

## **THIS “MIRACLE HEALTH FOOD” HAS BEEN LINKED TO BRAIN DAMAGE AND BREAST CANCER<sup>1</sup>**

**Dr. Mercola<sup>©</sup>**

If you were to carefully review the thousands of studies published on soy, I strongly believe you would reach the same conclusion as I have—which is, the risks of consuming unfermented soy products FAR outweigh any possible benefits. Notice I said *unfermented soy products*. For centuries, Asian people have been consuming fermented soy products such as natto, tempeh, and soy sauce, and enjoying the health benefits. Fermented soy does not wreak havoc on your body like unfermented soy products do. Unfortunately, many Americans who are committed to healthy lifestyles have been hoodwinked and manipulated into believing that unfermented and processed soy products like soymilk, soy cheese, soy burgers and soy ice cream are good for them.

### **How Did Soy Foods Become So Popular?**

If it seems like soy foods appeared out of nowhere to be regarded as the “miracle health food” of the 21st Century, it’s because they did. From 1992 to 2006, soy food sales increased from \$300 million to nearly \$4 billion, practically overnight, according to the Soyfoods Association of North America. This growth came about due to a massive shift in attitudes about soy. And this shift was no accident—it was the result of a massive investment in advertising by the soy industry that’s been wildly successful.

Soy is indeed big business, very big business. From 2000 to 2007, U.S. food manufacturers introduced more than 2,700 new soy-based foods, and new soy products continue to appear on your grocer’s shelves. According to the survey *Consumer Attitudes About Nutrition 2008* (by the United Soybean Board):

- As of 2007, 85 percent of consumers perceive soy products as healthful.
- 33 percent of Americans eat soy foods or beverages at least once a month.
- 70 percent of consumers believe soybean oil is good for them.
- 84 percent of consumers agree with the FDA’s claim that consuming 25 grams of soy protein daily reduces your risk of heart disease.

This is a tragic case of shrewd marketing and outright lies taking root among the masses with the end result of producing large profits for the soy industry and impaired health for most who have been deceived into using unfermented soy long-term. As you can see from the extensive list of articles below, there is a large amount of scientific research showing that soy is not the nutritional panacea of the 21<sup>st</sup> Century.

### **The Dark Side of Soy**

The vast majority of soy at your local market is not a health food. The exception is fermented soy, which I’ll explain more about later and even worse GMO soy that is contaminated with large pesticide residues as the reason it is GMO is so they can spray the potent toxic herbicide Roundup on them to improve crop production by killing the weeds.

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<sup>1</sup> Mercola.com, September 18, 2010

Unlike the Asian culture, where people eat small amounts of whole non-GMO soybean products, western food processors separate the soybean into two golden commodities—protein and oil. And there is nothing natural or safe about these products. Dr. Kaayla Daniel, author of *The Whole Soy Story*, points out thousands of studies linking soy to malnutrition, digestive distress, immune-system breakdown, thyroid dysfunction, cognitive decline, reproductive disorders and infertility—even cancer and heart disease. Here is just a sampling of the health effects that have been linked to soy consumption:

- breast cancer,
- brain damage,
- infant abnormalities,
- thyroid disorders,
- kidney stones,
- immune system impairment,
- severe, potentially fatal food allergies,
- impaired fertility, and
- danger during pregnancy and nursing.

Soy proponents will argue that soy-based foods (they lump the fermented ones with the unfermented) will protect you from everything from colon, prostate and breast cancer to strokes, osteoporosis, and asthma. But said enthusiasts never mention the studies that illuminate soy's downside and all of the dangers posed to your health, which are based on sound research. Another unfortunate fact is that 80 percent of the world's soy is used in farm animal feed, which is why soy production is contributing to deforestation. Some soy propagandists have suggested that the solution to this is for all of us to become vegetarians—a reckless recommendation rooted in total ignorance about nutrition—whereas a far better solution is a major overhaul in how farm animals are fed and raised.

### **What Makes Soy Such a Risky Food to Eat?**

Here is a summary of soy's most glaring problems.

1. **91 percent of soy grown in the US is genetically modified (GM).** The genetic modification is done to impart resistance to the toxic herbicide Roundup. While this is meant to increase farming efficiency and provide you with less expensive soy, the downside is that your soy is loaded with this toxic pesticide. The plants also contain genes from bacteria that produce a protein that has never been part of the human food supply. GM soy has been linked to an increase in allergies. Disturbingly, the **only published** human feeding study on GM foods ever conducted verified that the gene inserted into GM soy transfers into the DNA of our gut bacteria and continues to function. This means that years after you stop eating GM soy, you may still have a potentially allergenic protein continuously being produced in your intestines. Even more frightening is the potential for GM soy to cause infertility in future generations, which has been evidenced by recent Russian research.
2. **Soy contains natural toxins known as “anti-nutrients.”** Soy foods contain anti-nutritional factors such as saponins, soyatoxin, phytates, protease inhibitors, oxalates, goitrogens and estrogens. Some of these factors interfere with the enzymes you need to digest protein. While a small amount of anti-nutrients would not likely cause a problem, the amount of soy that many Americans are now eating is extremely high.

3. **Soy contains hemagglutinin.** Hemagglutinin is a clot-promoting substance that causes your red blood cells to clump together. These clumped cells are unable to properly absorb and distribute oxygen to your tissues.
4. **Soy contains goitrogens.** Goitrogens are substances that block the synthesis of thyroid hormones and interfere with iodine metabolism, thereby interfering with your thyroid function.
5. **Soy contains phytates.** Phytates (phytic acid) bind to metal ions, preventing the absorption of certain minerals, including calcium, magnesium, iron, and zinc -- all of which are co-factors for optimal biochemistry in your body. This is particularly problematic for vegetarians, because eating meat reduces the mineral-blocking effects of these phytates (so it is helpful—if you do eat soy—to also eat meat).
6. **Soy is loaded with the isoflavones genistein and daidzein.** Isoflavones are a type of phytoestrogen, which is a plant compound resembling human estrogen. These compounds mimic and sometimes block the hormone estrogen, and have been found to have adverse effects on various human tissues. Soy phytoestrogens are known to disrupt endocrine function, may cause infertility, and may promote breast cancer in women. Drinking even two glasses of soymilk daily for one month provides enough of these compounds to alter your menstrual cycle. Although the FDA regulates estrogen-containing products, no warnings exist on soy.
7. **Soy has toxic levels of aluminum and manganese.** Soybeans are processed (by acid washing) in aluminum tanks, which can leach high levels of aluminum into the final soy product. Soy formula has up to 80 times higher manganese than is found in human breast milk.
8. **Soy infant formula puts your baby's health at risk.** Nearly 20 percent of U.S. infants are now fed soy formula, but the estrogens in soy can irreversibly harm your baby's sexual development and reproductive health. Infants fed soy formula take in an estimated five birth control pills' worth of estrogen every day. Infants fed soy formula have up to 20,000 times the amount of estrogen in circulation as those fed other formulas!

There is also the issue of pesticides and genetic modification. Soy foods are both heavily sprayed with pesticides and genetically modified (GM). More than 80 percent of the soy grown in the United States is GM. And more than 90 percent of American soy crops are GM. Since the introduction of GM foods in 1996, we've had an upsurge in low birth weight babies, infertility, and other problems in the U.S. population, and animal studies thus far have shown devastating effects from consuming GM soy. You may want to steer clear of soy products for no other reason than a commitment to avoiding GM foods... unless you wish to be a lab animal for this massive uncontrolled experiment by the biotech industry.

### **What Soy Products are Good For You?**

I want to be clear that I am not opposed to *all* soy. Soy can be incredibly healthful, but ONLY if it is organic and properly fermented. After a long fermentation process, the phytate and “anti-nutrient” levels of soybeans are reduced, and their beneficial properties become available to your digestive system. You may have heard that Japanese people live longer and have lower rates of cancer than Americans because they eat so much soy—but it's primarily *fermented soy*

that they consume, and it's always been that way. Fermented soy products are the only ones I recommend consuming. These are the primary fermented soy products you'll find:

- **Tempeh** a fermented soybean cake with a firm texture and nutty, mushroom-like flavor.
- **Miso**, a fermented soybean paste with a salty, buttery texture (commonly used in miso soup).
- **Natto**, fermented soybeans with a sticky texture and strong, cheese-like flavor.
- **Soy sauce**, which is traditionally made by fermenting soybeans, salt and enzymes; be wary because many varieties on the market today are made artificially using a chemical process.

Please note that tofu is NOT on this list. Tofu is not fermented, so is not among the soy foods I recommend.

**Vitamin K2: One of the Major Benefits of Fermented Soy.** One of the main benefits of fermented soy, especially natto, is that it is the best food source of vitamin K2. Vitamin K2 is essential to preventing osteoporosis, cardiovascular disease, and diseases of the brain such as dementia, and protecting you from various cancers including prostate, lung, liver cancer and leukemia. Vitamin K acts synergistically with vitamin D to keep you healthy. Vitamin K is sometimes referred to as the “forgotten vitamin” because its benefits are often overlooked. It was named after the word “Koagulation,” to reflect its essential role in blood clotting. In fact, the enzyme nattokinase—derived from natto—is safer and more powerful than aspirin in dissolving blood clots, and has been used safely for more than 20 years.

If you enjoy natto or some of the other fermented soy foods, you can get several milligrams of vitamin K2 from them each day (this level far exceeds the amount of vitamin K2 found even in dark green vegetables). Unfortunately, the health benefits of many of the fermented soy foods fall by the wayside because many Americans do not enjoy their flavor. If you don't want to consume natto to get your vitamin K2, the next best thing would be to get use supplemental Vitamin K2 (MK-7). Remember, vitamin K must be taken with a source of fat in order to be absorbed. I suggest adults consume about 150 mcg of vitamin K2 daily.

### **Tips for Avoiding Unwanted Soy Foods**

For a simple rule of thumb, just remember that unless soy is fermented (tempeh, miso, natto, or traditionally made soy sauce), you're better off avoiding it. Soy foods to avoid include:

- Tofu,
- TVP (texturized vegetable protein) or soy protein isolate, which contains a large amount of msg, which you should definitely not consume,
- soybean oil,
- soymilk,
- soy cheese, soy ice cream, soy yogurt,
- soy “meat” (meatless products made of TVP),
- soy protein,
- edamame, and
- soy infant formula.

The best way to eliminate non-fermented soy from your diet is to *avoid all processed foods* and instead purchase whole foods that you prepare yourself. If you do buy packaged foods, you can check the label to see if it contains soy. The Food Allergen Labeling and Consumer Protection

Act, which took effect in January 2006, requires that food manufacturers list soy on the label, because it's one of the top eight food allergens. So, even if soy is hidden in colors, flavors, or spice blends added to foods, it must be clearly stated on the label.

One other common source of soy is lecithin which is used as an emulsifier in many foods and supplements. Most lecithin in the US is derived from soy but there are some newer products that extract it from organic sunflower. We switched over to the organic sunflower lecithin a few years ago in all of our products.

## **Addendum**

If you wish to know more about soy, I have provided a list of links below to the many articles I've posted over the years on this subject. Remember, the only way to avoid falling victim to shrewd marketing and misinformation is to become knowledgeable about what the research actually says, and this is often different from what is commonly passed around as "fact."

### **Soy is NOT a Health Food**

- [Newest Research On Why You Should Avoid Soy](#)
- [Which Veggie Burgers Were Made With a Neurotoxin?](#)
- [The Evidence Against Soy](#)
- [What's So Bad About Tofu?](#)
- [Why Soy Is NOT the Health Food You Think it Is](#)
- [The Whole Soy Story: The Dark Side of America's Favorite Health Food](#)
- [Concerns Regarding Soybeans](#)
- [More Evidence Soy is Not as Healthy as Originally Believed](#)
- [Soy Milk is Unhealthy](#)
- [Experts Finally Recognize The Dangers With Soy](#)
- [Soy Myth Exposed: Soy is Not a Health Food](#)
- [The Truth About Soy](#)
- [What You Don't Know About America's Favorite Health Food](#)
- [Think Soy is Healthy? Here's Why it's Not as Good as You Think](#)
- [Soy Milk is Gaining Popularity in America](#)
- [Researchers Take a Second Look at Soy Foods](#)
- [Response To Those Who Believe Soy Is Healthy](#)
- [They're Taking The Joy Out Of Soy](#)
- [ABC News does special on soy Friday. \(Special on 20/20 about dangers of soy\)](#)
- [New Avoid Soy Update](#)
- [Soy: Too Good to be True](#)
- [Learn the Truth About Soy. Just How Much Soy Do Asians Eat?](#)

### **The Danger of Soy for Infants, Children and Pregnant Women**

- [Pregnant Women Should Not Eat Soy Products](#)
- [Link Between High Soy Diet During Pregnancy and Nursing and Eventual Developmental Changes in Children](#)
- [Using Soy in Schools?](#)
- [Soy Weakens Your Immune System](#)
- [Soy is an Endocrine Disrupter and Can Disrupt Your Child's Health](#)

### **How Soy Infant Formulas Can Devastate Your Child's Health**

- [Which Infant Formulas Contain Hidden Toxic Chemicals?](#)
- [Soy Formula Exposes Infants To High Hormone Levels](#)

- Finally Infant Soy Formula Under Investigation
- Healthy Alternative to Conventional Infant Formula, Part I
- Soy Formula May Stunt the Intestinal Growth in Your Baby
- Soy Formula Kills Three Babies
- Soy Baby Formula Linked to Behavioral Problems
- Experts Dispute JAMA Soy Infant Formula Study
- Australian Pediatric Soy Protein Formula Policy
- Soy Milk Is Safe! That Is What the Formula Industry Says
- Responses to Manganese in Soy Infant Formula Article
- How Safe is Soy Infant Formula?
- Learn the Truth About Soy. Just How Much Soy Do Asians Eat?
- Genetically Engineered Soybeans May Cause Allergies
- Monsanto Under Investigation by Seven U.S. States
- FDA Scientists Wary of Soy

### **Government and Agribusiness Shenanigans**

- Why Silk Soy Milk's Parent Company is Throwing American Farmers and Consumers Under the Bus
- Weston A. Price Foundation to FDA: Soy is No Health Food
- Soy Ruled No Health Food
- Research Uncovers Yet Another Soy Myth
- Soy 'Miracle' Turns Bad in Argentina
- If You're Suffering From a Medical Problem Caused by Soy, You May Now be Able to Take Legal Action
- The Shadow of Soy
- Scientists Protest Soy Approval
- Soybean Crisis

### **Soy and Your Reproductive System**

- Soy Supplements Fail to Help Menopause Symptoms
- Soy Has Little, if Any, Effect on Heart Disease, Hot Flashes
- Eating Soy Can Decrease Your Fertility
- Soy-Based Foods No Good As A Hormone Replacement
- What Works Better for Hormones--Soy or Flax?
- Soy Supplements can Decrease Sexual Behavior
- Chemical in Soybeans Causes Sexual Dysfunction in Male Rats
- Caution Urged on Soy Menopause Remedies
- Even Cheetahs Can't Tolerate Soybeans
- Doubt Cast On Soy for Menopause
- Cancer, Heart Health: Making Sense of Soy
- Study Doubts Soy For Hot Flashes-Supplements May Not Work

### **Soy and Your Thyroid**

- Fatigue, Dry Skin, Gaining Weight? See Why You'd Better Check Your Thyroid!
- Soy Formulas and the Effects of Isoflavones on the Thyroid

### **Soy and Your Brain**

- Why Tofu Wrecks Your Brain
- Too Much Tofu Induces Brain Aging
- Soy and Brain Damage
- Soy May Cause Cancer and Brain Damage

**Soy and Your Heart**

- Soy Has Little, if Any, Effect on Heart Disease, Hot Flashes
- Soy No Help to Women With Heart Disease Prevention
- Soy Can Increase Heart Disease Risk
- Soy: Too Good To Be True

**Soy and Your Kidneys**

- Soy Can Lead to Kidney Stones

**Soy and Cancer Risk**

- Soy Maker Omits Studies That Soy May Cause Cancer
- Certain Soy and Oyster Sauces Containing Cancer-Causing Chemicals
- Experts Concerned About Soy and Breast Cancer
- Soy May Cause Cancer and Brain Damage

**Soy and Allergies**

- Genetically Engineered Soybeans May Cause Allergies
- Soy Can Cause Severe Allergic Reactions

**Other Soy Issues**

- Rebuttal to Seriously Confused Soy Enthusiast
- Don't Be Fooled--Calcium Content in Soy and Rice Milk Misleading
- Massive Deforestation of the Amazon for Soybean Crops