

U.S. Preventive Services Task Force

Interventions to Prevent Falls in Community-Dwelling Older Adults: Recommendation Statement

Summary of Recommendations and Evidence

The USPSTF recommends exercise interventions to prevent falls in community-dwelling adults 65 years or older who are at increased risk for falls (*Table 1*). **B recommendation.**

The USPSTF recommends that clinicians selectively offer multifactorial interventions to prevent falls to community-dwelling adults 65 years or older who are at increased risk for falls. Existing evidence indicates that the overall net benefit of routinely offering multifactorial interventions to prevent falls is small. When determining whether this service is appropriate for an individual, patients and clinicians should consider the balance of benefits and harms based on the circumstances of prior falls, presence of comorbid medical conditions, and the patient's values and preferences. **C recommendation.**

See the Clinical Considerations section for information on risk assessment for falls.

The USPSTF recommends against vitamin D supplementation to prevent falls in community-dwelling adults 65 years or older. **D recommendation.**

These recommendations apply to community-dwelling adults not known to have osteoporosis or vitamin D deficiency.

Rationale

IMPORTANCE

Falls are the leading cause of injury-related morbidity and mortality among older adults in the United States.¹ In 2014, 28.7% of community-dwelling adults 65 years or older reported falling, resulting in 29 million falls (37.5% of which needed medical treatment or restricted activity for a day or longer)² and an estimated 33,000 deaths in 2015.¹⁻⁴

DETECTION

Effective primary care interventions to prevent falls use various approaches to identify persons at increased risk. However, no instrument has been clearly identified as accurate and feasible for identifying older adults at increased risk for falls. Although many studies used a variety of risk factors, functional tests, or both involving gait, balance, or mobility to identify study participants, history of falls was the most commonly used factor that consistently identified persons at high risk for falls.

BENEFITS OF EARLY INTERVENTION

The USPSTF found adequate evidence that exercise interventions have a moderate benefit in preventing falls in older adults at increased risk for falls. The USPSTF found adequate evidence that multifactorial interventions have a small benefit in preventing falls in older adults at increased risk for falls. The USPSTF found adequate evidence that vitamin D supplementation has no benefit in preventing falls in older adults.

HARMS OF EARLY INTERVENTION

Based on the noninvasive nature of most of the interventions, the low likelihood of serious harms, and the available information from studies reporting few serious harms, the USPSTF found adequate evidence to bound the harms of exercise and multifactorial interventions as no greater than small. The USPSTF found adequate evidence that the overall harms of vitamin D supplementation are small to moderate; evidence suggests that the harms of vitamin D supplementation at very high dosages may be moderate.

See related Putting Prevention into Practice on page 253.

As published by the U.S. Preventive Services Task Force.

This summary is one in a series excerpted from the Recommendation Statements released by the USPSTF. These statements address preventive health services for use in primary care clinical settings, including screening tests, counseling, and preventive medications.

The complete version of this statement, including supporting scientific evidence, evidence tables, grading system, members of the USPSTF at the time this recommendation was finalized, and references, is available on the USPSTF website at <https://www.uspreventiveservicestaskforce.org/>.

This series is coordinated by Kenny Lin, MD, Deputy Editor.

A collection of USPSTF recommendation statements published in *AFP* is available at <https://www.aafp.org/afp/uspstf>.

TABLE 1

Interventions to Prevent Falls in Community-Dwelling Older Adults: Clinical Summary of the USPSTF Recommendations

Population	Community-dwelling adults 65 years or older at increased risk for falls, without osteoporosis or vitamin D deficiency		
Recommendations	Recommend exercise interventions to prevent falls. Grade: B	Selectively offer multifactorial interventions to prevent falls. Grade: C	Do not recommend vitamin D supplementation to prevent falls. Grade: D
Risk assessment	Age is strongly related to risk for falls. A pragmatic approach to identifying older persons at high risk for falls would be to assess for a history of falls or physical function/mobility limitation problems. Clinicians could also use assessments of gait and mobility, such as the Timed Up and Go test.		
Interventions	Effective exercise interventions include supervised individual and group classes and physical therapy. Given the heterogeneity of these interventions, it is difficult to identify specific components of exercise that are particularly efficacious. Multifactorial interventions include an initial assessment of modifiable risk factors for falls and subsequent customized interventions for each patient based on issues identified in the initial assessment. The initial assessment could include a multidisciplinary comprehensive geriatric assessment or an assessment using a combination of various components, such as balance, gait, vision, postural blood pressure, medication, environment, cognition, and psychological health.		
Other relevant USPSTF recommendations	The USPSTF found insufficient evidence on vitamin D or calcium supplementation to prevent fractures in men, premenopausal women at any dose, and in postmenopausal women at doses > 400 IU of vitamin D and > 1,000 mg of calcium. The USPSTF recommends against supplementation with ≤ 400 IU of vitamin D or ≤ 1,000 mg of calcium in postmenopausal women. The USPSTF recommends screening for osteoporosis in women 65 years or older and in younger women at increased risk.		

Note: For a summary of the evidence systematically reviewed in making this recommendation, the full recommendation statement, and supporting documents, go to <https://www.uspreventiveservicestaskforce.org/>.

USPSTF = U.S. Preventive Services Task Force.

USPSTF ASSESSMENT

The USPSTF concludes with moderate certainty that exercise interventions provide a moderate net benefit in preventing falls in older adults at increased risk for falls.

The USPSTF concludes with moderate certainty that multifactorial interventions provide a small net benefit in preventing falls in older adults at increased risk for falls.

The USPSTF concludes with moderate certainty that vitamin D supplementation has no net benefit in preventing falls in older adults.

Clinical Considerations

PATIENT POPULATION UNDER CONSIDERATION

This recommendation applies to community-dwelling adults 65 years or older who are not known to have osteoporosis or vitamin D deficiency.

BRIEF RISK ASSESSMENT

When determining to whom these recommendations apply, primary care clinicians can reasonably consider a small number of risk factors to identify older adults who are at increased risk for falls. Age is strongly related to risk for falls. Studies most commonly used a history of falls to identify increased risk for future falls; history of falls is generally considered together or sequentially with other key risk

factors, particularly impairments in mobility, gait, and balance. A pragmatic approach to identifying persons at high risk for falls, consistent with the enrollment criteria for intervention trials, would be to assess for a history of falls or for problems in physical functioning and limited mobility. Clinicians could also use assessments of gait and mobility, such as the Timed Up and Go test.⁵⁻⁷

INTERVENTIONS

Exercise Interventions. Effective exercise interventions include supervised individual and group classes and physical therapy, although most studies reviewed by the USPSTF included group exercise. Given the heterogeneity of interventions reviewed by the USPSTF, it is difficult to identify specific components of exercise that are particularly efficacious. The most common exercise component was gait, balance, and functional training (17 trials), followed by resistance training (13 trials), flexibility (8 trials), and endurance training (5 trials). Three studies included tai chi, and 5 studies included general physical activity. The most common frequency and duration for exercise interventions was 3 sessions per week for 12 months, although duration of exercise interventions ranged from 2 to 42 months.⁸ The 2008 U.S. Department of Health and Human Services guidelines recommended that older adults get at least 150 minutes per week of moderate-intensity

or 75 minutes per week of vigorous-intensity aerobic physical activity, as well as muscle-strengthening activities twice per week.⁹ It also recommended performing balance training on 3 or more days per week for older adults at risk for falls because of a recent fall or difficulty walking.⁹

Multifactorial Interventions. Multifactorial interventions include an initial assessment of modifiable risk factors for falls and subsequent customized interventions for each patient based on issues identified in the initial assessment. The initial assessment could include a multidisciplinary comprehensive geriatric assessment or an assessment using a combination of various components, such as balance, gait, vision, postural blood pressure, medication, environment, cognition, and psychological health. In studies, nursing staff usually performed the assessment, and a number of different professionals performed subsequent interventions, including nurses, clinicians, physical therapists, exercise instructors, occupational therapists, dietitians, or nutritionists. Intervention components vary based on the initial assessment and could include group or individual exercise, psychological interventions (cognitive behavioral therapy), nutrition therapy, education, medication management, urinary incontinence management, environmental modification, physical or occupational therapy, social or community services, and referral to specialists (e.g., ophthalmologist, neurologist, or cardiologist). For additional details on multifactorial interventions reviewed by the USPSTF, please see the full evidence report.^{8,10}

Other Interventions. The following single interventions lack sufficient evidence for or against their use to prevent falls in community-dwelling older adults when offered alone and not in the context of a multifactorial intervention: environmental modification, medication management, psychological interventions, and combination interventions not customized to an individual risk profile.

USEFUL RESOURCES

Fractures are an important injury associated with falls, and the USPSTF has issued 2 related recommendation statements on the prevention of fractures. The USPSTF recommends screening for osteoporosis in women 65 years or older and in younger women at increased risk.¹¹ In its recommendation on vitamin D and calcium supplementation to prevent fractures, the USPSTF states that it found insufficient evidence on vitamin D or calcium supplementation to prevent fractures in men, premenopausal women at any dose, and in postmenopausal women at doses greater than 400 IU of vitamin D and greater than 1,000 mg of calcium; the USPSTF recommends against supplementation with 400 IU or less of vitamin D or 1,000 mg or less of calcium in postmenopausal women.¹²

The Centers for Disease Control and Prevention has published guidance on implementing community-based interventions to prevent falls.¹³

This recommendation statement was first published in *JAMA*. 2018;319(16):1696-1704.

The “Other Considerations,” “Discussion,” “Update of Previous USPSTF Recommendation,” and “Recommendations of Others” sections of this recommendation statement are available at <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/falls-prevention-in-older-adults-interventions1>.

The USPSTF recommendations are independent of the U.S. government. They do not represent the views of the Agency for Healthcare Research and Quality, the U.S. Department of Health and Human Services, or the U.S. Public Health Service.

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