

# Higher doses of vitamin D did not reduce falls in at risk older adults

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A randomized trial found that, compared with a lower dose, higher doses of vitamin D supplementation did not reduce falls in older persons at high risk for falls. In addition, several analyses raised safety concerns

about vitamin D3 doses of 1000 IU/d or higher. The findings are published in *Annals of Internal Medicine*.

Some studies have suggested that vitamin D supplements might reduce the risk for falls in [older adults](#); however, evidence has been inconsistent, possibly because of differences in dosage.

Researchers from Johns Hopkins University compared four doses of vitamin D3 to determine whether vitamin D supplementation reduces the risk for falls, and if so, at what dosage. The researchers randomly assigned 514 participants, aged 70 years and older, with elevated fall risk and low vitamin D blood levels to receive 200 (control), 1000, 2000, or 4000 IU/d of vitamin D3. During the dose-finding phase, the best non-control dose for preventing falls was selected.

In the subsequent confirmatory phase, participants previously assigned to receive non-control doses received the best dose, and 174 new participants were randomly assigned to receive 200 IU/d or the best dose. The researchers found that vitamin D3 supplementation at doses of 1000 IU/d or higher did not prevent falls compared with 200 IU/d.

No analysis found a benefit of higher dose vitamin D supplements, while some analyses suggested that the higher doses of vitamin D supplements increased the risk of serious falls and falls with hospitalization.

**More information:** Lawrence J. Appel et al. The Effects of Four Doses of Vitamin D Supplements on Falls in Older Adults, *Annals of Internal Medicine* (2020). [DOI: 10.7326/M20-3812](https://doi.org/10.7326/M20-3812)

Bruce R. Troen. Falls: To D or Not to D—That Is Not the (Only) Question!, *Annals of Internal Medicine* (2020). [DOI: 10.7326/M20-7609](https://doi.org/10.7326/M20-7609)

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