

# SOY

## IS SOY A HEALTHY ALTERNATIVE TO PROTEIN?

Soy was first marketed heavily to the American population as an exciting new protein source due to a large crops surplus and an attempt to utilize bi-products from soy oil extraction. Scientists developed ways to disguise the color, flavor and texture in order to be accepted by the American pallet. Research was designed to support its health benefits and soy soon became the ‘hot’ new Functional Food. We have since learned more about soy’s potential affect on health, but it is now hidden in nearly 60 percent of packaged foods. Along with it are unhealthy additives such as sugar, salt, artificial flavorings, colors, and monosodium glutamate (MSG).

Let’s look at a few facts on soy:

1. Traditional soy was used in small amounts, in fermented condiments and combined with fish broths, shrimp or egg yolk to compensate for the anti-nutrients remaining.
2. Slow fermentation rids soy of phytic acid that inhibits digestion, but not the phytoestrogens.
3. Most modern soy foods are made with soy protein isolate (SPI), which is a waste by product of soy oil manufacturing.
  - a. Some of the anti-nutrients are destroyed, but the high heat and pressure also denatures the protein and the amino acid – lysine. In this process, additional toxins are formed like nitrates and lysinoalanine.
  - b. SPI has not been “Generally recognized as safe” by the FDA, but has been approved as a binder in cardboard boxes.
4. Isoflavones are the plants natural pesticide as they render insects sterile and have been shown to have the same effect on humans.
5. The soy isoflavone, genestein, has been found to be an inhibitor of Thyroid Peroxidase. The ultimate consequence of this could result in goiter and/or hypothyroidism.
6. Infants fed soy formulas were developing goiters until additional iodine was added. In 2004, researchers found that infants fed soy formula had a prolonged increase in their TSH levels compared to infants fed non-soy formula.
7. The isoflavone, genestein, was found to be more disruptive to thyroid function in children who had an iodine deficiency. It is currently estimated that ¼ of the U.S. population has an iodine deficiency and that number is on the rise.
8. Kaayla Daniels, Ph.D., author of The Whole Soy Story, suggest that thyroid-toxic effects of soy are most often seen at levels above 30 mg of soy isoflavones per day.
9. On average, Asians consume 10-30 mg of isoflavones per day, but the average person in the U.S. consumes between 80-100mg of soy isoflavones per day.
10. In a Swiss report, adult women consuming 100mg of isoflavones in two cups of soy milk received the equivalent estrogenic effect of a contraceptive pill.<sup>2</sup>
  - a. For babies on soy formula, the effect is that of five birth control pills per day.
11. Over 70 years of studying soybeans<sup>3</sup> have shown the infants on soy formula to be part of a larger population that’s putting their thyroid at risk when soy is their primary protein source.

a. Infants with congenital hypothyroidism need 18 to 25 percent higher doses of a thyroxine drug than usual if they are bottle-fed with soy formula.

Note: Examples of some foods containing soy isoflavones:

Soy flour ½ cup = 50 mg

Miso soup ½ cup = 59 mg

Soybeans (boiled) ½ cup = 47 mg

Soy milk 1 cup = 30-50 mg

Tofu 3 oz = 30 mg

Edamame ½ cup = 12 mg

Prosobee (soy infant formula) 8 oz = 9.4 mg

Isomil (soy infant formula) 8 oz = 10.2 mg

We now have up-to-date research available on soy and it definitely calls for caution and self education when it comes to feeding it to our children.

<sup>2</sup> *Bulletin de L'Office Federal de la Sante' Publique*, No 28, July 20, 1992

<sup>3</sup> M. Fitzpatrick (2000) Soy Formulas and the Effects of Isoflavones on the Thyroid, *NZ Med J* 113, no. 1103: 24-26.