

What You Need to Know About Soy and Breast Cancer

Although the recommendations for soy in the diet of breast cancer patients have been the source of considerable debate, the most current research and guidelines from the American Cancer Society suggest that **soyfoods can be part of a healthy diet for breast cancer patients and survivors.**

In one recent study, nearly 2,000 breast cancer patients in the United States were followed for six years. Researchers found that soy isoflavone consumption was associated with an improved prognosis and a reduced risk of cancer recurrence.¹ A second study of over 5,000 breast cancer patients published in the Journal of the American Medical Association (JAMA) in December 2009 found that soyfood intake was associated with an improved prognosis. In fact, patients with the highest intake of soyfoods had a reduced risk of tumor recurrence and lower mortality.²



Recommendations included in an accompanying editorial in JAMA concurred, stating:

“Clinicians can advise their patients with breast cancer that soyfoods are safe to eat and that these foods may offer some protective benefit for long-term health. Patients with breast cancer can be assured that enjoying a soy latte or indulging in pad thai with tofu causes no harm, and when consumed in plentiful amounts, may reduce the risk of disease recurrence.”³

These findings are encouraging, since the relationship between soy and breast cancer has long been a source of confusion for physicians and cancer patients. The controversy stems from concern about the potential for soy isoflavones to promote estrogen-dependent breast cancer growth. While epidemiological studies indicate that Asian women (who consume higher amounts of soyfoods) have lower rates of breast cancer,^{4,5} some animal and cellular studies suggested that individual isoflavones encouraged growth of breast cancer cells.^{6,7} However, human clinical trials have not supported this finding; rather they have found that soy isoflavones do not promote the growth of breast cells or increase breast tissue density, both of which are markers of breast cancer risk.⁸

Soy Can Be an Everyday Choice

In light of the most current research and recommendations, breast cancer patients can be encouraged to enjoy the many health benefits of soy. In fact, according to the American Cancer Society, breast cancer patients can safely consume up to three servings of traditional soyfoods daily.⁹ Breast cancer patients should always consult with a health care provider before making significant dietary changes.



What Is a Serving of Soy?

Each of these options constitute one serving of soyfood.

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|---------------|----------------------|
| ½ cup edamame | 3 oz tempeh |
| 1 cup soymilk | ¼ cup soynuts |
| ½ cup tofu | 2 Tbsp soynut butter |

1 Guha N et al. Soy isoflavones and risk of cancer recurrence in a cohort of breast cancer survivors: the life after cancer epidemiology study. *Breast Cancer Res Treat* 2009; 118: 395-405.

2 Shu XO et al. Soyfood intake and breast cancer survival. *JAMA* 2009; 302(22): 2437-2443.

3 Ballard-Barbash R, Neuhauser ML. Challenges in design and interpretation of observational research on health behaviors and cancer survival. *JAMA* 2009; 302(22): 2483-4.

4 Wu AH, Yu MC, Tseng CC, Pike MC. Epidemiology of soy exposures and breast cancer risk. *Br J Cancer* 2008 Jan 15; 98: 9-14.

5 Shu XO, Jin F, Dai Q, et al. Soyfood intake during adolescence and subsequent risk of breast cancer among Chinese women. *Cancer Epidemiol Biomarkers Prev*. 2001; 10(5): 483-488.

6 Allred CD et al. Dietary genistin stimulates growth of estrogen-dependent breast cancer tumors similar to that observed with genistein. *Carcinogenesis* 2001; 22: 1667-73.

7 Ju YH et al. Effects of dietary daidzein and its metabolite, equol, at physiological concentrations on the growth of estrogen-dependent human breast cancer tumors implanted in ovariectomized athymic mice. *Carcinogenesis* 2006; 27: 856-63.

8 Messina MJ, Wood CE. Soy isoflavones, estrogen therapy, and breast cancer risk: analysis and commentary. *Nutr J* 2008; 3; 7; 17.

9 Doyle C et al. Nutrition and physical activity during and after cancer treatment: an American Cancer Society guide for informed choices. *CA Cancer J Clin*. 2006 Nov-Dec; 56: 323-53.