Medical Xpress

Do you take calcium and vitamin D to protect your bones? A new study says it doesn't help

December 28 2017, by Karen Kaplan, Los Angeles Times

Credit: CC0 Public Domain

If taking more vitamin and mineral supplements is part of your plan for a healthier new year, a new study may prompt you to reconsider.

Researchers who scoured the medical literature for evidence that calcium and vitamin D pills could help prevent bone fractures came up empty.

Their analysis focused on adults older than age 50 who lived on their own (that is, not in a nursing home or other type of residential care facility). Fractures are a serious health concern for this population—previous studies have found that about 40 percent of women in this age group will wind up with at least one "major osteoporotic fracture" at some point in their lives, and that among adults who break a hip, 20 percent died within a year of their injury.

The researchers, led by Dr. Jia-Guo Zhao of Tianjin Hospital in northeastern China, combed through clinical trials, systematic reviews and other reports published in the last decade, since late 2006. They identified 51,145 people who were included in studies assessing the role of calcium and/or vitamin D in preventing bone fractures.

Their findings appear in Tuesday's edition of the *Journal of the American Medical Association*.

Among the 14 trials that pitted calcium supplements against either a placebo or no treatment, there was no statistically significant relationship between use of the mineral (in pill form) and the risk of suffering a hip fracture. Nor was there any clear link between calcium supplements and fractures involving the spine or other bones.

Even when the researchers accounted for each study participant's gender, past history of bone fractures, the amount of calcium they consumed in their diets and the dose of the calcium pills they took (if they did), there was still no sign that supplements were helpful.

An additional 17 trials examined the role of vitamin D, which helps the

body absorb calcium. Once again, they found no statistically significant link between supplement use and hip fracture risk. Ditto for fractures in the spine and elsewhere.

Upon drilling down to certain subgroups, they found that for people who started out with at least 20 nanograms of vitamin D per milliliter of blood, adding more vitamin D through supplements was associated with a greater risk of hip fractures. The same was true for people who took high doses of vitamin D supplements just once a year.

Finally, there were 13 trials involving people who took a combined calcium-vitamin D supplement. As before, there was no statistically significant link between supplement use and the risk for any kind of fracture or combination of fractures. That held up even when accounting for gender, past fractures, supplement dose, dietary calcium or baseline blood levels of vitamin D.

The researchers noted that thousands of people in this final group were participants in the Women's Health Initiative, a long-term study sponsored by the National Heart, Lung and Blood Institute in the U.S. Earlier reports based on data gathered by the Women's Health Initiative found that calcium and vitamin D supplements were associated with a lower risk of fractures, but only for women who took hormone therapy after menopause. To get a clearer picture of the direct link (if any) between supplements and fracture risk, Zhao and his colleagues opted not to include data from women on hormone therapy.

It's still possible that calcium and vitamin D supplements are useful for people who live in nursing homes or other residential facilities, the study authors wrote. Such people are more likely to have osteoporosis, due to a combination of poor diet, less sun exposure (which the body needs to synthesize vitamin D) and other factors.

But for older adults who live on their own, they wrote, the results are clear: "These findings do not support the routine use of these supplements."

More information: Jia-Guo Zhao et al. Association Between Calcium or Vitamin D Supplementation and Fracture Incidence in Community-Dwelling Older Adults, *JAMA* (2017). DOI: 10.1001/jama.2017.19344

©2017 Los Angeles Times
Distributed by Tribune Content Agency, LLC.

Citation: Do you take calcium and vitamin D to protect your bones? A new study says it doesn't help (2017, December 28) retrieved 23 April 2024 from
https://medicalxpress.com/news/2017-12-calcium-vitamin-d-bones-doesnt.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.