

The Truth about Soya

Do you use any soya products?

Very likely you do. If not through the traditional or obvious soya products like tofu, miso, tamari, shoyu, natto, soymilk and soybean sprouts than in the form of hidden soya in processed foods.

Research estimates soya is present in more than 70% of all supermarket products and widely used by all fast food chains.

One of the main reasons for soya's great success was the supposed health benefit, it has been said to lower cholesterol, help with menopausal problems, and ward off osteoporosis and even reduce the risks of some cancers. However, doctors and scientists have come to retract these statements. Phytoestrogens levels in soybeans are extremely high, even higher in GM soybeans. Adding isolates of soy to food without the knowledge of consumers is like adding a hormone to your food with no way to track dosage, individual reactions or harmful side effects.

On top of this soybeans contain a variety of other antinutrients among which phytates, which reduce the intake of minerals like calcium, magnesium, iron, copper and zinc, haemagglutinins, and protease inhibitors, which interfere with protein digestion. Soy is not the only food source containing anti nutrients, many other beans, seeds and nuts contain some of them as well. What is worrying is the amount of its use and the way it is used in our food chain.

The different compounds in soya more explained:

Phytoestrogens

Phytoestrogens are plant compounds that mimic estrogen and function in the body as hormone disruptors. The phytoestrogens present in soya are known as isoflavones.

Although all consequences derived from consuming considerable amounts of phytoestrogens are not known yet, thyroid problems and infertility might be caused by it. The claim that it prevents breastcancer and prostate cancer seems to be unfounded. It is even possible it stimulates certain cancers.

(From an article on the soyonline site)

‘The recent practice of feeding infants soy-based formula has raised concerns with regard to the long-term health effects of exposure during development (Setchell et al. 1997; Irvine et al. 1998). For example, it has been recognized for some time that feeding infants soy-based formula was associated with goiter (thyroid enlargement associated with thyroid hormone deficiency) in animals and human infants (Shepherd et al. 1960).’

Although the whole article is worth reading I use here a couple of excerpts of the following article to illustrate the infertility issue.

Breeding Discontent: soy and Infertility by Kaayla T. Daniel

Aedin Cassidy completed an in-depth study of six women of childbearing age who were given 60 grams of textured vegetable protein per day (containing 45 mg total isoflavones) for 30 days. Compared to controls the soy feeding resulted in 'significant biological effects,' including menstrual cycles lengthened by an average of two and a half days; an average 33 percent reduction of mid cycle levels of Luteinizing Hormone (LH) and an average 53 percent reduction of Follicle Stimulating Hormone (FSH). One woman saw her LH and FSH levels reduced to a mere 17 percent and 32 percent respectively of normal levels. LH and FSH are gonadotropins; they stimulate the gonads-in males the testes and in females the ovaries. They are not necessary for life, but are essential for reproduction. Although none of the women in this short-term study stopped ovulating, the effects of the isoflavones continued for three months after they ceased eating the soy.

These findings clearly show that soy food consumption can disrupt a woman's cycle and jeopardize her fertility. However, the study's authors chose to deemphasize this finding in favor of speculating that the longer menstrual cycles experienced by the soy-fed women could result in lower lifetime levels of estrogen. This, in turn, was harnessed to the unproven theory that reduction in lifetime estrogen levels is the key to reducing breast cancer risk. They also suggested that soy isoflavones could be used prophylactically to prevent breast cancer in a manner similar to the liver-damaging drug Tamoxifen. The conclusion that made the 6 o'clock news – still widely cited by the media – is that soy reduces breast cancer risk.

Another excerpt of this article

Researchers have also report lowered testosterone and higher estrogen levels in males who consume foods rich in soy estrogens. Scientists have even induced "testosterone deprivation" in animals simply by feeding them isoflavone-rich diets. Just as soy industry spokespeople promote hormonal changes indicative of infertility as beneficial tools in the war against breast cancer, so they tout testosterone lowering as protective against prostate cancer and atherosclerosis. Although the possibility that soy foods or supplements could prevent these deadly conditions makes headlines, few men hear that the downside is demasculinization. This is not just a macho thing, for testosterone is an important hormone with roles in growth, repair, red blood cell formation, sex drive and immune function. Low levels of testosterone have also been linked to low thyroid, another unwanted and common side-effect of soy consumption. Recently scientists at the University of North Carolina at Chapel Hill completed a study for the National Cancer Institute in which the soy-eating men experienced "nipple discharge, breast enlargement and slight decreases in testosterone." The good news, according to lead researcher Dr. Steven Zeisel, was that nothing "serious" was found even though they administered doses up to 30 times what one might get from "normal foods." To reassure men, he stated: "I don't think there are a lot of estrogenic worries. Your testicles will not shrink and you won't have massive breast enlargement."

Very clearly these two excerpts show the negative effects isoflavones have on fertility while the claims made that they reduce the chance to get breast cancer or prostate cancer is based on speculation. Soybeans contain about 0.1 to 0.2% isoflavones by weight. These compounds are not removed during crushing and soy oil extraction, but are carried through with the soy fiber, meal and protein products.

Protease inhibitors

They are able to inhibit the action of proteases, including trypsin, which have a function in protein digestion. Although the official point of view is that low levels form no risk to human beings, Professor Irvin Leiner, who is an expert on protease inhibitors does not agree; "...the soybean trypsin inhibitors do in fact pose a potential risk to humans when soy protein is incorporated into the diet."

If there are any problems they seem to emerge firstly in the pancreas.

Phytates

It is the presence of multiple phosphates in phytates that makes them effective chelating agents, i.e. they have the ability to bind to certain metal ions. Obviously if metals are bound up in a phytate-complex, they are less available to the body (i.e. less bioavailable) for nutritive purposes.

The intake of minerals like Calcium, Magnesium, Iron, Copper and Zinc are reduced.

Haemagglutins which are, 'a clot-promoting substance that causes red blood cells to clump together'.

The soy toxins that Soy Online Service have concerns about are protease inhibitors, phytic acid, soy lectins (or haemagglutins), nitrosamines, manganese concentrations and the mysterious soyatoxin. Nitrosamines are not naturally occurring in soybeans but form during the processing of products such as isolated soy protein (ISP). Please read more on their website. <http://www.soyonlineservice.co.nz/01introduction.htm>

Soy Protein Allergy

One of the reasons soya has been promoted widely is because it is so rich in proteins. Not widely known is that soya is one of the most allergenic foods in modern diets. It is reported in several research reports to contain at least 30 allergenic proteins. Having to eradicate it out of your life can be a challenge.

People allergic to soy protein face danger 24/7. Hidden soy exists in thousands of everyday foods, cosmetics and industrial products such as inks, cardboards, paints, cars, and mattresses. Four fatalities documented in a major Swedish study are the best known of thousands of reported cases of people who experienced severe allergic reactions to tiny amounts of soy after inadvertently eating foods that contained soybean proteins.

Those who are allergic to soy must exclude *all* soy from their diets. This can be a challenge. Soy lurks in nearly everything these days even in products where we would not reasonably expect it. It's in Bumblebee canned tuna, Chef Boyardee Ravioli,

Hershey's chocolate, Baskin Robbins ice cream, some brands of orange juice, McDonald's and other fast food burgers, Pizza Hut pizza, many luncheon meats, most bread, muffins, donuts, lemonade mixes, hot chocolate, some baby foods, and tens of thousands of other popular products.

If you absolutely must keep soy out of your life or that of your children, memorize the following:

· Soy goes by many aliases. Food processors are less likely to list the three letter word "soy" than a technical term such as "textured vegetable protein (TVP)," "textured plant protein," "hydrolyzed vegetable protein (HVP)," "vegetable protein concentrate," "vegetable oil" or "MSG (monosodium glutamate)." Ingredient lists also include words such as "lecithin," "vegetable oil," "vegetable broth," "boullion," "natural flavor" or "mono-diglyceride" that do not necessarily come from soy, but are likely to.

From [http://www.thewholesoystory.com/WHERE THE SOYS ARE.pdf](http://www.thewholesoystory.com/WHERE_THE_SOYS_ARE.pdf)

Soya-oil

Soya oil is not one of the traditional soya products it is one of the soy isolates. To understand it better we will look at the modern production method of oil and other isolates.

The oil content of soybeans is around 20% dry basis. Soybeans are the world's largest oilseed crop. Soybeans must be carefully cleaned, dried and dehulled prior to oil extraction.. The raw beans are broken down to thin flakes, which are then percolated with a petroleum-based hexane solvent to extract the soya oil. The remains of the flakes are toasted and ground to a protein meal, most of which goes into animal feed. Soya flour is made in a similar way.

The oil then goes through a process of cleaning, bleaching, degumming and deodorising to remove the solvent and the oil's characteristic "off" smells and flavours. The lecithin that forms a heavy sludge in the oil during storage used to be regarded as a waste product, but now it has been turned into a valuable market in its own right as an emulsifier. Part of the oil is hydrogenated to create products of different hardness like for example margarine. The downside is that trans-fatty acids, which are poisonous for us, are being created.

Trans fats inhibit cell membrane function, interfere with the enzyme systems the body needs to eliminate carcinogens and toxins (thus contributing to cancer), inhibit insulin receptors (causing type 2 diabetes) and decrease hormone production (leading to infertility). Most tragically, trans fats in the diet of pregnant women contribute to low birth weight babies and inhibit visual and neurological function; they lower fat content in mothers milk and depress learning ability, particularly in situations of stress.

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Phytoestrogens and anti nutrients are still present in the oil. Because the oil is in a far state of refinement producers do not have to mention the origin any more though people with a severe allergy could still react to it

Traditional use of Soya

Originated in China, the ancient Chinese called it 'the yellow jewel'. They used it as 'green manure' to enrich the soil for growing other crops. It did not become a staple human food until late in 1134 BC when the Chinese invented miso and soya sauce.

Whole soya beans which are not genetically modified are used traditionally to make fermented soya products in which the negative effects are been diminished throughout the long fermentation process. Traditional fermentation reduces the levels of isoflavones two- to threefold. Modern factory processes do not. Moreover, modern American strains of soya have significantly higher levels of isoflavones than Japanese or Chinese ones because they have been bred to be more resistant to pests.

Dawson describes the traditional craft method of transforming the soya bean through fermentation, so that its valuable amino acids become available but its antinutrients are tamed. The process involves cooking whole soya beans, complete with their oil, for several hours, then adding the spores of a mould to the mix, and leaving it to ferment for three days to begin the long process of breaking down the proteins and starches. This initial brew is then mixed with salt water and left to ferment for a further 18 months, during which time the temperature will vary with the seasons. The end result is an intensely flavoured condiment in which the soya's chemical composition has been radically altered. Traditional miso is similarly made with natural whole ingredients, slowly aged.

Tofu is unfermented soya and is traditionally used in Asia. It seems that Japanese women were feeding their husbands more tofu when they wanted to reduce their libido.

Daniel's detailed examination of the history of soya milk, however, suggests that soya milk was made not to drink, except in times of famine, but as the first step in the process of making tofu. After the long, slow boiling of soya beans in water to eliminate toxins, a curdling agent was added to the liquid to separate it. The curds would then be pressed to make tofu and the whey, in which the antinutrients were concentrated, would be thrown away.

Most soya sauces (and misos) are not made this way any more, however. Instead of using the whole bean, manufacturers short-cut the fermentation by starting with defatted soy protein meal. Soya veggie burgers and sausages generally use the same chemically extracted fraction of the bean.

In so-called "naturally brewed" soya sauces the processed soy protein meal is mixed with the mould spores and given accelerated ageing at high temperatures for three to six months. Non-brewed soya sauce, the cheapest grade, is made in just two days. Defatted soya flour is mixed with hydrochloric acid at high temperatures and under pressure to create hydrolysed vegetable protein. Salt, caramel and chemical preservatives and

flavourings are then added to provide colour and taste. This rapid hydrolysis method uses the enzyme glutamase as a reactor and creates large amounts of the unnatural form of glutamate that is found in MSG.

How to use Soya products safely

If you insist on using soya products limit it to the way it is traditionally used in the fermented soya products and tofu (not soya milk). Also limit the amounts and frequency.

Asian people did not eat that much, and contrary to what the industry may claim soy has never been a staple in Asia. A study of the history of soy use in Asia shows that it was used by the poor during times of extreme food shortage, and only then the soybeans were carefully prepared (e.g. by lengthy fermentation) to destroy the soy toxins.

Perhaps the best survey of what types/quantities of soy eaten in Asia comes from data from a validated, semiquantitative food frequency questionnaire that surveyed 1242 men and 3596 women who participated in an annual health check-up program in Takayama City, Japan. This survey identified that the soy products consumed were tofu (plain, fried, deep-fried, or dried), miso, fermented soybeans, soy milk, and boiled soybeans. The estimated amount of soy protein consumed from these sources was 8.00 ± 4.95 g/day for men and 6.88 ± 4.06 g/day for women (Nagata C, Takatsuka N, Kurisu Y, Shimizu H; J Nutr 1998, 128:209-13).

Guidelines from the soyonline website are:

For Adults

A glass a day melts the thyroid away. From USA Womans World, Mar 16 2001.
AVOIDING SOY as little as 30mg of soy isoflavones--the amount in 5-8 ounces of soy milk - have been proven to suppress thyroid function. "The isoflavones in soy act like a hormone in the body. And in many women, especially those who eat large amounts of concentrated soy powder or take isoflavone supplements, this disturbs the body's hormonal balance, triggering or worsening thyroid problems," explains Dr. Larian Gillespie, author of "The Goddess Diet". Some experts are even calling for the makers of soy products to remove these antithyroid isoflavones from their products.

For Infants

In simple terms. The dose in soy baby formulas means an infant gets the dose-equivalent of an adult woman taking up to ten pills a day. Or, a baby in its first year gets a total antifertility dose of 100 Pill-equivalents. Swiss Federal Health Service , 100 g soy protein = Contraceptive Pill

For Males

Testosterone Reduction . Nagata and colleagues have reported an inverse association between soy product intake and serum hormone concentrations in Japanese men. Research has demonstrated that chemical compounds can have a number of other effects .The isoflavone dose was 22mg/day. Two glasses of soy milk can contain up to 100mg of isoflavones

For Women

Disruption of the Menstrual Cycle (a harbinger of potential fertility problems) was caused by 45 mg/day for only 30 days. That is less than the quantity of isoflavones in two glasses of soy milk. Irregular cycles are also a risk factor for breast cancer.

I would like to end with some advice which I found on the website of Judy Cole

Over the past few years I have become increasingly concerned with the true dangers of eating soya products of all types, including soya milk, tofu, beans and soy sauce. Soya has consistently come up as a serious food intolerance for 99.9% of people I have tested. The few who could take it were culturally tolerant. Please also read the following story which was forwarded to me and I feel warrants publication on this site. It illustrates clearly my very worst fears about this product, which is being feted as a health food and of great benefit to women's health in particular.

ONE WOMAN'S STORY ON SOYA ...

"This is my true story, nothing altered. These are facts, as they relate to my experience, my opinions based on what I have read and felt. I am relating them to warn other health-conscious women who are unwittingly harming themselves.

In 1989, I graduated from high school in Texas and couldn't wait to hit the big college city. One of the changes I wanted to make was to eat healthier. Once I moved to health-conscious Austin, Texas, I began to fortify my body with the best and healthiest foods I could find. Tofu was the main ingredient in every healthy dish and I bought soya milk almost every day. I used it for everything from cereal to smoothies or just to drink for a quick snack. I bought soya muffins, miso soup with tofu, soyabeans, soyabean sprouts, etc.

All the literature in all the health and fitness magazines said that soya protected you against everything from heart disease to breast cancer. It was the magical isoflavones, the estrogen-like hormones that all worked to help you stay young and healthy . I looked great, I was working out all the time, but my menstrual cycle was off.

At 20, I started taking birth control pills to regulate my menstrual cycle. In addition to this I began to suffer from painful periods. began to get puffy, it was as though I was losing my muscle tone. I began to suffer from depression and getting hot flashes. I mistook all this for PMS, since my periods were irregular. By the time I was 25, my periods were so bad I couldn't walk. The birth control pills never made them regular or less painful so I decided to stop taking them. I went on like this for another two years until I realized my pain wasn't normal.

At 27, my gynaecologist found two cysts in my uterus. Both were the size of tennis balls. I went through surgery to have them removed and thank God they were benign. The gynaecologist told me to go back on birth control pills. I didn't.

In 1998, he discovered a lump in my breast. Again, I went through surgery and again it was benign.

In November 2000 my glands swelled up and my gums became inflamed. Thinking I had a tooth infection I went to the dentist who told me that teeth were not the problem. After a dose of antibiotics the swelling still did not go down.

At this point I could feel a tiny nodule on the right side of my neck. I told my mother I had thyroid trouble. She thought I was being silly. No one in the family suffered from thyroid trouble. Going on a hunch I saw a specialist who diagnosed me with Papillary Thyroid Carcinoma. After a series of tests he told me it was cancer. My fiance and I sat stunned. We were not prepared and I was so scared. We scheduled surgery right away.

The specialist told us that it would only be after the operation that a pathologist would be able to tell us for sure if it was cancer. They found a tumor at my right lobe composed of irregular cells and another smaller tumor growing on the left, so the entire thyroid was removed.

They told me that after undergoing radioactive iodine would be safe and assured me that I could live a long life. After treatment I began to search for the cause of all these problems. I never once thought it could be all the soya I had consumed for nearly ten years. After all, soya is healthy.

I came upon a web page that linked thyroid problems to soya intake and the conspiracy of soya marketed as a health food when in fact it is only a toxic by-product of the vegetable oil industry. This was insane, after all, the health and fitness magazines had said nothing about soya being harmful.

I visited a herbalist who was diagnosed with thyroid cancer in 1985. She informed me that soya was the culprit. She had a hysterectomy due to cysts and other uterine problems. A few months later another acquaintance who had consumed soya came down with thyroid cancer. A girl in England I met through the internet in a thyroid cancer forum had just undergone surgery and she was only 19.

What was going on????

Breast cancer is linked to estrogen. What mimics estrogen in the female body, SOYA!

But I never suspected soya because until now I never once found a single article that stated soya could be dangerous. Women who took soya prior to thyroid problems will continue to take it after if they are not aware of what soya actually does, what it contains and how it reacts in the female body. I think this is the reason that women with thyroid cancer often develop breast cancer later.

My co-worker is big into soya and I see her losing hair and gaining weight despite a walking workout during her break and after work, and apples and oranges for lunch. She just had cysts removed from her uterus too. I warn her to stay off soya. I refer her to websites but until it is on the evening news on all four networks, women will suffer. Since the thyroidectomy, I do not touch soya, haven't for two years.

Dear readers, please use my story in any way you can.

There are so many young girls who are consuming soya because they think they are taking care of themselves, and women taking soya because they want to be healthy. It is so unfair that the information about the dangers of soya isn't more widely circulated. It is sad. There are many out there who feel this way and it is a terrible blow when you realize you are not as healthy as you thought and that the information that you depended on was wrong."

If you have inherited Japanese, Chinese, South East Asian or South American genetics you may have slightly more tolerance of soya products but if not beware of Soya and all soy products. This is a new food only introduced to the west in the last 30 years and 99% of western people I test for soy are highly intolerant to it. Your body has not been able to adjust and evolve into the very high level of natural hormones contained in this food. The 1% of westerners that could take some fermented soy when I tested them all had some Japanese or South American ancestry, cultures which have eaten Soya for centuries. I have wondered for a long time if the terrible breast cancer suffered by Linda McCartney was in some way linked to her high soya diet over many years.

However, the terrible truth about this food is documented and known, but due to economic benefits, has been hidden from the general public. In 1999, two top scientists, working for the Food and Drug Administration in America, broke rank with their colleagues and wrote an internal protest letter, opposing the FDA's decision to approve a health claim that soy reduced the risk of heart disease. They warned of **28 studies** (*this is a huge number of studies*) disclosing the toxic effects of Soya, revealing their studies had all produced *significant and dangerous* levels of breast cancer, brain damage and abnormalities in infants. In an interview with the Observer newspaper in the UK in

August 1999, one of the Soya experts, Daniel Doerge, said: 'Research has shown a clear link between Soya and the potential for adverse effects in humans.'

These studies were carried out on a western population. The studies that support the widely publicized benefits of taking soy, all result from longitudinal studies on people whose cultures have eaten soy products as a main part of their diets for hundreds of years. Yes for them soy is beneficial and can protect against cancer. But for the westerner, the opposite is true. It is not just in vegetarian products such as tofu and Soya milk that the danger lies. Soya is a key ingredient in products from meat sausages and fish fingers to salad creams and breakfast cereals. The Soya Industry, worth six billion dollars in the States each year alone, insists that the health benefits outweigh the risks. Richard Barnes, European director of the US Soy Bean Association said, 'Millions of people around the world have been eating Soya for years and have shown no signs of abnormalities'. Have we? I am slowly gathering evidence for my claim. Having tested so many people for Soya and had it rejected 99% of the time, I am convinced it is NOT safe for a Westerner with no history of Soya in their blood inheritance. Add to this the fact it is all genetically modified. I strongly advise you avoid it until more is known about the long-term effects of it on us, if we are ever going to be told the truth. Eating it once a week will not do you any harm as your body will have time to detox any harmful effects, it is the buildup that does the damage. This includes all soy products such as soymilk, Tofu, Soy Sauce unless used very occasionally, and soybeans. If you are vegetarian, use other seeds, nuts and pulses which are also high in protein and much safer.

See those sites for more information:

economic, social and environmental consequences of soya

<http://www.gardenanddesign.co.uk/landscape-garden-design/ethnobotanical.htm>

soy and infertility

[http://www.thewholesoystory.com/BREEDING DISCONTENT.pdf](http://www.thewholesoystory.com/BREEDING_DISCONTENT.pdf)

A wealth of information about soya

<http://www.soyonlineservice.co.nz/03toxins.htm>