

# Study finds no evidence that vitamin D supplements reduce depression

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Vitamin D deficiency has been implicated in numerous health conditions in recent years, including depressed mood and major depressive disorder. Recent observational studies provide some support for an association of vitamin D levels with depression, but the data do not indicate whether vitamin D deficiency causes depression or vice versa. These studies also do not examine whether vitamin D supplementation improves depression.

A systematic review of clinical trials that have examined the effect of vitamin D supplementation on depression found that few well-conducted trials of vitamin D supplementation for depression have been published and that the majority of these show little to no effect of vitamin D on depression. The review, by Jonathan A. Shaffer, PhD, assistant professor of medical sciences at Columbia University Medical Center (CUMC), and colleagues at CUMC's Center for Cardiovascular Behavioral Health,

was published recently in the online edition of *Psychosomatic Medicine*.

The review found that only seven trials with a total of approximately 3200 participants compared the effect of vitamin D supplementation on depression with no vitamin D supplementation. Nearly all of these trials were characterized by methodological limitations, and all but two involved participants without clinically significant depression at the start of the study. The overall improvement in depression across all trials was small and not clinically meaningful.

However, additional analyses of the clinical data by Dr. Schaffer hinted that vitamin D supplements may help patients with clinically significant depression, particularly when combined with traditional antidepressant medication. New well-designed trials that test the effect of vitamin D supplements in these patients are needed to determine if there is any clinical benefit.

The authors note that supplementation with vitamin D also may be effective only for those with vitamin D deficiency. They also recommend that future studies consider how vitamin D dosing and mode of delivery contribute to its effects on depression.

"Although tempting, adding vitamin D [supplements](#) to the armamentarium of remedies for [depression](#) appears premature based on the evidence available at this time," said Dr. Shaffer. He hopes that the current review will guide researchers to design new [trials](#) that can answer the question more definitively.

**More information:** The title of the paper is "Vitamin D Supplementation for Depressive Symptoms: A Systematic Review and Meta-analysis of Randomized Controlled Trials."

Provided by Columbia University Medical Center

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