

Dispelling the “Joy of Soy” Myth

For several years soy has been revered as the darling of the food industry. New studies have linked soy to rickets, goiters, reproductive disorders and even cancer.

By Raquel Martin -author of Estrogen Alternative Book

A few decades ago, soybeans were not used as a food but were used instead, and more appropriately, in crop rotation. However, the discovery of long periods of fermentation has been found to be essential in transferring soy into a healthy food. This process significantly reduces the phytate content of soybeans, as well as the trypsin inhibitors that interfere with many vital enzymes and amino acids. Fortunately, fermented soy such as tempeh, miso, natto, tamari and other fermented soy products can provide nourishment that is easily assimilated.

When precipitated soy products like tofu are consumed with meat, the mineral-blocking effects of the phytates are reduced.ⁱ However, when consuming soy (tofu/bean curds) as a replacement for meat and dairy products, mineral deficiencies occur. Such a diet can lead to an amino acid deficiency.ⁱⁱ “Asian and Western children, who do not get enough meat and fish products to counteract the effects of a high phytate diet, are subject to rickets, and other growth problems.”ⁱⁱⁱ Contrary to popular opinion concerning the healthy effect of consuming soy food has on Asians, a New York Times article (June 6, 1996) cited 100 million cases of goiters at present in China.

We are told that soybeans are high in protein, but what we are not told is that soybeans also block the action of the enzymes that are essential in digestion of protein. Soy damages the enzymes that manufacture thyroid hormones, as well as those enzymes essential to proper thyroid functioning.^{iv} Besides this bad news, scientists have known for years that isoflavones in soy products can cause enlarged thyroid glands (goiter)^{vi}.

How are soy protein isolates (S.P.I) made? They are manufactured by mixing an alkaline solution to it in order to remove fiber. A toxin called lysinoalanine is formed during alkaline processing.^{vii} Then it is separated by adding an acid. This is done in aluminum tanks, which leach high levels of aluminum into the final product. It is then spray-dried at high temperatures to make a protein powder. Nitrites, which are potent carcinogens, are formed during spray drying. A final indignity to this substance is brought on by the use of additional high-temperature and pressure. This is what produces textured soy protein. However when the soy is denatured in this way, the resulting product becomes ineffective.^{viii} And even though much of the trypsin inhibitor content can be removed through high-temperature processing, it's not all removed during this processing. This remnant can vary as much as fivefold.^{ix}

This leftover anti-nutrient (a toxin) becomes more of a concern when MSG is added in order to mask the unpleasant taste of this texturized soy product. This in turn often creates more allergic reactions as well as a need to increase vitamins E, K, D, B12, calcium, magnesium, manganese, molybdenum, copper, iron and of course, zinc.^x The effect of mineral blocking enzyme inhibitors in soy can result in any number of conditions, such as endocrine disruption (goiters), reproductive disorders and allergic reactions.^{xi}

Test animals fed soy protein isolates (SPI) develop enlarged thyroid, as well as the enlargement of other glands, most particularly the pancreas. Their diets, which are high in trypsin inhibitors, are also subjected to pathological conditions of the pancreas, including cancer.^{xii} A biochemical

pharmacology study confirms that fatigue, as well as goiter problems, are associated with soy food.xiii

The National Center for Toxicological Research reports that soy isoflavones (genistein and daidzein) “inhibit thyroid peroxidase-catalyzed reactions essential to thyroid hormone synthesis.”xiv Japanese researchers studied the effects of consuming as little as two tablespoons of soybean a day. Even when healthy people were put on this diet for a short period of time suppressed thyroid function and goiters developed, “especially elderly subjects.”xv Infants have also been found to suffer from hypothyroid problem when on a soybean diet.xvi Another study confirms that autoimmune thyroid disease is linked to children who have consumed soymilk formula on a regular basis.xvii Doctors should be aware of the “potential interaction between soy infant formula and thyroid function,”xviii says the New Zealand Ministry of Health.

And a study comparing consumption of soy formula in non-diabetic children found those who drank it, as infants were prone to diabetes.xix Also, it is possible that allergies, so prevalent these days, may have been exacerbated from consuming soy formula. For instance, “the amount of phytoestrogens that are in a day’s worth of soy infant formula equals 5 birth control pills,” says Mary G. Enig, Ph.D., president of the Maryland Nutritionists Association. Nutritional experts believe that this high amount of phytoestrogens can be linked with early puberty in girls and hinders physical maturation in boys.xx In 1998, the FDA had even received warnings from the British Government’s final account on phytoestrogens, about their harmful reactions.xxi But for reasons beyond the consumer’s knowledge FDA bureaucrats have engaged in a “rigorous approval process” for S.P.I. However, we can now protect ourselves by learning more about what’s behind all these inconsistent reports as we become more aware of the health industry’s claims and political propaganda concerning food supplements.

Soy phytates reduce zinc and iron absorption. This is a concern because numerous people, who are taking iron supplements due to low levels of this mineral, are not realizing the cause of their iron deficiency. Soybeans have one of the highest phytate levels of any grain or legume that has been studied,xxii and even long periods of cooking at high temperatures will not completely eliminate the phytate levels.xxiii Phytates (an organic acid found within the outer portion of all seeds) block the absorption of essential minerals (e.g. calcium, magnesium, iron, and especially zinc. This is a concern because high levels of zinc are needed in the brain, especially the hippocampus. Zinc plays an important role in the transmission of the nerve impulse between brain cells. Deficiency in zinc can be serious, as it’s needed in the development of brain, immune and nervous system functioning. It also plays a role in collagen formation and protein synthesis, as well as our blood-sugar control mechanism and other systems in the body.

The U.S. Department of Agriculture, Agricultural Research Service, Food & Nutrition Research Briefs (July 1997) provides information showing how changes in zinc intake can affect cognitive function.xxiv This suggests the importance of zinc in the pathological functioning of the cerebral cortex.xxv Furthermore, age-related zinc deficiency in cells may contribute to brain cell death in Alzheimer’s dementia.xxvi

Congenital abnormalities in an infant’s nervous system can be caused by a deficiency of zinc during pregnancy and lactation. In children, “insufficient levels of zinc have been associated with lowered learning ability, apathy, lethargy, and mental retardation.”xxvii The USDA references a study of 372 Chinese school children with very low levels of zinc in their bodies. The children who received zinc supplements had the most improved performance—especially in perception, memory, reasoning, and psychomotor skills such as eye-hand coordination. “Both phytate and soy protein reduce iron absorption so that the iron in soy foods is generally poorly absorbed.”xxviii

As early as 1967, researchers found soy formula to have a negative effect on zinc absorption and also a strong correlation between phytate content and poor growth. Author Sally Fallon warns “a reduced rate of growth is especially serious in the infant as it causes a delay in the accumulation of lipids in the myelin, and hence jeopardizes the development of the brain and nervous system.”^{xxix} It has even been found to increase the deposition of fatty acids in the liver.^{xxx}

Soy and Cancer

The promotional health claims about soy products that come from vitamin/food manufacturer’s ads and multi-level marketers is then passed on to medical doctors, as well as the media and are received as gospel truth. Is this how we, the consumer, want to obtain information that will affect our future health? Some of the hype about soy alleges to aid in weight loss, protect the heart, prevent female discomforts and the list goes on. One piece of literature from a vitamin company goes so far as to state that the “Japanese, who eat 30 times as much soy as North Americans, have a lower incidence of cancers of the breast, uterus and prostate.”^{xxxi} I have not found clinical studies to back this up and if it is true, it should also be pointed out that these Asians and Japanese have a higher rate of other kinds of cancer (esophagus, stomach, pancreas and liver).^{xxxii xxxiii} Other literature confirms that a high rate of thyroid cancer is linked to soy consumption.^{xxxiv}

In a 1996 study, researchers discovered that women who consumed the soy protein isolates had a greater risk of experiencing abnormally excessive cell growth, a symptom that can be a predecessor to malignancies.^{xxxv} A study called “Dietary Estrogens Stimulate Human Breast Cells to Enter the Cell Cycle,” led researchers to conclude that women should not consume soy products, thinking that they were preventing breast cancer, when in fact dietary genistein found in soy food actually stimulates breast cell growth ^{xxxvi} In fact, according to Cancer Research “Genistein...is more carcinogenic than DES.”^{xxxvii} That’s right DES the drug that caused death and disfigurement for countless women.

Additionally, it takes a mere 45 mg of isoflavones in premenopausal women to create a biological effect that will cause a reduction in hormones needed for proper thyroid activity. Numerous women are on thyroid medication, yet at the same time they are increasing their soy intake. The two seem to be defeating each other’s purposes. Other problems concerning a diet rich in soy food are highlighted from animal studies at Brigham Young University’s Neuroscience Center. Researchers found that consumption of phytoestrogens from soy for a relatively short interval can significantly elevate estrogen levels in the brain and can interfere with and thus decrease calcium-binding proteins in the brain.^{xxxviii}

Athletes should be aware that the “soy protein” drinks they are consuming in order to build muscle tissue, may actually cause muscle protein breakdown.^{xxxix} Take a look at some of the studies, such as the British Journal of Nutrition, which correlates strongly to weight-training athletes, whose diets consist of inferior soy protein, which may increase protein breakdown in skeletal muscle. Soybean protein isolates were given to pigs for fifteen weeks. Cortisol levels began to rise after their morning meal. Soy meals were causing the body to break down muscle protein in order for it to get its required amino acids.^{xl}

This soy fad is resulting in numerous physiological abnormalities. Shocking news on this subject comes from investigations made by toxicologist, Mike Fitzpatrick, Ph.D., who confirms the facts that soy consumption has been linked to disorders, such as infertility and leukemia, and that soy foods are highly estrogenic. In 1992, the Swiss health service estimated that 299 grams of soy

protein provided the estrogenic equivalent of the Pill.^{xli} In fact other studies suggest that isoflavones inhibit synthesis of estradiol and other steroid hormones as well.^{xlii xliii} But soy food can be very disruptive as their isoflavones, genistein and diadzen, can create endocrine dysfunction.

Elaine Hollingsworth in her book *Take Control of Your Health and Escape the Sickness Industry* says, “Soybeans contain Hemagglutinin, a clot-promoting substance that causes red blood cells to clump together. These clustered blood cells are unable to properly absorb oxygen for distribution to the body’s tissues, which can damage the heart.”^{xliv} In his classic book, *A Cancer Therapy - Results of 50 Cases*, (p. 237) Dr. Charlotte Gerson warns to stay away from soy products. “Genistein, a component of soy, is more carcinogenic than DES.”^{xlv}

Hollingsworth says: “Increased level of tofu consumption was found to be associated with indications of brain atrophy and cognitive impairment in later life. They even found, at autopsy, swelling of the brain cavities and a decrease in brain weight among heavy tofu eaters.^{xlvi} “ Few people are aware that most soil contains aluminium. It is one of the most prevalent minerals, but it doesn’t affect most crops. Soy, however, has an affinity for aluminium and extracts it from the soil and concentrates it in the beans. This contamination is exacerbated by the aluminium tanks, which are used in the acid wash soy, is subjected to. So, when you ingest soy in any form, you also ingest aluminium, known for causing many health problems.”^{xlvii}

It seems like we, the consumer, have been duped by the producers and their ad campaigns regarding the so-called “health” benefits obtained from soy products. Dr. Joseph Mercola tells us that the propaganda, from so many sources in the industry, has spread like a wild fire; and that this aggressive publicity is just another “nail in the coffin...” concerning a food that is not “designed to be eaten.”^{xlviii} Never has there been a mention of the many studies that demonstrate the toxicity to our thyroid, liver or endocrine glands.^{xlix}

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