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 By TARA PARKER-POPE


Protecting Your Bones: New Evidence Helps Clarify The Benefits of Calcium

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After a widely followed study earlier this year cast doubts on the benefits of calcium for bone health, women have been wondering what to do with their calcium pills. Throw them out or keep taking them?

A new calcium study published today, along with new insights from the earlier research, are starting to clear up the confusion. The verdict: Calcium works, but only if you take it regularly.

The latest calcium news comes from an Australian study of 1,460 women older than 70, reported in today's Archives of Internal Medicine. In their main finding, the Australian researchers say there was no statistically significant benefit to using calcium. However, that's not the end of the story.

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It turned out that only 57% of the women had continued to take their pills during the five-year study period. When researchers looked at just the women who did consistently take calcium, there was actually a 34% reduction in overall

fracture risk. That finding reinforces other data that have shown consistent use of calcium really does help women lower their risk for fractures, a significant health risk for aging women.

"It was a bit of a surprise and a bit disappointing to discover that the effect was so dependent on compliance," says study author Richard L. Prince, associate professor at the School of Medicine and Pharmacology at the University of Western Australia. Patients need to make their calcium regimen a life-long habit "to get the full treatment effect."

Typically, looking just at study participants who take their pills can be misleading because those people might be more health-conscious and healthier to start with. The Australian researchers analyzed the data and found that there were no meaningful differences in the health status of the calcium users and the placebo group who took their pills consistently. That means the lower risk of fracture shown in the calcium group likely was real.

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ABOUT TARA PARKER-POPE

Since 2000, Tara Parker-Pope has been writing Health Journal, a column devoted to exploring health issues that directly affect our readers' daily lives. Before that, she spent five years as a consumer-products reporter, first for The Wall Street Journal Europe in London and most recently from the Journal's New York headquarters. She is a 1988 graduate of the University of Texas, where she majored in sociology.

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What's so striking about the latest calcium study is how similar it is to some of the data that emerged in February from the calcium study of the Women's Health Initiative. The main finding of that study, which involved 36,000 postmenopausal women, also was that calcium offered no real benefit to bone health. The results sparked widespread news stories questioning whether postmenopausal women should adhere to federal guidelines recommending 1,200 milligrams of daily calcium.

The Case for Calcium
A comparison of women's calcium use in a new University of Western Australia study, and the much larger Women's Health Initiative study:

	UWA	WHI
Average age of participants	75	62
Overall benefit	None	None
Percent of women who regularly took their pills	57%	59%
Reduction in fracture risk among regular pill users	34%	29%*
Side effects	Constipation	Kidney stones

* Hip fractures only
Sources: Archives of Internal Medicine, New England Journal of Medicine

But WHI researchers now say the data have been largely misinterpreted by the public. Although the overall group didn't benefit, the results were skewed by the fact that the study included women under 60, who generally aren't at risk for fractures. Many women in the placebo group were taking calcium supplements on the side. By the end of the study, only 59% of the women were consistently taking the study pills.

All of these problems clouded the data, making the trends that emerged in certain groups even more remarkable. Women over age 60 in the calcium group were 21% less likely to suffer a hip fracture than women in the placebo group. The benefits were even higher among just those women who took their pills regularly. Across all age groups, those women had a 29% lower risk of hip fracture. And among all age groups and compliance levels, women who weren't taking calcium supplements before the study lowered their hip fracture risk by 30%. A hip fracture is a serious health concern that almost always requires surgery, and can lead to permanent disability and even death.

"I heard women saying, 'That's it. This study says [calcium] isn't important and I should throw them out,'" says Andrea LaCroix, professor of epidemiology at the Fred Hutchinson Cancer Research Center and co-author of the WHI calcium study. "But that's the wrong take home message. I think there are so many things about this trial that support the guidelines to get at least 1,200 milligrams a day."

The biggest concern right now is that many women have begun to doubt the benefits of calcium at a time when important safety questions are being raised about other bone treatments. In a separate study, the WHI found that menopause hormones lower hip-fracture risk by 33% among users of estrogen and progestin and by 40% among women taking estrogen alone. The benefits jumped to 60% among hormone users who also took calcium. But the hormone drugs also carry a higher risk of stroke and other problems for older women, and the combined estrogen/progestin regimen increases breast-cancer risk with long-term use. More recently, questions have been raised about bone-strengthening drugs called bisphosphonates, which include Merck's Fosamax, and whether long-term use is linked with osteonecrosis of the jaw, a rare disease in which a patient's jawbone rots and dies.

Calcium meanwhile is a relatively low-risk treatment. The WHI found that the biggest risk of daily calcium is a 17% higher risk of kidney stones. The overall risk of kidney stones is relatively low, but the problem is unpleasant and painful for patients who develop it. The Australian study found that constipation was the only side effect of calcium use.

Dr. LaCroix said she personally will continue to take daily calcium in the wake of the WHI results. And she hopes women and their doctors will take a close look at what the WHI data really show.

"It would be such a tragedy if the level of calcium intake in our country went down because of a yes or no

interpretation of this trial," says Dr. LaCroix. "We would have done damage instead of improving public health."

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