

A widely distributed article *Tragedy and Hype : Third International Soy Symposium* written by Sally Fallon and Mary G. Enig in **March 2000** documents a series of issues relating to soy consumption.<sup>1</sup>



They claim that **“Soy is the next asbestos”**, that of contains **“anti-nutrients”**, causes dementia and Alzheimer’s disease, reproductive problems and much more.

The book *The Whole Soy Story: The Dark Side of America’s Favorite Health Food* is written by Kaayla Daniel is another source of strong criticism of soy. Sally Fallon was the editor of the book. According to the book:

Soy is not a health food, does not prevent disease and has not even been proven safe. Epidemiological, clinical and laboratory studies link soy to malnutrition, digestive problems, thyroid dysfunction, cognitive decline, reproductive disorders, even heart disease and cancer.

Sally Fallon and Mary Enig are co-founders in 1999 of the Weston A Price Foundation. Kaayla Daniel is also a board member of the Weston A Price Foundation. Joseph Mercola, a board member of Weston A Price foundation, is another strong critic of soy.

According to the Weston A. Price Foundation website:

Dr. Price’s research demonstrated that humans achieve perfect physical form and perfect health generation after generation only when they consume

nutrient-dense whole foods and the vital fat-soluble activators found exclusively in animal fats.

Specific goals of the foundation include establishment of universal access to clean, certified raw milk and a ban on the use of soy formula for infants.

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One concern raised in the above articles is that **Soy inhibits thyroid function.**

Below is an extract from the paper *Anti-Thyroid Isoflavones from Soybean: Isolation, Characterization, and Mechanisms of Action*. This paper is cited in the *Tragedy and Hype* article.

Because inhibition of thyroid hormone synthesis can induce goiter and thyroid neoplasia in rodents, delineation of anti-thyroid mechanisms for soy isoflavones may be important for extrapolating goitrogenic hazards identified in chronic rodent bioassays to humans consuming soy products.<sup>2</sup>

The conclusion on this study was based on experiments **in the laboratory** involving the isoflavones extracts (genistein and daidzein) that were obtained from soy, as well as rodent studies.

It is a complete misrepresentation of the article to state “**Soy inhibits thyroid function in humans**”.

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Another paper cited in the *Tragedy and Hype* article is *Goitrogenic and estrogenic activity of soy isoflavones*. The conclusions of this paper are below which are inconsistent with the

message conveyed in the *Tragedy and Hype* article.

Iodine deficiency greatly increases soy antithyroid effects, **whereas iodine supplementation is protective**. Thus, soy effects on the thyroid involve the critical relationship between iodine status and thyroid function.

Other measures of thyroid function in vivo (serum levels of triiodothyronine, thyroxine, and thyroid-stimulating hormone; thyroid weight; and thyroid histopathology) were all normal. **Additional factors appear necessary for soy to cause overt thyroid toxicity.**<sup>3</sup>

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The *Tragedy and Hype* article also states that:

Weanling rats fed soy containing these antinutrients fail to grow normally.

Rats need 10 essential amino acids compared with 9 for humans. Human milk has 6% of energy derived from protein compared with 24% for rat milk. Rats do not thrive on soy protein and they do not thrive on human milk.

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Health researcher Syd Baumel states that Daniel's book "consistently deceives and manipulates the reader in order to build a false case... Pretty well anywhere you dip into this book, the waters are muddied with half-truths, misrepresentations, errors, lies and other tricks of false persuasion."

One example that he lists is:

Daniel cites a five-year clinical trial in which six out of 179 post-menopausal women taking a very high dosage soy isoflavone supplement developed endometrial hyperplasia. None of the 197 women who took a placebo did. 'Endometrial proliferation is a precursor of cancer,' Daniel warns, implying the women can look forward to a date with the oncologist.

She doesn't mention that all of them developed the relatively benign, non-atypical form of endometrial hyperplasia. Research suggests this condition carries a 2 percent risk of progressing to endometrial cancer - little different from the 1 to 2 percent risk for women in general.

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The Vanderbilt University of Medicine performed the largest study on the influence of soy and breast cancer outcomes with a grant from the National Cancer Institute. The study involved 9514 breast cancer survivors with a diagnosis of invasive breast cancer between 1991 and 2006 from 2 US cohorts and 1 Chinese cohort. It showed that isoflavone consumption was ***inversely associated*** with recurrence among both US and Chinese women.<sup>4</sup>

Women who ate the very most soy isoflavones (the top 10%) enjoyed a 36% reduced risk of recurrence compared to those who consumed the least (the bottom 10%). Women in the top 10% were 29% less likely to die of breast cancer than women in the bottom 10%.

Chinese women ate considerable more soy than the US women. The consumption of the top 10% in the US consumed the same amount as those in the bottom 10% in China. Those in the top decile of consumption in China consumed more than four servings a day of soy and had the greatest benefit - a 42% reduction in breast cancer recurrence.

In 2000, Riva Bitrum, the President of Research for the American Institute for Cancer Research, said that “Studies showing consistently that just one serving a day of soyfoods contributes to a reduction in cancer risk are encouraging.”

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Okinawa is the home to the world’s longest living women. According to the Okinawan Centenarian Study, the Okinawan elders consume a diet of 12% soy (by weight). They eat an average of 3oz (85g) of soy per day. The incidence of breast cancer deaths in Okinawa is 6 per 100,000 women.

Dr Makato Suzuki is a cardiologist and geriatrician doctor who first surveyed the elders of Okinawa. He was the head of the Division of Gerontology at Okinawa International University. He states:

Soy products that contain phytoestrogens are probably better than hormone supplements. Some researchers speculate that they may impart many of the benefits of estrogen without the cancer dangers. Okinawans eat an average of three ounces of soy products per day. Tofu, their main source of soy, may play a role in reducing the risk of heart disease.<sup>5</sup>

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Loma Linda is a Seventh Day Adventist community 100km east of Los Angeles. For over 50 years their health and lifestyle has been studied.

Dr. Gary Fraser has been the principal investigator of the Seventh Day health studies since 1987. These studies show that a 30-year-old Adventist vegetarian 9.5 years longer than the average American male and 6.1 years longer for a vegetarian female.

A study of over 12,000 Seventh Day Adventists showed that those who drank soy milk regularly instead of cow's milk had a 70% reduction in their risk of developing prostate cancer.<sup>6</sup>

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Unfortunately, a passionate, committed and vocal minority has frightened many people away from a food that can not only nourish but can also heal.

## Footnotes

1. Fallon, S. & Enig, M. G. (2000) *Tragedy and Hype: Third International Soy Symposium - The Weston A. Price Foundation* [online]. Available from: [www.westonaprice.org/health-topics/soy-alert/tragedy-and-hype-third-international-soy-symposium/](http://www.westonaprice.org/health-topics/soy-alert/tragedy-and-hype-third-international-soy-symposium/) (Accessed 21 March 2015).
2. Divi, R. L. et al. (1997) Anti-thyroid isoflavones from soybean: isolation, characterization, and mechanisms of action. *Biochemical Pharmacology*. 54 (10), 1087-1096..
3. Doerge, D. R. & Sheehan, D. M. (2002) Goitrogenic and estrogenic activity of soy isoflavones. *Environmental Health Perspectives*. 110 (SUPPL. 3), 349-353.
4. Nechuta, S. J. et al. (2012) Soy food intake after diagnosis of breast cancer and survival. *The American Journal of Clinical Nutrition*. 96 (1), 123-132.
5. Buettner, D. (2012) *The Blue Zones*. Second Ed. Washington DC: National Geographic.
6. Jacobsen, B. K. et al. (1998) Does high soy milk intake reduce prostate cancer incidence? The Adventist Health Study (United States). *Cancer Causes & Control*. 9 (6), 553-557.