billion</td>
<td>Weinstein (9) MMWR (19)</td>
</tr>
<tr>
<td>Malnutrition</td>
<td>108,800</td>
<td>—</td>
<td>Nurses Coalition (11)</td>
</tr>
<tr>
<td>Outpatients</td>
<td>199,000</td>
<td>$77 billion</td>
<td>Starfield (12) Weingart (1, 12)</td>
</tr>
<tr>
<td>Unnecessary Procedures</td>
<td>37,136</td>
<td>$122 billion</td>
<td>HCUP (12)</td>
</tr>
<tr>
<td>Surgery-Related</td>
<td>32,000</td>
<td>$9 billion</td>
<td>AHRQ (15)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>783,936</td>
<td><strong>$282 billion</strong></td>
<td></td>
</tr>
</tbody>
</table>

We could have an even higher death rate by using Dr. Lucina Leape’s 1997 medical and drug error rate of 3 million. (4) Multiplied by the fatality rate of 14 percent that Leape used in 1994 (6) we arrive at an annual death rate of 420,000 for drug errors and medical errors combined. If we put this number in place of Lazarou’s 108,000 drug errors and the Institute of Medicine’s (IOM) 98,000 medical errors, we could add another 216,000 deaths making a total of 999,936 deaths annually.

## Projected Ten-Year Death Rates For Medical Intervention

<table>
<thead>
<tr>
<th>Condition</th>
<th>10-Year Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverse Drug Reaction</td>
<td>1.06 million</td>
</tr>
<tr>
<td>Medical error</td>
<td>0.98 million</td>
</tr>
<tr>
<td>Bedsores</td>
<td>1.15 million</td>
</tr>
<tr>
<td>Nosocomial Infection</td>
<td>0.88 million</td>
</tr>
<tr>
<td>Malnutrition</td>
<td>1.09 million</td>
</tr>
<tr>
<td>Outpatients</td>
<td>1.99 million</td>
</tr>
<tr>
<td>Unnecessary Procedures</td>
<td>371,360</td>
</tr>
<tr>
<td>Surgery-related</td>
<td>320,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>7,841,360 (7.8 million)</strong></td>
</tr>
</tbody>
</table>
IATROGENIC DEATHS: (Med Doctor Caused) America's Dark Secret - Leading Cause of Death in USA is Not Auto, Not Heart Or Not Cancer
"No Dr. Kevorkian did not make out the menu
the SINthetic food people did."

We Must Stop Prescription Drug Addiction
WE DON'T USE HERBS--JUST DRUGS WITH PROVEN SIDE EFFECTS.

But the Hospital Menu does not Offer a choice
You must Choose SINthetic
People Should be free to Chose Natural Medicine

Large Natural Pharmacy • Health & Nutrition Store
Botanical Medicine • Homeopathy • Acupuncture
Food Sensitivity Testing • Bowen Treatments
Weight Loss • B12 Injections • Onsite Lab
Walk in Clinic with Naturopathic Doctors on Staff
The History of the Pharma-Cartel

1911, May 15

The Supreme Court of the U.S. finds John Rockefeller and his Trust guilty of corruption, illegal business practices and racketeering. As a result of this decision, the entire Rockefeller Standard Oil-Trust, the world's largest corporation of its time, was sentenced to be dismantled. But Rockefeller was already above the Supreme Court and did not care about this decision.

1913

In order to disperse public and political pressure on him and other robber-barons, Rockefeller uses a trick called "philanthropy", whereby the illegal gains from his robber-practices in the oil business are used to launch the Rockefeller Foundation. This tax haven was used to strategically take over the health care sector in the U.S..

The Rockefeller Foundation was the front organization for a new global business venture of Rockefeller and his accomplices. This new venture was called the pharmaceutical investment business. Donations from the Rockefeller Foundation went only to medical schools and hospitals. These institutions had become missionaries of a new breed of companies: the manufacturers of patented, synthetic drugs.

This was also the time when the first vitamins were discovered. It soon became clear however that these natural molecules had live-saving health benefits and that they were able to prevent many chronic health conditions. The first books appeared with research, subsequently abandoned, about the health benefits of vitamins. These newly discovered molecules had only one disadvantage: they were non-patentable.

Thus, in its first years of existence, the pharmaceutical investment business already faced a mortal threat: vitamins and other micronutrients promoted as public health programs would prohibit the development of any sizable investment business based on patented drugs. The elimination of this unwanted competition from natural micronutrients therefore became a question of life and death for the pharmaceutical business.

1918

The Rockefeller Foundation uses the Spanish flu epidemic - and the media (that it already controlled by this time) - to start a witch-hunt on all forms of medicine that were not covered by its patents.

Within the next 15 years, all medical schools in the U.S., most hospitals and the American Medical Association all essentially became pawns on the chessboard of Rockefeller's strategy to subjugate the entire health care sector under the monopoly of his pharmaceutical investment business.

Disguised as a "Mother Theresa", the Rockefeller Foundation was also used to conquer foreign countries and entire continents for the pharmaceutical investment business - just as Rockefeller himself had done a few decades previously with his petrochemical investment business.
1925

On the other side of the Atlantic, in Germany, the first chemical / pharmaceutical cartel is founded in order to compete with Rockefeller's quest for control of the global drug market. Lead by the German multinationals Bayer, BASF and Hoechst, the I.G. Farben cartel was founded with a total number of employees surpassing 80,000. The race for global control was on.

1929, November 29

The Rockefeller cartel (U.S.A.) and the I.G. Farben cartel (Germany) decided to divide the entire globe into interest spheres - the very same crime Rockefeller had been sentenced for 18 years earlier, when his trust had divided up the U.S. into “interest zones”.

1932 / 33

The I.G. Farben cartel, equally insatiable, decides no longer to be bound by the 1929 constraints. They support an uprising German politician, who promises I.G. Farben to militarily conquer the world for them. With millions of dollars in election campaign donations, this politician seized power in Germany, turned the German democracy into a dictatorship and kept his promise to launch his conquest war, a war that soon became known as WWII.

In each and every country Hitler's wehrmacht invaded, the first act was to rob the chemical, petrochemical and pharmaceutical industries and assign them - free of charge - to the I.G. Farben empire.

1942 - 45

In order to cement its global leadership with patented drugs, the I.G. Farben cartel tests its patented pharmaceutical substances on concentration camp inmates in Auschwitz, Dachau and many other sites. The fees for conducting these inhumane studies were transferred directly from the bank accounts of Bayer, Hoechst and BASF to the bank accounts of the SS, who operated the concentration camps.

1945

I.G. Farben's plan to take control of the global oil and drug markets has failed. The U.S. and the other allied forces won WWII. Nevertheless, many U.S. and allied soldiers had lost their lives during the conflict, and the allies' reward was little compared to the rewards of others. The corporate shares of the losers, I.G. Farben, went to the Rockefeller trust (U.S.A.) and Rothschild / J.P. Morgan (U.K.).

1947

In the Nuremberg war crimes tribunal, 24 managers from Bayer, BASF, Hoechst and other executives of the I.G. Farben cartel were tried for crimes against humanity. These crimes included: leading wars of aggression, instituting slavery and committing mass murder. In his final pleading, U.S.-Chief Prosecutor Telford Taylor summarized the crimes committed by these
corporate criminals with the following words: "Without I.G. Farben, the second World War would not have been possible".

Amazingly, the real culprits for the death of 60 Million people in World War II - the I.G. Farben executives - received the mildest verdicts. Even those executives directly responsible for the crimes in I.G. Auschwitz only received a maximum of twelve years in jail. Surprised? You shouldn't be.

By 1944 Nelson Rockefeller had already entered the executive branch of the U.S. government. He started off as Under-Secretary of State and ended up a few years later as Special Adviser of President Truman for Special Affairs. In other words, at critical junctures of the 20th century, the Rockefeller interests took direct charge. They decided the post war shape of the world and the distribution of its wealth.

As such, under the influence of the U.S. State Department, the verdicts in Nuremberg against the I.G. Farben managers can easily be explained. In return for taking over the corporate shares of I.G. Farben, and thereby global control of the oil and drug business, Nelson Rockefeller made sure that the real culprits of World War II were not hanged. In fact, and as we shall see, they were needed.

1949

The Federal Republic of Germany was founded. This was the first time in history that the constitution and society of an industrialized nation could be planned and modeled as a fortress of the pharmaceutical investment business - a transatlantic outpost of the Rockefeller interests.

Within only a few years, the I.G. Farben managers sentenced in Nuremberg were released from jail and put back into their previous positions as stakeholders of the Rockefeller interests. Fritz Ter Meer, for example, sentenced to twelve years in jail for his crimes in Auschwitz, was back as chairman of the board of Germany's largest pharmaceutical multinational, Bayer, by 1963!

1945 - 49

The role of the Rockefeller brothers was not limited to their taking over the global monopolies of the oil and drug businesses. They also needed to create the political framework for these businesses to thrive. Under their influence, therefore, the United Nations was founded in 1945, in San Francisco. To seize political control of the post war world, three countries - leading drug export nations - had all the say, and 200 other nations were rendered mere spectators.

Founded as organizations to allegedly serve the wellbeing of the people of the world, the UN's subsidiary organizations, such as the World Health Organization (WHO) and World Trade Organization (WTO), soon turned out to be nothing more than the political arms of the global oil and drug interests.

1963

On behalf of the Rockefeller interests, the government of the pharmaceutical banana republic Germany spearheaded one of the most infamous efforts ever made within the United Nations.
Under the pretense of consumer protection, it launched a four-decade-long crusade to outlaw vitamin therapies and other natural, non-patentable health approaches in all member countries of the United Nations. The goal was to simply ban any and all competition for the multi-billion dollar business with patented drugs. The plan was simple: copy for the entire world what had already been accomplished in America in the 1920s - a monopoly on health care for the investment business with patented drugs.

Since the marketplace for the pharmaceutical investment business depends upon the continued existence of diseases, the drugs it developed were not intended to prevent, cure or eradicate disease. Thus, the goal of the global strategy was to monopolize health for billions of people, with pills that nearly cover symptoms but hardly ever address the root cause of disease. The deprivation of billions of people from having access to life saving information about the health benefits of natural health approaches, whilst at the same time establishing a monopoly with largely ineffective and frequently toxic patented drugs, caused disease and death in genocidal proportions.

This epidemic of unnecessary disability and death by the pharmaceutical business with disease is unparalleled in history.

Linus Pauling and other eminent scientists deserve credit for having kept open the door of knowledge about the health benefits of vitamins and other effective natural health approaches. If it were not for them we would already be living in a health prison today, guarded by the gatekeepers of the pharmaceutical business with disease in medicine, politics and the media.

Linus Pauling should also be credited for having identified the significance of Dr. Rath’s early research in vitamins and cardiovascular disease, and for having invited Dr. Rath to join him during his last years to continue his life’s work.

1990 - 92

These years will go down in history as the beginning of the end of the pharmaceutical business with disease. In a series of scientific publications, in some of which Dr. Rath invited Linus Pauling to join him as co-author, Dr. Rath identified micronutrient deficiency as the primary cause of diseases. These diseases include heart attacks, high blood pressure, diabetic circulatory problems, cancer and even immune deficiency diseases, including AIDS.

Like a Sherlock Holmes of science, Dr. Rath traced the real cause of these diseases, and found that they had been deliberately nebulized or even hidden away from millions of people for one purpose only: to feed the insatiable greed of the pharmaceutical business with disease.
US Supreme Court Immunizes Vaccine Makers Against Lawsuits

By
Toni
on February 25, 2011 6:45 PM | Permalink | Comments (1) | TrackBacks (0)

by Infowars Ireland
by Neil Z. Miller
naturalnews.com
February 24, 2011

In a 6-2 decision, the Supreme Court voted to protect pharmaceutical companies from liability when their vaccines cause debilitating injuries and death. The high court majority considers vaccines “unavoidably unsafe” and was worried about drug makers being sued and obligated to compensate their vaccine victims. Instead of opting to protect children, the Supreme Court chose to safeguard the financial interests of the multi-billion dollar vaccine industry.

THE SECRET POLITICAL ISSUE

By
Toni
on November 3, 2010 11:32 AM | Permalink | Comments (0) | TrackBacks (0)

Jon Rappoport

Interesting, Innovative and Investigative Reporting

OCTOBER 21, 2010. As this year’s election draws close, it’s business as usual, as far as Health Freedom is concerned. This issue isn’t just in the shadows. It’s in the closet behind the shadows, locked in tight.
The avalanche of pharmaceutical ads on TV drones on. The attacks on natural health set off firecrackers here and there: “Patients shouldn’t be allowed to choose alternative remedies, because that will take them away from medicines that really help.”

“We, the medical elites, know what’s best for you, and we’ll shove it down your throats.”

But wait. This is supposed to be the Year of the Conservative. Conservatives want less government intrusion, more individual freedom. Why isn’t Health Freedom front and center?

**One Source: Codex, Tar Sands, and Vaccines**

By **Toni**
on November 8, 2011 11:17 AM | Permalink | Comments (0) | TrackBacks (0)

**Food Freedom**
October 25, 2011 by geobear
By David Varner

For those occupying various cities now to protest the bankers, remember that **pharma IS the bankers**.

“The Rockefellers and I.G. Farben worked together before World War II and during World War II. For all practical purposes, the Rockefellers and I.G. Farben were the Third Reich.”

The **Bushes made their money in Nazi German** and are tied **closely to pharma** and the Rockefellers. GW Bush had them as advisors when he pushed through “**pandemic**” laws in each state that are **disguised martial law** and would force untested (and unknown) **vaccines** (as well as unknown, untested drugs, chemicals and “medical” procedure) on the entire country with a mere declaration of an emergency (no proof required).

Continue reading **One Source: Codex, Tar Sands, and Vaccines.**
<table>
<thead>
<tr>
<th>Course Fees</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Assessment for Masters level entry</td>
<td>$150</td>
</tr>
<tr>
<td>Continuing Ed Units—Certificate for unit 50 euro/hr</td>
<td></td>
</tr>
<tr>
<td>Course 150 euro/hr or Karma Pay</td>
<td></td>
</tr>
<tr>
<td>Diplomat in BioFeedback</td>
<td>$750usd or Pay in Karma</td>
</tr>
<tr>
<td>Certificate Fees available on request</td>
<td></td>
</tr>
<tr>
<td>License Fees available on request</td>
<td></td>
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<tr>
<td>Instructor or Trainer Certificate—$350usd if qualified</td>
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<tr>
<td>Phd / Doctorate in Wellness+BFB— 5500 euro</td>
<td></td>
</tr>
<tr>
<td>450 euro for the hard drive course plus shipping</td>
<td></td>
</tr>
<tr>
<td>International Medical Doctorate — 8,000 euro</td>
<td></td>
</tr>
</tbody>
</table>

Scholarships and barter discussions welcome
Drug giants fined $11bn for criminal wrongdoing

Fines are not enough to reform drug industry, warn lawyers

JEREMY LAURANCE
THURSDAY 20 SEPTEMBER 2012

The global pharmaceutical industry has racked up fines of more than $11bn in the past three years for criminal wrongdoing, including withholding safety data and promoting drugs for use beyond their licensed conditions.

In all, 26 companies, including eight of the 10 top players in the global industry, have been found to be acting dishonestly. The scale of the wrongdoing, revealed for the first time, has undermined public and professional trust in the industry and is holding back clinical progress, according to two papers published in today's New England Journal of Medicine. Leading lawyers have warned that the multibillion-dollar fines are not enough to change the industry's behaviour.

The 26 firms are under "corporate integrity agreements", which are imposed in the US when healthcare wrongdoing is detected, and place the companies on notice for good behaviour for up to five years.

The largest fine of $3bn, imposed on the UK-based company GlaxoSmith-Kline in July after it admitted three counts of criminal behaviour in the US courts, was the largest ever. But GSK is not alone – nine
other companies have had fines imposed, ranging from $420m on Novartis to $2.3bn on Pfizer since 2009, totalling over $11bn.

Kevin Outterson, a lawyer at Boston University, says that despite the eye watering size of the fines they amount to a small proportion of the companies' total revenues and may be regarded as a "cost of doing business". The $3bn fine on GSK represents 10.8 per cent of its revenue while the $1.5bn fine imposed on Abbott Laboratories, for promoting a drug (Depakote) with inadequate evidence of its effectiveness, amounted to 12 per cent.

Mr Outterson said: "Companies might well view such fines as a quite small percentage of their global revenue. If so, little has been done to change the system. The government merely recoups a portion of the financial fruit of firms' past misdeeds."

He argues that penalties should be imposed on executives rather than the company as whole. He cites a Boston whistleblower attorney, Robert Thomas who observed that GSK had committed a $1bn crime and "no individual has been held responsible".

Following GSK's admission that it had withheld safety data about its best-selling diabetes drug Avandia, the company pledged to make more clinical trial information available. But the pledge has "disturbing exceptions", according to Mr Outterson, and in any case is made under the corporate integrity agreement, which expires in five years.

Trust in the industry among doctors has fallen so low that they dismiss clinical trials funded by it, even when the trials have been conducted with scientific rigour, according to a second paper in the journal by researchers at Brigham and Women's Hospital, Boston. This could have serious implications because most medical research is funded by the drug industry and "if physicians are reluctant to trust all such research, it could hinder the translation of ... research into practice," said Aaron Kesselheim, who led the study.

Andrew Witty, the chief executive of GSK, said at the time of the $3bn settlement last July that it had resolved "difficult, long-standing matters" for the company and that there had since been a "fundamental change in procedures" including the removal of staff engaged in misconduct and changes to incentive payments.

The Association of the British Pharmaceutical Industry said practices in the industry had improved and more changes to "build greater levels of trust" would be made. The UK Medicines and Healthcare Products Regulatory Agency said it monitored the conduct of companies and took "appropriate action" when it uncovered malpractice.

**Alzheimer's funding 'must continue'**

Governments, universities and charities should step in to ensure funding is maintained for research into Alzheimer's disease, following a series of failed drug trials, experts said yesterday.

They were responding to a report in *The Independent* that the world's leading drug companies are giving up on the search for a cure, scaling back their neuroscience departments and focusing on symptomatic, rather than disease-modifying, treatments.

A spokesman for the Alzheimer's Society said: "This is not the time to back away from dementia research. Despite costing the economy more than cancer and heart disease, funding for research into dementia is only a fraction of these conditions. More funding is urgently needed if we are to defeat it."

Jeremy Laurance
Supreme Court Decision to enhance Drug Companies exemption from Lawsuits

July 7, 2013. Washington DC.
By Laima Jonusiene, MD

Product liability is the area of law in which manufacturers, distributors, suppliers, retailers, and others who make products available to the public are held responsible for the injuries those products cause. In the United States, the claims most commonly associated with product liability are negligence, strict liability, breach of warranty, and various consumer protection claims. Under strict liability, the manufacturer is liable if the product is defective, even if the manufacturer was not negligent in making that product defective. The man who makes your car, your stairs, or your elevator is liable for damages if you are hurt from any of them. But because the drug companies do not have the money or the technology to make safe products they historically do not have the same kind of liability.

To get damages from the drug companies you must prove premeditated plans to hurt. You must prove they knew it was unsafe and still sold it. Now even that is challenged and now it becomes difficult to make any lawsuit against the drug companies.

The US Supreme Court July 2013 made a ruling on lawsuits against drug companies for fraud, mislabeling, side effects and accidental death. Now, 80 percent of all drugs are exempt from legal liability.

Drug companies did not warn patients that toxic epidermal necrolysis was a side effect.

But the Supreme Court ruled the Drug Company is still not liable for damages.
In a 5-4 vote, the US Supreme Court struck down a lower court’s ruling and award for the victim of a pharmaceutical drug’s adverse reaction. According to the victim and the state courts, the drug caused a flesh-eating side effect that left the patient permanently disfigured over most of her body. The adverse reaction was concealed by the drug maker and later required to be included on all warning labels. But the highest court in the land, the Supreme Court ruled that victims have no legal basis to sue the corporation because its SINthetic drugs are exempt from lawsuits.

Karen Bartlett vs. Mutual Synthetic Pharmaceutical Company

In 2004, Karen Bartlett was prescribed the generic anti-inflammatory drug Sulindac, manufactured by Mutual Pharmaceutical, for her sore shoulder. Three weeks after taking the drug, Bartlett began suffering from a disease called, ‘toxic epidermal necrolysis’. The disorder is enormously painful and causes the victim’s skin to peel off, revealing raw flesh in the same manner as a third degree burn victim.

Karen Bartlett sued Mutual Pharma in New Hampshire state court, arguing that the drug company built-in no warning about the possible side effect. A NH court agreed and awarded her $21 million. The FDA went on to force both Mutual, as well as the original drug manufacturer Merck & Co., to include the side effect on the two drugs’ warning labels for the future.

Nine years later the tragedy began, the US Supreme Court overturned the state court’s verdict and award. Justices cited the fact that all generic drugs and their manufacturers, some 80% of all drugs consumed in the United States, are exempt from liability for side effects, mislabeling or virtually any other negative reactions caused by their drugs. In short, the Court ruled that the FDA
has ultimate authority over pharmaceuticals in the US. And if the FDA says a drug is safe, that takes precedent over actual facts, real victims and any and all adverse reactions.

The Court ruling

The Court’s ruling on behalf of generic drug makers is actually a continuation of a ruling made by the same Court in 2011. At that time, the Justices ruled that the original inventors and manufacturers of pharmaceutical drugs, also known as ‘name brand’ drugs, are the only ones that can be sued for mislabeling, fraud or adverse drug reactions and side effects. If the generic versions of the drugs are made from the exact same formula and labeled with the exact same warnings as their brand name counterparts, the generics and their manufacturers were not liable.

The Court ruled, “Because it is impossible for Mutual and other similarly situated manufacturers to comply with both state and federal law, New Hampshire’s warning-based design-defect cause of action is preempted with respect to FDA-approved drugs sold in interstate commerce."

And that ruling flies in the face of both common sense and justice. And as Karen Bartlett can now attest, it leaves 240 million Americans unprotected from the deadly and torturous side effects of pharmaceutical drugs. As a reminder, the number one cause of preventable or accidental death in the US is pharmaceutical drugs.

Public Reaction

Immediately upon the Supreme Court’s ruling, both drug manufacturers and Wall Street investors were celebrating. As one financial analyst pointed out, drug company profits should skyrocket going forward. Not only do the pharmaceutical companies no longer have to worry about safety or side effects, they are exempt from the multi-million dollar court-imposed settlements awarded to victims of their drugs.

One industry critic was quoted by Reuters after the verdict. "Today's court decision provides a disincentive for generic makers of drugs to monitor safety of their products and to make sure that they have a surveillance system in place to detect adverse events that pose a threat to patients," Michael Carome, director of Public Citizen's Health Research Group told the news outlet.

Senate Judiciary Committee Chairman Patrick Leahy (D-VT) was quick to react to the ruling by writing a stern letter to FDA Commissioner Margaret Hamburg, "A consumer should not have her rights foreclosed simply because she takes the generic version of a prescription drug."

But an attorney for the drug companies, Jay P. Lefkowitz, took the opposing position saying, "It makes much more sense to rely on the judgments of the scientific and medical experts at the FDA, who look at drug issues for the nation at large, than those of a single state court jury that only has in front of it the terribly unfortunate circumstances of an adverse drug reaction."

In other words, if the FDA says something is safe, it doesn’t matter if that decision is wrong or the result of lies, fraud or deception on the part of the world’s pharmaceutical companies. And there’s no way to sue the FDA for being wrong and costing millions of unsuspecting Americans their lives. That result leaves 240 million Americans unprotected from an industry responsible for more preventable deaths in the US than any other cause.
Every drug that has been recalled by the FDA...

was first proven to be "safe and effective" by the FDA

And Yet over 20,000 drugs have been removed from the market for hurting and killing people

GARDASIL®
Human Papillomavirus Vaccine

Helping destroy the Lives of Little Girls
One Injection at a Time

If the drugs do cause a problem then we've got some pills that might help...

And some other pills for the side effects of the pills you take for the problems the drugs cause...

And some other pills for the side effects of the pills you take for the problems the drugs cause...

And some other pills for the side effects of the pills you take for the problems the drugs cause...

With the cost of bringing a drug to market at over 1.5 million dollars, when will we see the ludicrous folly.
Merck:

Fainting can happen after getting GARDASIL. Sometimes people who faint can fall and hurt themselves.

But we'll give you a $20.00 iTunes gift card if you get all 3 doses, and a chance to win an iPad!

Learn more at:
“Labeling a child as mentally ill is stigmatization, not diagnosis. Giving a child a psychiatric drug is poisoning, not treatment.”

- Thomas Szasz, Professor of Psychiatry Emeritus
A long time has gone by since this cartoon was first published. Yes the Drug Companies and the FDA are sitting on the research that confirms beyond a shadow of doubt that the synthetic drugs are not safe and they do more harm than good. But since medicine has become so dependent on these drugs, the drug companies have soooo much money, it would be difficult to reteach all doctors medicine, the FDA and Drugs sit on the research, and drug caused iatrogenic disease increases Dramatically.
White Sugar is the White Horse of Conquest

The Pale Horse's Name is DEATH

Big Pharma is the Pale Horse
HEADLINES
1,500 People die from Cancer each Day

HEADLINES
Over 12,000 people a day die from the effects of smoking

HEADLINES
20,000 people die each day from Drugs
Booster Shots: Oddities, musings and news from the health world

Synthetic marijuana linked to heart attacks in teens

November 08, 2011 | By Shari Roan, Los Angeles Times / For the Booster Shots blog

Three teenagers in Texas appear to have had heart attacks caused by smoking synthetic marijuana, doctors reported Monday.

While smoking marijuana is known to affect the heart, such as by increasing the heart rate, synthetic pot -- known as K2 or Spice -- may represent an additional risk. These drugs contain synthetic cannabinoids and have become popular among illicit drug users because they do not show up on toxicology screens.

5 Signs Of Restless Legs

COUNTERTHINK

BIG PHARMA
I Told You, You can't talk about SINthetic Drugs

WHAT ABOUT THE FIRST AMENDMENT?

Major Causes of Death 1955

- Cancer
- Heart
- Medicine
Major Death Categories 1985

- Cancer
- Heart
- Iatrogenic

2009

- Cancer mostly from Tobacco
- Conventional Medicine No 1 Killer
- Heart Disease from Bad Diet and Big Sugar
- Deaths from:
  - Cancer
  - Heart Disease
  - Conventional Medicine
COUNTERTHINK

PHARMACEUTICAL ROULETTE

People Should be free to Chose Natural Medicine
The Increasing drive for SINthetic Patents

Our Society has All Learned to Avoid Synthetic Foods
If We See SYNTHETIC foods on the Menu, We Won't order them

To try to Play God is a Sin, So I call the Synthetic Chemicals SINthetic
Synthetic Allopathic Non Holistic Medicine Has Become Out-Dated

Top Ten Legal Drugs Linked to Violence

By Maia Szalavitz Jan. 07, 2011
When people consider the connections between drugs and violence, what typically comes to mind are illegal drugs like crack cocaine. However, certain medications — most notably, some antidepressants like Prozac — have also been linked to increase risk for violent, even homicidal behavior.

A new study from the Institute for Safe Medication Practices published in the journal *PloS One* and based on data from the FDA’s Adverse Event Reporting System has identified 31 drugs that are disproportionately linked with reports of violent behavior towards others. (More on Time.com: New Hope For An Anti-Cocaine Vaccine)

Please note that this does not necessarily mean that these drugs cause violent behavior. For example, in the case of opioid pain medications like Oxycontin, people with a prior history of violent behavior may seek drugs in order to sustain an addiction, which they support via predatory crime. In the case of antipsychotics, the drugs may be given in an attempt to reduce violence by people suffering from schizophrenia and other psychotic disorders — so the drugs here might not be causing violence, but could be linked with it because they’re used to try to stop it.

Nonetheless, when one particular drug in a class of nonaddictive drugs used to treat the same problem stands out, that suggests caution: unless the drug is being used to treat radically different groups of people, that drug may actually be the problem. Researchers calculated a ratio of risk for each drug compared
to the others in the database, adjusting for various relevant factors that could create misleading comparisons. Here are the top ten offenders:

10. **Desvenlafaxine (Pristiq)** An antidepressant which affects both serotonin and noradrenaline, this drug is 7.9 times more likely to be associated with violence than other drugs.

9. **Venlafaxine (Effexor)** A drug related to Pristiq in the same class of antidepressants, both are also used to treat anxiety disorders. Effexor is 8.3 times more likely than other drugs to be related to violent behavior. (More on Time.com: Adderall May Not Make You Smarter, But It Makes You Think You Are)

8. **Fluvoxamine (Luvox)** An antidepressant that affects serotonin (SSRI), Luvox is 8.4 times more likely than other medications to be linked with violence.

7. **Triazolam (Halcion)** A benzodiazepine which can be addictive, used to treat insomnia. Halcion is 8.7 times more likely to be linked with violence than other drugs, according to the study.

6) **Atomoxetine (Strattera)** Used to treat attention-deficit hyperactivity disorder (ADHD), Strattera affects the neurotransmitter noradrenaline and is 9 times more likely to be linked with violence compared to the average medication.

5) **Mefoquine (Lariam)** A treatment for malaria, Lariam has long been linked with reports of bizarre behavior. It is 9.5 times more likely to be linked with violence than other drugs.

4) **Amphetamines: (Various)** Amphetamines are used to treat ADHD and affect the brain’s dopamine and noradrenaline systems. They are 9.6 times more likely to be linked to violence, compared to other drugs.

3) **Paroxetine (Paxil)** An SSRI antidepressant, Paxil is also linked with more severe withdrawal symptoms and a greater risk of birth defects compared to other medications in that class. It is 10.3 times more likely to be
linked with violence compared to other drugs. (More on Time.com: Healthland’s Guide to Life 2011)

2) Fluoxetine (Prozac) The first well-known SSRI antidepressant, Prozac is 10.9 times more likely to be linked with violence in comparison with other medications.

1) Varenicline (Chantix) The anti-smoking medication Chantix affects the nicotinic acetylcholine receptor, which helps reduce craving for smoking. Unfortunately, it’s 18 times more likely to be linked with violence compared to other drugs — by comparison, that number for Xyban is 3.9 and just 1.9 for nicotine replacement. Because Chantix is slightly superior in terms of quit rates in comparison to other drugs, it shouldn’t necessarily be ruled out as an option for those trying to quit, however.
But a Prozac user can be different. His reality check is interfered with. In his new reality it is logical to kill for the simplest of reasons. The shooter in Montreal said that there was too many girls in his engineering class. Normal people would choose other ways to handle such a conflict. The fact that these mass murders have little sweat or nervous reaction gives us proof of the pharmacological nature of this tragedy.

The problem is not the mental disease, but the illogical cure. Once again the synthetic pharmacology industry has taken the symptom (depression) and the sales. The side effects are observed most often too late. This letter contains the explanation for the recent catastrophe.

But for over a year now this letter is not published by anyone. The Media has been bought. The world media is not doing its job. The media has been bought and is controlled by the big corporations like Big Pharma.

Now the new research shows that Prozac is no better than a placebo in treating depression. This story is a better one to remove Prozac from the market. The expose’ of deaths would not only continue the legal attack on damages that Big Pharma is occurring. Viox, DES, anti-cholesterol drugs, heart medications and a host of others. There is an ever growing awareness of just how much of a problem the incompatible synthetic pharmaceuticals are. This is a most vital story to tell, and tremendous cover up and conspiracy of the drug company.

But there is a larger story. The entire world press is bought and will not cover stories like this, will not cover stories of the international pedophile cartel, will not cover stories of Equal Economic Education, will not cover the angel. The greatest news story is that the news is not the news. Big Money and large corporations filter the news and they control the dribble of what we see. Every journalist should be ashamed. Is there not one of them willing to step forward with honesty and integrity.

This letter must not be suppressed. This treatise requires more in-depth evaluation that cannot honestly be done from inside the Chemical companies. Please give this correspondence the proper treatment and allow others to read it.

Professor William Nelson
1. Quantum Electrodynamics has proven that just putting the atoms such as calcium or copper in its place in a compound is not enough.

2. The realization of Fractal and Chaos mathematics has shown us that reductionism has failed as a technique for safety and efficacy of the new drug.

3. Allopathy does not work as a form of medicine.

4. Doctor prescribed drugs are one of the most prolific killers. Over a million die each year from doctor prescribed drugs.

5. The social experiment of synthetic chemistry over. Synthetics are not compatible with a human.

6. At the very least, in the smallest manner, it should at least be a matter of opinion and a freedom of choice for informed consent for any use of a synthetic medicine.

Proof of the incompatibility of synthetic compounds