

Soy is Poisonous

@2009 Jerry Tennant, MD

- US Food and Drug Administration (FDA) decision, announced on October 25, 1999, allowed a health claim for products "low in saturated fat and cholesterol" that contain 6.25 grams of soy protein per serving.
- Breakfast cereals, baked goods, convenience food, smoothie mixes and meat substitutes could now be sold with labels touting benefits to cardiovascular health, as long as these products contained one heaping teaspoon of soy protein per 100-gram serving.
- All soybean producers pay a mandatory assessment of one-half to one per cent of the net market price of soybeans. The total something like US \$80 million annually.
- Possibly in the 2nd century BC, Chinese scientists discovered that a purée of cooked soybeans could be precipitated with calcium sulfate or magnesium sulfate (plaster of Paris or Epsom salts) to make a smooth, pale curd tofu or bean curd.
- The Chinese did not eat unfermented soybeans as they did other legumes such as lentils because the soybean contains large quantities of natural toxins or "antinutrients".
- First among them are potent enzyme inhibitors that block the action of trypsin and other enzymes needed for protein digestion. They can produce serious gastric distress, reduced protein digestion and chronic deficiencies in amino acid uptake.
- In test animals, diets high in trypsin inhibitors cause enlargement and pathological conditions of the pancreas, including cancer.
- Soybeans also contain hemagglutinin, a clot-promoting substance that causes red blood cells to clump together.
- In fermented products, enzyme inhibitors concentrate in the soaking liquid rather than in the curd. Thus, in tofu and bean curd, growth depressants are reduced in quantity but not completely eliminated.
- Soy also contains goitrogens - substances that depress thyroid function.
- Soybeans are high in phytic acid, present in the bran or hulls of all seeds. It's a substance that can block the uptake of essential minerals - calcium, magnesium, copper, iron and especially zinc - in the intestinal tract.
- The soybean has one of the highest phytate levels of any grain or legume that has been studied, and the phytates in soy are highly resistant to normal phytate reducing techniques such as long, slow cooking.
- Vegetarians who consume tofu and bean curd as a substitute for meat and dairy products risk severe mineral deficiencies. The results of calcium, magnesium and iron deficiency are well known; those of zinc are less so.
- Zinc is called the intelligence mineral because it is needed for optimal development and functioning of the brain and nervous system. It plays a role in protein synthesis and collagen formation; it is involved in the blood-sugar control mechanism and thus protects against diabetes; it is needed for a healthy reproductive system.
- Zinc is a key component in numerous vital enzymes and plays a role in the immune system.

- Phytates found in soy products interfere with zinc absorption more completely than with other minerals.
- Zinc deficiency can cause a "spacey" feeling that some vegetarians may mistake for the "high" of spiritual enlightenment.
- Acid washing in aluminum tanks leaches high levels of aluminum into the final product.
- High-temperature processing has the unfortunate side-effect of so denaturing the other proteins in soy that they are rendered largely ineffective.
- In feeding experiments, the use of Soy Protein Isolate (SPI) increased requirements for vitamins E, K, D and B12 and created deficiency symptoms of calcium, magnesium, manganese, molybdenum, copper, iron and zinc.
- Phytic acid remaining in these soy products greatly inhibits zinc and iron absorption; test animals fed SPI develop enlarged organs, particularly the pancreas and thyroid gland, and increased deposition of fatty acids in the liver.
- The "long and demanding" road to FDA approval actually took a few unexpected turns. The original petition, submitted by Protein Technology International, requested a health claim for isoflavones, the estrogen-like compounds found plentifully in soybeans, based on assertions that "only soy protein that has been processed in a manner in which isoflavones are retained will result in cholesterol lowering".
- In 1998, the FDA made the unprecedented move of rewriting PTI's petition, removing any reference to the phyto-estrogens and substituting a claim for soy protein — a move that was in direct contradiction to the agency's regulations. The FDA is authorized to make rulings only on substances presented by petition.
- The abrupt change in direction was no doubt due to the fact that a number of researchers, including scientists employed by the US Government, submitted documents indicating that isoflavones are toxic.
- The published report suggested that individuals with cholesterol levels over 250 mg/dl would experience a "significant" reduction of 7 to 20 per cent in levels of serum cholesterol if they substituted soy protein for animal protein. Cholesterol reduction was insignificant for individuals whose cholesterol was lower than 250 mg/dl.
- In other words, for most of us, giving up steak and eating veggie-burgers instead will not bring down blood cholesterol levels. The health claim that the FDA approved "after detailed review of human clinical data" fails to inform the consumer about these important details.
- The famous Cornell China Study, conducted by Colin T. Campbell, found that legume consumption in China varied from 0 to 58 grams per day, with a mean of about twelve." Assuming that two-thirds of legume consumption is soy, and then the maximum consumption is about 40 grams, or less than three tablespoons per day, with an average consumption of about nine grams, or less than two teaspoons.
- A survey conducted in the 1930s found that soy foods accounted for only 1.5 per cent of calories in the Chinese diet, compared with 65 per cent of calories from pork.
- Celibate monks living in monasteries and leading a vegetarian lifestyle find soy foods quite helpful because they dampen libido.

- Thousands of women are now consuming soy in the belief that it protects them against breast cancer. Yet, in 1996, researchers found that women consuming soy protein isolate had an increased incidence of epithelial hyperplasia, a condition that presages malignancies.
- A year later, dietary genistein was found to stimulate breast cells to enter the cell cycle - a discovery that led the study authors to conclude that women should not consume soy products to prevent breast cancer.
- In 1997, researchers from the FDA's National Center for Toxicological Research made the embarrassing discovery that the goitrogenic components of soy were the very same isoflavones touted to lower cholesterol.
- Twenty-five grams of soy protein isolate, the minimum amount PTI claimed to have cholesterol-lowering effects, contains from 50 to 70 mg of isoflavones. It took only 45 mg of isoflavones in premenopausal women to exert significant biological effects, including a reduction in hormones needed for adequate thyroid function. These effects lingered for three months after soy consumption was discontinued.
- One hundred grams of soy protein - the maximum suggested cholesterol-lowering dose, and the amount recommended by Protein Technologies International - can contain almost 600 mg of isoflavones, an amount that is undeniably toxic.
- In 1992, the Swiss health service estimated that 100 grams of soy protein provided the estrogenic equivalent of the Pill.
- In 1998, investigators reported that the daily exposure of infants to isoflavones in soy infant formula is 6 to 10 times higher on a body-weight basis than the dose that has hormonal effects in adults consuming soy foods.
- Circulating concentrations of isoflavones in infants fed soy-based formula were 13,000 to 22,000 times higher than plasma estradiol concentrations in infants on cow's milk formula.
- Approximately 25 per cent of bottle-fed children in the US receive soy-based formula - a much higher percentage than in other parts of the Western world. Fitzpatrick estimated that an infant exclusively fed soy formula receives the estrogenic equivalent (based on body weight) of at least five birth control pills per day!
- Dr. Lon White reported on a study of Japanese Americans living in Hawaii that showed a significant statistical relationship between two or more servings of tofu a week and "accelerated brain aging."
- Genistein in soy foods causes irreversible damage to enzymes that synthesize thyroid hormones.
- Mothers who ate a vegetarian diet during pregnancy had a fivefold greater risk of delivering a boy with hypospadias, a birth defect of the gonads.
- Problems with female offspring of vegetarian mothers are more likely to show up later in life. While soy's estrogenic effect is less than that of diethylstilbestrol (DES), the dose is likely to be higher because it's consumed as a food, not taken as a drug. Daughters of women who took DES during pregnancy suffered from infertility and cancer when they reached their twenties.
- Soy protein was introduced into infant formula in the early 1960s. It was a new product with no history of any use at all.

- As soy protein did not have GRAS status, premarket approval was required. This was not and still has not been granted.
- The key ingredient of soy infant formula is not recognized as safe.
- According to Crinella and Tran, the discovery of potential harm from soy infant formula began in 1980 when a federal agency then called the Food and Nutrition Board established safe and acceptable values for manganese in adults, toddlers and infants.
- Permissible levels for the three age groups ranged from 2.5 to 3 mg per day for adults, 1 to 1.5 mg per day for toddlers and 0.5 to 1 mg per day for infants under 6 months. This job now is handled by the Food and Drug Administration (FDA), which today permits 0.6 mg per day for infants, 120 times the amount found in mother's milk.