

# Soy foods linked to fewer fractures in younger breast cancer survivors

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A new paper in *JNCI Cancer Spectrum*, published by Oxford University Press, is the first study to find that diets high in soy foods are associated with a decreased risk of osteoporotic bone fractures in pre-menopausal

breast cancer survivors.

Breast [cancer](#) is the second most common cancer among women in the United States, with 1 in 8 women diagnosed with it during their lifetime. Many treatments for breast cancer can cause premature menopause and decrease bone mineral density. This leads to a higher incidence of osteoporosis-related [fractures](#) among survivors compared to healthy women in the same age range, and yet many factors connected to this increase in fracture risks are understudied.

Researchers here studied the impact that BMI, exercise, and soy food consumption had on bone fracture rates among breast cancer survivors. The study used data from the Shanghai Breast Cancer Survival Study of 5,042 newly diagnosed breast cancer survivors between the ages of 20 and 75. Researchers collected detailed information at enrollment, including [cancer diagnosis](#) and treatment history, medication use, dietary habits, exercise and other lifestyle factors. About 52% of women in the study were postmenopausal. Patients then had follow-up visits at 18 months, and 3, 5, and 10 years after their diagnosis to update exposure and outcome information.

Throughout the 10-year study period, 3.6% of survivors reported an osteoporotic bone fracture. Higher soy intake was associated with a 77% reduced risk of osteoporotic fractures in younger women, and exercise showed a significantly reduced risk of fractures among older [women](#).

Consistent with prior studies, the extended use of tamoxifen, a drug that is prescribed for [breast cancer patients](#) showed a 37% reduced risk of fractures in the overall study population. Tamoxifen is a selective estrogen receptor modulator, or SERM, that causes an increase in bone mineral density. Soy based foods, which are rich in isoflavones, provide a natural SERM.

"The menopausal transition is known to be a period of high risk for bone loss, and given the relative scarcity of data related to fracture risk among [younger women](#) with [breast cancer](#), this study marks an important contribution to this body of literature," said the paper's lead author, Evelyn Hsieh. "Our findings, in particular regarding the protective effects of soy food consumption provide novel insight into how future interventions can be best tailored to different risk groups."

**More information:** Neil Zheng et al, Soy Food Consumption, Exercise, and Body Mass Index and Osteoporotic Fracture Risk Among Breast Cancer Survivors: The Shanghai Breast Cancer Survival Study, *JNCI Cancer Spectrum* (2019). [DOI: 10.1093/jncics/pkz017](https://doi.org/10.1093/jncics/pkz017)

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