

## Buyer beware: Estrogen supplements not as effective as claimed

September 2 2009



Connie Weaver is a researcher at Purdue University. Credit: Purdue University News Service

Dietary supplements claiming to help postmenopausal women with bone health may not be doing what they say, according to new research from Purdue University.

"We found that some plant-derived isoflavones have a modest effect on suppressing bone loss during post-menopause, but more concerning is many dietary supplements that claim to have the power of estrogen do not," said Connie Weaver, distinguished professor of foods and nutrition. "It's buyer beware. Some of the supplements in our study



claimed to be substitutes for estrogen, yet they weren't effective at all or weren't as effective as some of the current treatments for osteoporosis."

Women who are menopausal or postmenopausal produce less estrogen, and that leads to bone loss. More than 2 million women in the United States reach menopause each year, according to the National Women's Health Resource Center.

Estrogen <u>hormone replacement therapy</u> was the traditional treatment, but it is no longer recommended for the long term because of links to stroke, embolism and breast cancer. Some individuals have harmful side effects with long-term use of <u>bisphosphonates</u>, the current main class of osteoporosis treatment drugs.

"This is a reminder that it's better to build up a good healthy skeleton than to rely on a drug to fix it later," Weaver said. "Healthy bones can be maintained by a good diet that is rich in calcium and regular exercise that includes strength training."

Weaver, who also is co-director of the Botanicals Research Center for Age Related Diseases, and her team looked at four popular isoflavones: soy cotyledon, soy germ, red clover and kudzu. These plant-derived phytoestrogens are claimed to protect bone health from estrogen loss, which can lead to <u>osteoporosis</u> and even fractures.

The researchers compared the four isoflavones to a traditional bisphosphonate treatment, risedronate and <u>estrogen</u> plus progesterone. These traditional therapies decreased bone loss 22 percent to 24 percent, but only soy isoflavones from the cotyledon and germ significantly decreased bone loss by 9 percent and 5 percent, respectively. The findings are available online and will be published in the October edition of the *Journal of Clinical Endocrinology and Metabolism*.



The findings also indicate that the soy cotyledon was more effective because of its higher genistein content. Weaver's team is currently evaluating the role of genistein more closely.

"Before, we might have assumed that any isoflavone was equally effective, but we found that for a supplement to work it was because of the genistein content specifically," she said.

Source: Purdue University (<u>news</u>: <u>web</u>)

Citation: Buyer beware: Estrogen supplements not as effective as claimed (2009, September 2) retrieved 27 April 2024 from

https://medicalxpress.com/news/2009-09-buyer-beware-estrogen-supplements-effective.html

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