

Link between migraines and reduced breast cancer risk confirmed in follow-up study

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The relationship between migraine headaches in women and a significant reduction in breast cancer risk has been confirmed in a follow-on study to landmark research published last year and conducted by scientists at Fred Hutchinson Cancer Research Center. The new study found a 26 percent reduced risk of breast cancer among both premenopausal and postmenopausal women with a clinical diagnosis of migraines.

The study appears in the July 2009 issue of *Cancer Epidemiology, Biomarkers and Prevention*, a journal of the American Association for Cancer Research. It was led by Christopher I. Li, M.D., Ph.D., a [breast-cancer](#) epidemiologist and associate member of the Hutchinson Center's Public Health Sciences Division. Li led the first-of-its-kind study linking migraines with breast cancer risk reduction that was published in the same journal last November.

This time researchers found that the risk reduction remained statistically similar regardless of a woman's menopausal status, her age at [migraine](#) diagnosis, use of prescription migraine medications or whether she avoided known migraine "triggers" such as alcohol consumption, smoking and taking hormone replacements. These triggers are also well-established breast cancer risk factors.

Some key differences between this study and the initial one that discovered the link include:

- The sample size was more than four times larger this time - more than 4,500 cases and controls versus about 1,000 each in the first study - and was more diverse geographically, drawing [women](#) from five metropolitan areas instead of only one. "From an epidemiological perspective, having a larger and more diverse study in its underlying population helps in replicating the finding," Li said.
- The age range of women studied was wider this time, 34-64 years of age versus 55-74 years old. "We were able to look at whether this association was seen among both pre-menopausal and post menopausal women," Li said. "In breast cancer this is relevant because there are certain risk factors that are different between older and younger women. In this study we saw the same reduction in breast cancer risk associated with a migraine history regardless of age."
- Researchers were able to ascertain whether women in the study had lifestyle behaviors that are known migraine triggers - alcohol consumption, smoking and taking [hormone replacement](#) therapy. Researchers posited that perhaps women who had migraines drank and smoked less and didn't take hormone replacements. "But in this study we looked at women who never drank, never smoked and who also didn't use hormones and found the same association within each of those groups, suggesting that the association between migraine and reduced breast cancer risk may be independent of those other factors and may stand alone as a protective factor," he said.

What remains unknown is how migraine confers its apparent protection against breast cancer. "We know that migraine is definitely related to hormones and that's why we started looking at this in the first place," Li said. "We have different ideas about what may be going on but it's

unclear exactly what the biological mechanisms are."

In the meantime, research on migraines and breast cancer continues. Li and his colleagues are conducting a follow-up investigation among the women in the first study to determine the types, timing, intensity and severity of their migraines in hopes that the data may elicit additional clues.

And, the research group has submitted a third study for publication that found that the association between migraine and reduced breast cancer risk holds up independent of whether women with migraine took non-steroidal anti-inflammatory drugs such as aspirin and ibuprofen. Earlier studies linked these medications to reduced breast cancer risk as well.

Source: Fred Hutchinson Cancer Research Center ([news](#) : [web](#))

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