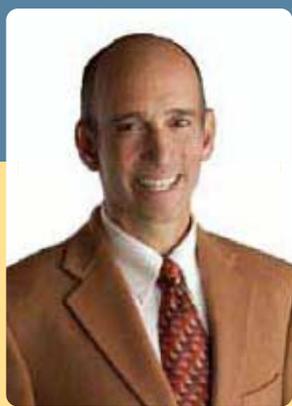


# How to Get the Benefits of Soy ... Without All the Health Risks

**DR. MERCOLA**



Soy

Vitamin K2

Natto

Tempeh

Miso

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Take Control of Your Health

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There was a time not long ago, probably during your lifetime, when most Americans would have gasped at the notion of eating soy “hippie” foods.

This all changed back in 1999, when the U.S. Food and Drug Administration approved a health claim for soy, and suddenly -- after a heavy marketing campaign from the soy industry -- an onslaught of “healthy” soy products bore the logo: “Diets low in saturated fat and cholesterol that include 25 grams of soy protein a day may reduce the risk of heart disease.”

The resulting fanfare over the soybean has been every marketing director’s dream: Eat soy, they say, and you can lose weight, protect your heart, lower your cholesterol, have more energy, and reduce the symptoms of menopause, among many other reported benefits.

What’s more, you don’t have to stomach the “beany” flavored, drab soy products of the past to gain these supposed benefits because today you can find chocolate-flavored soymilk, soy burgers, soy ice cream, soy cheese, and just about any other soy food you could imagine.



But those aren’t the only sources of soy. Soy is now in just about every processed food out there -- even those that you’d think have nothing to do with soy, like condiments, yogurt, bread, sausages, and pasta sauce -- often in the form of soybean oil or the emulsifying agent soy lecithin (which is made from the sludge left over after crude soy oil is processed).

In fact, you may be surprised to learn that soybeans provided a whopping 75 percent of the edible consumption of fats and oils in the United States in 2006<sup>1</sup>.

## Why Did Soy Foods Become So Popular?

If it seems like soy foods appeared seemingly out of nowhere to fast become the “miracle 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, all in just

14 years<sup>2</sup>. This increase, according to the Soyfoods Association of North America:

*“Can be attributed to new soy food categories being introduced, soy foods being repositioned in the market place, and new customers selecting soy for health and philosophical reasons.”*

In other words, the growth came because somewhere along the way a massive shift in attitudes emerged about soy. And this shift was no coincidence -- it was the result of a massive soy advertising campaign that's been wildly successful.

From 2000 to 2007, U.S. food manufacturers introduced over 2,700 new foods with soy as an ingredient; 161 new products were introduced in 2007 alone<sup>3</sup>.



In fact, ever since the FDA's now-prolific health claim for soy and heart health came out in 1999, there has been an influx of new soy products coming to the market, eager to take advantage of consumers who were suddenly seeking soy foods.

According to the Mintel Global New Products Database<sup>4</sup>, there were:

- 406 new soy products released in 2001
- 278 released in 2002
- 336 released in 2003
- 448 released in 2004
- 291 released in 2005
- 471 released in 2006

In the past, of course, soy foods were typically only available at natural foods stores, but today 75 percent of all soy foods and drinks are purchased at, you guessed it, the supermarket.

Americans' attitudes about soy have also been dramatically shifting.

You can admit it, you probably used to turn your nose up at the thought of eating tofu or drinking soymilk, but now perhaps you've opened your mind to it.

So, it seems, has the bulk of the U.S. population. Consider these facts from the Soyfoods Association of North America<sup>5</sup>:

- As of 2007, 85 percent of consumers perceive soy as healthy (up from 82 percent in 2006)
- 33 percent of Americans eat soy foods or beverages once a month or more
- 70 percent of consumers believe soybean oil is a healthy oil
- Over half of consumers have tried soy foods or beverages in a restaurant
- Over three in five consumers believe that eating soy-based foods can help to reduce obesity, and 84 percent agree with (or would like more information about) the FDA's claim that consuming 25 grams of soy protein per day reduces your risk of heart disease

Seeing these statistics, and noting how pervasive the belief that soy foods are healthy is in the

United States, makes it very clear how important the following message is:

## Soy is NOT the Health Food You Believe it Is

It's true. The vast majority of soy that's on the market is NOT a health food (the exception here is fermented soy, and I'll explain more about this later).

Far from being the health panacea it's purported to be, "thousands of studies link soy to malnutrition, digestive distress, immune-system breakdown, thyroid dysfunction, cognitive decline, reproductive disorders, and infertility -- even cancer and heart disease," says Dr. Kaayla Daniel, author of the book *The Whole Soy Story: The Dark Side of America's Favorite Health Food*.

What's makes soy such a risky food to eat? Here is a breakdown of soy's major problems:

### 1. It contains natural toxins known as "antinutrients."

This includes a large quantity of inhibitors that deter your enzymes needed for protein digestion. While a small amount of these antinutrients would likely not be a problem, the amount of soy that many Americans are now eating is no small amount.

According to Daniel, the toxic effects occur if you eat more than 35 grams of soy a day. Soy foods can contain anywhere from 1-2 grams of soy per serving to 18-20 grams per serving<sup>6</sup>, so you could easily be eating far more than 35 grams a day.

The result of consuming too many of soy's antinutrients is extensive gastric distress and chronic deficiencies in amino acid uptake, which can result in pancreatic impairment and cancer.

### 2. Soy contains hemagglutinin.

Hemagglutinin is a clot-promoting substance that causes your red blood cells to clump together and inhibits oxygen take-up and growth. Soybeans also contain growth-depressant substances (while some of these substances are reduced in processing, they are not completely eliminated).



### **3. Soy contains goitrogens.**

Goitrogens frequently lead to depressed thyroid function.

### **4. Soy contains phytates.**

Phytates prevent the absorption of 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).

### **5. Soy is loaded with phytoestrogens (isoflavones) genistein and daidzein.**

These compounds mimic and sometimes block the hormone estrogen, and have been found to have adverse effects on various human tissues.

Drinking even two glasses of soymilk daily for one month has enough of the chemical to alter a woman's menstrual cycle, and although the FDA regulates estrogen-containing products, no warnings exist on soy.



Soy phytoestrogens are also known to disrupt endocrine function, may cause infertility, and may promote breast cancer in women<sup>7</sup>.

### **6. Soy has high levels of aluminum.**

In an effort to remove the antinutrients from soy, soybeans are taken through a series of chemical processes including acid-washing in aluminum tanks. This leaches high levels of aluminum -- a toxic metal -- into the final soy products.

### **7. Soy has potentially toxic levels of manganese.**

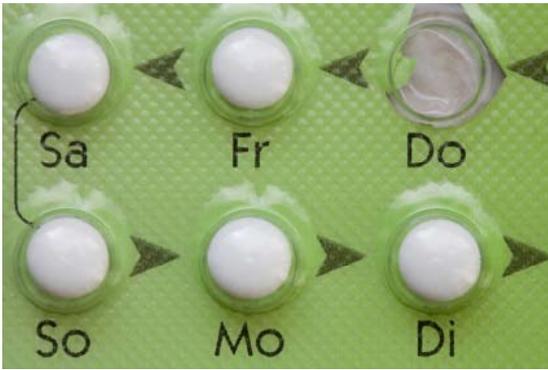
Soy formula has up to 80 times higher manganese than is found in human breast milk.

### **8. Soy infant formula puts your baby 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 future sexual development and reproductive health.

Infants fed soy formula take in an estimated five birth control pills' worth of estrogen every day.

There is also the issue of pesticides and genetic modification.



Soy foods are both heavily sprayed with pesticides and more often than not genetically modified (more than 80 percent of the soy grown in the United States is genetically modified) -- and I recommend that you NOT consume pesticides or genetically modified foods if you want to be optimally healthy.

In my book *Take Control of Your Health* I have further outlined the potential health problems that can result from consuming too much non-fermented soy.

Here is just a sampling of the health effects, described in detail in my book, that have been linked to soy:

## WARNING

- Breast cancer
- Brain damage
- Infant abnormalities
- Thyroid disorders
- Kidney stones



- Immune system impairment
- Severe, potentially fatal, food allergies
- Reduced fertility
- Danger during pregnancy and nursing

### What Type of Soy IS Healthy?

Now that you're up to speed on the many potential dangers of soy foods, I want to emphasize that I am not opposed to all soy -- only the non-fermented, processed variety (which makes up the vast majority of soy products on the market).

Soy can, indeed, be incredibly healthy but ONLY if it is first fermented. After a long fermentation process, the phytate and "antinutrient" levels of soybeans are reduced, and their beneficial properties become available to your digestive system.

You may have heard the analogy that Japanese people live longer and have lower rates of cancer than Americans because they eat so much soy.

Well, listen up: soy in the Asian diet is primarily fermented soy, and has always traditionally been eaten that way.

Interestingly, Japanese people also do not eat nearly as much soy as Americans are now consuming. A 1998 study found that a Japanese man typically eats just 2 teaspoons (or 8 grams) of soy a day.

Americans, meanwhile, can get 9 grams of soy just from eating one soy burger, yet many people also drink soymilk and eat processed foods that contain still more soy, every day.



Fermented soy products, the only ones that I recommend eating, include:

- **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**. Traditionally, soy sauce is made by fermenting soybeans, salt, and enzymes, however be wary because many varieties on the market are made artificially using a chemical process

Please note that tofu is NOT fermented and is not a soy food that I recommend eating.

## 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 highest food source of vitamin K2.

Vitamin K2 is essential to build strong bones and also helps to promote your heart health.

Sometimes referred to as the “forgotten vitamin” because its major benefits are often overlooked, vitamin K was named for “Koagulation,” because it’s essential for proper blood clotting.\*

Beyond that, vitamin K has been linked to osteoblasts, the cells that generate or “lay down” bone and produce a specific protein known as osteocalcin.\*

The protein osteocalcin acts as a kind of glue that helps to incorporate calcium into your bones, and vitamin K2 is necessary in order to produce this protein.\*

Further, research shows that vitamin K regulates calcium in your bones and arteries\* -- promoting heart health and bone health at the same time.

Vitamin K works through an amino acid called “Gla,” (gamma carboxyglutamic acid). Gla is part of a certain kind of protein that controls calcium. Researchers believe there are at least 100 of these proteins scattered throughout your body, but vitamin K is the only vitamin that makes these proteins work.\*



Vitamin K facilitates a process on the proteins called “carboxylation,”\* which gives the proteins “claws” so they can hold on to calcium.\*

Proteins that don’t get enough vitamin K, however, can’t hold on to calcium. Without a functioning protein to control it, calcium drifts out of your bone and into your arteries and other soft tissue. Vitamin K2 gently redirects the “lost” calcium back to your “bone bank.”\*

Vitamin K is also emerging as a key vitamin to fight the signs of aging -- it’s actually a stronger antioxidant than vitamin E or coenzyme Q10, and it’s being researched for its potential to promote your immune health and support your memory.\*

If you enjoy natto or some of the other fermented soy foods, you can get several milligrams of vitamin K2 from them on a daily basis (this level far exceeds the amount of vitamin K2 found even in dark green vegetables).

However, the reason why there’s not a huge market for fermented soy products is because many people aren’t fond of their taste and texture. Natto, for instance, has a very strong flavor and a slimy texture similar to raw eggs (but with a much worse taste).

So the health benefits of many of the fermented foods products fall by the wayside because so few Americans will actually eat them. If you don’t want to consume fermented natto to get vitamin K2, the next best thing would be to get it from [Vitamin K2 \(MK-7\): The Pinnacle of Bone and Heart Health](#), which you can find on my website.

## Tips for Avoiding Non-Fermented 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.



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 (this means avoiding all pre-packaged, ready-made foods).

However, 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 present in colors, flavors, or spice blends added to foods, it must be stated clearly on the label.

As with many foods, if you adhere to the traditional versions, you will be doing your health a favor. Soy is no exception. Seek out traditional fermented varieties and avoid the new-fangled, highly processed soy junk foods, and your body will thank you.

\* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

1. Soy Stats 2007 <http://www.soystats.com/2007/Default-frames.htm>
2. Soyfoods Association of North America <http://www.soyfoods.org/products/sales-and-trends/>
3. Soyfoods Association of North America <http://www.soyfoods.org/products/sales-and-trends/>
4. Soyfoods Association of North America <http://www.soyfoods.org/products/sales-and-trends/>
5. Soyfoods Association of North America <http://www.soyfoods.org/products/sales-and-trends/>
6. Soyfoods Association of North America <http://www.soyfoods.org/health/frequently-asked-questions/>
7. The Weston A. Price Foundation <http://www.westonaprice.org/soy/index.html#updates>