

Analysis finds vitamin D potency varies widely in dietary supplements

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Vitamin D supplement potency varies widely, and the amount of vitamin D in over-the counter and compounded supplements does not necessarily match the amount listed on the label, according to a research letter published in the journal *JAMA Internal Medicine*.

The analysis showed that the amount of vitamin D in these supplements ranged from 9 percent to 146 percent of the amount listed on the label. Not only was there variation among different brands and manufacturers, but also among different pills from the same bottle.

"We were surprised by the variation in potency among these vitamin D pills," says Erin S. LeBlanc, M.D., MPH, lead author and investigator with the Kaiser Permanente Center for Health Research in Portland, Ore. "The biggest worry is for someone who has low levels of vitamin D in their blood. If they are consistently taking a supplement with little vitamin D in it, they could face health risks."

According to a recent editorial in the [New England Journal of Medicine](#), more than 100 million Americans spend a combined \$28 billion on vitamins, herbs, and supplements each year. The U.S. [Food and Drug Administration](#) is considering new [safety guidelines](#) for some supplements but, for the most part, the industry remains unregulated.

Some manufacturers participate in a voluntary quality [verification program](#) operated by the U.S. Pharmacopeial Convention (USP)—an independent, nonprofit organization that sets public standards for the

quality of [dietary supplements](#). In order to receive the USP verification mark, manufacturers' facilities undergo annual good manufacturing practice audits, and their products are tested for quality, potency, and purity. LeBlanc and her colleagues included one supplement from a USP Verified manufacturer in their sample. They found the amount of vitamin D in pills from that bottle was generally more accurate than the other bottles tested.

"The USP verification mark may give consumers some reassurance that the amount of vitamin D in those pills is close to the amount listed on the label," said Dr. LeBlanc. "There are not many manufacturers that have the USP mark, but it may be worth the extra effort to look for it."

The researchers tested 55 bottles of over-the-counter vitamin D from 12 different manufacturers. The over-the-counter vitamin D pills used in the analysis were purchased at five different stores in Portland, Ore. The compounded [vitamin D](#) was made by a compounding pharmacy in Portland. The analysis was conducted by an independent lab in Houston.

Provided by Kaiser Permanente

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