# Soy Safety and Cancer: What the Experts Say in 2013

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After years of conflicting information, primarily based on early animal studies, many people remain confused about the alleged association between soyfoods and cancer risk. Here's an update on the latest research that supports their safety and protective effects.

The American Cancer Society's 2012 Nutrition and Physical Activity Guidelines for Cancer Survivors concluded that current research finds NO harmful effects from breast cancer survivors eating soy.

# Marji McCullough, ScD, RD

(American Cancer Society Strategic Director of Nutritional Epidemiology)

"Some people had feared that soy's isoflavones might interfere with a hormone-related treatment, such as tamoxifen, but no evidence of that was seen. In fact, overall, these population studies don't show any harmful interactions between soyfoods and antiestrogen medications. A small number of studies even suggest soyfoods may be protective for women who take tamoxifen, but more research is needed."

# Karen Collins, MS, RD, CDN

(Nutrition advisor with the American Institute for Cancer Research)

Earlier soy studies suggested that genistein, a primary isoflavone in soy, increased growth of estrogen receptor-positive (ER+) breast cancer cells and promoted breast cancer growth. But as research advanced, scientists found that *rats and mice metabolize phytoestrogens such as genistein differently from humans*. (1)

- "...we now have five population studies and one pooled analysis of several studies involving breast cancer survivors that consistently show moderate amounts of soyfood consumption doesn't increase a woman's risk of death or recurrence, including women with ER+ breast cancer," she says. "Some of the studies, in fact, show improved outcomes with regular soyfood consumption."
- "...the largest study to date, a pooled analysis of studies that included almost 10,000 breast cancer patients, showed that consuming at least 10 mg of isoflavones daily was linked to a 25% **decrease** in breast cancer recurrence". (2)

#### Mark Messina, Phd

(Diet and Cancer Branch, National Cancer Institute, National Institutes of Health)

The American Journal of Clinical Nutrition looked at the fact that **mice metabolize isoflavones differently than humans**. He says that even in the rodent model, not all studies show that genistein stimulates tumor growth.

"...stay focused on the *human* research, both clinical and epidemiologic. The most recent human research should dissolve previously held fears, and when focusing on these findings, it's hard not to conclude that soyfoods warrant a larger role in the US diet than they currently have."

On "Whole vs. Processed Soy":

Messina says research indicates the greater the amount of processing, the greater the tumor growth in rodents. "This observation is primarily responsible for healthcare organizations concluding that soyfoods are OK, but supplements may not be."

Still, while Messina has many reasons for recommending whole soyfoods over supplements—in the same way he'd recommend apples over apple juice—he comes back to the fact that the *effects of processing on tumor growth in rodents isn't applicable to humans*.

### Janel Funk, MS, RD, LDN

"It's really important that we choose soy in its most unprocessed form and that we urge our clients to do the same"

## References

- (1). Onoda A, Ueno T, Uchiyama S, et al. Effects of S-equol and natural S-equol supplement (SE5-OH) on the growth of MCF-7 in vitro and as tumors implanted into ovariectomized athymic mice. Food Chem Toxicol. 2011;49:2279-2284.
- (2). Nechuta SJ, Caan BJ, Chen WY, et. al. Soy food intake after diagnosis of breast cancer and survival: an in-depth analysis of combined evidence from cohort studies of US and Chinese women. Am J Clin Nutr. 2012; 96(1): 123-132

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"Based on current human research and expert reviews showing the safety and protective effects of soy on health there should be no remaining controversy in the medical community on this subject. I recommend this plant based protein without reservation. Juice Plus+ Complete is a soy based whole-food beverage mix providing balanced nutrition in every scoop. As a physician, the fact that it was utilized in a dietary intervention study on ovarian cancer survivors at The University of Texas MD Anderson Cancer Center was particularly impressive to me."