

SOY:

THE REAL DEAL

MYTHS VERSUS FACT



What's the deal with soy?

There is a lot of misinformation percolating on the Internet about soy, and finding accurate and relevant facts to make an informed decision can be difficult at best. This guide should help shed some light on the peskiest falsehoods and help you navigate between the myths and the benefits of soy.

WHERE ARE THE SOY MYTHS COMING FROM?

There are actually only a few so called “soy bashers” who are the main instigators in the war on soy. These anti-soy enthusiasts happen to be very vocal, and they're shouting most loudly about the effects of *isoflavones*, a group of naturally occurring, estrogen-like (read: estrogen-like, *not* estrogen) plant chemicals that are found in soybeans ^[1].

But, really, almost all of the negative reports about soy stems from studies that involve rodents. The thing is, rodents *metabolize soy much differently than humans* ^[2], so using these studies as a scientific model for how soy foods affect humans isn't all that helpful. So let's take a look at **human** data.

HUMANS AND SOY

Other than those who are allergic to soy (statistics say less than 8%) ^[3], the vast majority of the medical and scientific communities agree that people can safely consume soy foods. Numerous scientific results obtained from human data, population studies, and clinical research all validate a variety of health benefits as well as the safety of regular consumption of soy foods ^[4]. In fact, there are strong indications that soy foods offer *significant* health benefits, including reducing the risk of heart disease ^[5].

MYTH 01 Consuming soy can increase the risk of breast cancer

Breast cancer and the effects of soy is probably one of the most controversial arguments out there online and in real life. Regardless of who is yelling the loudest, the fact of the matter is that **for more than 20 years the U.S. National Cancer Institute and laboratories around the world have been rigorously investigating the role of soy in breast cancer prevention** ^[6]. **Breast cancer P-R-E-V-E-N-T-I-O-N**. Why? Well, Asian populations who traditionally consume soy as a dietary staple typically have far lower breast cancer rates than populations consuming a typical Western diet ^[7]. And because roughly two-thirds of breast cancer is estrogen-sensitive, the anti-estrogenic effects of soy isoflavones may actually help **decrease breast cancer risk**. To top it off, studies have found that soy foods and soy isoflavones don't increase breast tissue density or cause breast cells to multiply ^[8], unlike hormone therapy. In fact, consuming soy during the early years of life (the first 20 years, to be specific) may help to reduce the risk of breast cancer later in life ^[9].

And, in two recently published studies, soy consumption has also been shown to actually be associated with reduced recurrence rates and improved survival in people with breast cancer ^[10, 11].



MYTH 02 Soy causes thyroid problems

If you're a healthy human, then according to more than 20 studies that have looked at the effects of consuming soy foods (i.e. tofu), soy protein, and soy isoflavones on thyroid function, then you have nothing to worry about ^[12]. **In long-term studies (up to three years!) no effect whatsoever was found in the thyroid functions of subjects who consumed copious amounts of soy ^[13].** However, it is important to note that people who take synthetic thyroid hormone medication should avoid taking it at the same time as ingesting soy to avoid possible interference with the medication's absorption. But that doesn't mean that it's necessary to avoid it altogether. No, it just comes down to timing and consistency. If thyroid medication is taken as prescribed (typically on an empty stomach and 30 minutes to an hour before breakfast), and a consistent amount of soy is consumed in the person's day-to-day diet, then you're good to go.

MYTH 03 Men shouldn't consume soy

This myth keeps coming back thanks to two reports published in scientific literature that have described negative effects of excessive soy consumption...in exactly *two individuals*: men who consumed a massive 14 to 20 servings of soy per day ^[14, 15].

In contrast, a comprehensive scientific analysis of the research done on more average intakes of soy—more than 30 individual studies, we might add—found that *neither soy foods or isoflavones* have any effect on male testosterone levels. That's right, in more than 30 individual studies, it was determined that neither soy foods or isoflavones have any effect on male testosterone levels ^[16].

MYTH 04 There's no evidence of the health benefits of soy, including protecting against heart disease

It's actually quite the opposite. Research suggests that incorporating soy foods into a healthful diet has many proven or indicated health benefits for things such as:

Osteoporosis

- Helping to reduce bone fractures in postmenopausal women ^[17, 18]

Menopause

- Reducing the severity and frequency of hot flashes (by 50% on average) ^[19]

Prostate health

- Lowering the risk of cancer ^[20]

Heart disease, including:

- Decreasing LDL-cholesterol (the bad cholesterol) ^[21]
- Giving a modest boost to HDL-cholesterol
- Reducing triglyceride levels
- Lowering blood pressure ^[22]
- Promoting artery health ^[23]

Basically, when soy foods replace conventional sources of protein (usually animal protein) in Western diets, all kinds of good things can and do happen. For instance, saturated fat intake is reduced and polyunsaturated fat intake is increased, which has the comparable cholesterol-lowering effects of the kind of soluble fiber found in oat bran ^[24]. In fact, as early as 1999 the Food and Drug Administration (FDA) awarded a coronary heart disease health claim associated with consuming two servings per day of soy foods.

Soy and your diet

The 2010 U.S. Dietary Guidelines call for *increasing* the intake of plant protein in the average diet, and soy foods are an excellent way to do that. Based on soy intake in Asians—who have been consuming soy for thousands of years, as well as the amounts of soy shown to be beneficial in clinical studies,

a good goal is to consume about 15 to 25 grams of soy protein per day, or roughly 1 to 3 servings.



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Did you know...



The soybean is a legume (i.e. a plant), and is in the same family as black beans, fava beans, navy beans, lentils, chickpeas, pinto beans, snow peas, peanuts, green beans, cannellini beans, and many more.



Soy is a good source of vitamin B, iron, and potassium.



Soy has been consumed for thousands of years in Asia.



Unfermented soy protein is 90% digestible ^[25].



Soybeans contain heart-healthy essential polyunsaturated omega-6 and omega-3 fatty acids.