

# Vitamin D alone does little to protect bone health in postmenopausal women

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While calcium supplements noticeably improved bone health in postmenopausal women, vitamin D supplements did not reduce bone turnover, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism (JCEM)*.

Bone turnover is the body's natural process for breaking down old bone. In young people, the body forms enough new bone to replace what is lost. After age 30, however, bone mass in women begins to decline and the process speeds up after menopause. Osteoporosis develops when the body cannot replace bone as fast as it is broken down.

"Vitamin D and calcium interact to suppress bone turnover by decreasing parathyroid hormone levels," said the study's lead author, John Aloia, MD, of Winthrop University Hospital in Mineola, NY. "This can be beneficial in women who are vitamin D deficient. In women who already are receiving the recommended daily allowance of vitamin D, however, the study found there was no advantage to adding a vitamin D supplement."

The double-blind, placebo-controlled, parallel group, longitudinal factorial design study divided 159 [postmenopausal women](#) into four groups. One group received a combination of vitamin D and calcium, one was given 1,200 milligrams of calcium daily, one took 4,000 IU of vitamin D daily and the last group received placebos. To measure the effect supplements had on bone health, researchers measured bone

turnover markers, such as parathyroid hormone levels in the blood, over the course of six months. In all, 120 women completed the study.

Researchers found a significant decline in bone turnover markers among women who were given daily [calcium supplements](#). The vitamin D supplements did not have any effect on bone turnover markers, although the supplements did decrease parathyroid hormone levels.

"These findings suggest that [vitamin](#) D supplements over the recommended dietary allowance (RDA) do not protect [bone health](#), whereas calcium supplements do have an effect," Aloia said. "Women do need to be cautious about the possibility of vascular side effects from too much calcium and should consult their physicians about whether their diet is adequate or whether they should take [supplements](#) at all."

**More information:** The article, "Calcium and Vitamin D Supplementation in Postmenopausal Women," was published online, ahead of print.

Provided by The Endocrine Society

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