

## Fall Protection Guidelines From USPSTF Highlight Vitamin D

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May 29, 2012 — Exercise or physical therapy, along with vitamin D supplementation, are the best medicine for fall prevention among older adults, according to a report by the US Preventive Services Task Force (USPSTF). The new clinical guideline was [published online](#) May 28 in the *Annals of Internal Medicine*.

Virginia A. Moyer, MD, MPH, on behalf of the USPSTF, reported new recommendations for fall prevention among community-dwelling adults aged 65 years and older after reviewing evidence on both the efficacy and possible harm from interventions. Dr. Moyer and colleagues reviewed data on multifactorial clinical assessment, clinical management, clinical education or behavioral counseling, home hazard modification, and exercise or physical therapy.

Falls are the leading cause of injury in adults aged 65 years and older, with 30% to 40% of community-dwelling adults older than 65 years falling at least once each year. Among these patients, 5% to 10% incur a fracture, laceration, or head injury from a fall.

The task force called its recommendation for exercise or physical therapy a grade B recommendation, meaning the service is recommended with a high certainty of moderate benefit. On the basis of a review of 18 studies that tested exercise or physical therapy, the USPSTF estimated the risk for falls would be reduced 13% (pooled relative risk [RR], 0.87; 95% confidence interval [CI], 0.81 - 0.94). To prevent 1 person from falling, 16 people needed to undergo physical therapy or undertake exercise for 12 weeks. High-risk populations benefited most (pooled RR, 0.84; 95% CI, 0.78 - 0.91).

Similarly, vitamin D supplementation was also a grade B recommendation, with the USPSTF concluding it has moderate certainty of moderate net benefit among older adults. In a review of 9 trials involving vitamin D supplementation, the authors estimated there was a 17% reduction in the risk of falling over the course of 6 to 36 months of follow-up, with a number needed to treat of 10. When studies targeted those who were vitamin D deficient, the effect was greater yet.

In contrast, the task force did not recommend multifactorial risk assessment with comprehensive management of identified risk for the general population of older adults. The authors stressed that the service would likely be beneficial only to selected patients, depending on individual symptoms.

Specifically, a combined analysis of 6 studies on multifactorial clinical assessment with comprehensive management resulted in a non-statistically significant reduction of risk after 12 months, with a pooled RR of 0.89 (95% CI, 0.76 - 1.0). The largest of these studies involved 1559 adults with a mean age of 72.5 years reporting a 25% reduction in the risk of falling in the intervention group compared with control patients (RR, 0.75; 95% CI, 0.64 - 0.88). Multifactorial clinical assessment with less-than-comprehensive follow-up was ineffective in reducing the risk for falls (pooled RR, 0.994; 95% CI, 0.917 - 1.076).

In addition, 4 studies that looked at vision correction failed to report a reduced risk of falling, and evidence for wearing hip protection was mixed. Although 1 study of 4169 women with an average age of 78 years reported a reduced risk of falling after 12 months, a smaller study found no benefit. Evidence of the benefits of protein supplementation was limited, as was evidence for clinical education or behavioral counseling. Three studies examining home hazard modification produced results that fell short of statistical significance.

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