

Soy: Friend or Foe?

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If you pay attention long enough, it seems that every piece of nutritional information you receive will be disputed. Sometimes that is simply a matter of new information, sometimes it is a matter of marketing....and sometimes, it is just because the information is complex. Soy nutrition fits into the latter category.

Soybeans have been cultivated by humans for more than 3000 years. Originating in China, they spread throughout Asia and arrived in North America in the 19th century. Interestingly, they can be eaten whole or turned into highly processed foods; these variations are probably what leads to the confusing results in different studies. Some studies have been on traditional use of the whole bean and others have studied isolated compounds such as soy protein or soy isoflavones.

Soy has documented health benefits in lowering cholesterol and blood pressure in men. It has also been shown to increase HDL cholesterol in men and women as well as reducing the stickiness of platelets, which lowers the risk of heart attacks. In people eating moderate amounts of soy daily, the LDL cholesterol produced tended to be larger, which is less risky than the smaller LDL particles. Of note is that all the studies mentioned above were in WHOLE soy, not soy protein or soy isoflavone isolates.

In women, soy has been shown to decrease menopausal symptoms, improve cardiovascular health and have a beneficial effect on bone density. Most of these studies were done on whole soy foods, such as fermented tofu, tempeh and miso, not soy powders or capsules. Many studies have shown that, although soy has estrogenic activity, it does NOT stimulate breast cancer and is safe for cancer survivors to consume. In fact, some studies have suggested that it is beneficial in the long run, although a midlife American woman cannot expect to have the same benefit as an Asian woman who has consumed soy since her early years.

Most chronic disease begins with inflammatory changes in the cells; the choline content of soy helps to promote antiinflammatory pathways in the body, lowering the levels of C reactive protein, homocysteine and tumor necrosis factor alpha. Soy foods have also been shown to help promote stable blood sugar in those with diabetes, as well as protect against prostate cancer.

Many people have read that soy contributes to thyroid dysfunction; this is only the case when the diet is also deficient in iodine. The thiocyanates and isoflavones found in soy can negatively affect the thyroid, however, adequate iodine protects against this effect. This likely explains the traditional use of soy along with sea vegetables such as arame or dulse.

Whole soy beans are undoubtedly health-promoting foods, as they contain high quality protein, essential fatty acids, minerals and vitamins, and fiber. They are also one of the most highly modified foods---the US produces approximately 50% of the world's crop and much of it is genetically modified. The way we eat soy is very different from how it is consumed in Asia---we eat fake burgers, cheese and hot dogs. Asians eat primarily fermented soy, which is more easily digested, and they consume only 40-70gms of soy daily (the food total, not the isoflavone

total), which is much less than what we eat (even drinking some soy milk each day gets you over this amount). Fermented soy includes tempeh, miso, natto and fermented tofu; most of the tofu we consume is NOT fermented.

If you're new to cooking soy foods, start with miso soup---it's incredibly easy. Keep white miso paste around, as it stays for months in the fridge. Boil some water or broth, add some miso paste, add some shaved greens or seaweed and perhaps some sauteed shiitake mushrooms along with small cubes of tofu, and you're done. Makes a great breakfast, believe it or not.