



## Falls & Older Adults

Last reviewed October 2019

### **Does Perturbation-Based Balance Training Prevent Falls? Systematic Review and Meta-Analysis of Preliminary Randomized Controlled Trials**

<https://academic.oup.com/ptj/article/95/5/700/2686424>

This study estimated the efficacy of perturbation-based balance training involving repeated postural perturbations aimed to improve control of rapid balance reactions on falls in daily life. (OPEN ACCESS)

### **Prediction of Falls and/or Near Falls in People with Mild Parkinson's Disease**

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0117018>

This study included 141 participants with the mean age of 68 years with Parkinson's disease. Participant falls and near falls were tracked daily for a 6 month period. The investigators found that the strongest contributing factor was fear of falling followed by a history of near falls and retropulsion. (OPEN ACCESS)

### **Factors Associated with Fear of Falling in People with Parkinson's Disease**

<https://bmcneurol.biomedcentral.com/articles/10.1186/1471-2377-14-19>

This study aimed to complete a comprehensive investigation of factors which contribute to a fear of falling in individuals with idiopathic Parkinson's disease. Functional balance performance, dependence in ADLs, and fatigue were independently associated with fear of falling. (OPEN ACCESS)

### **Fear of Falling is Associated with Recurrent Falls in People with Multiple Sclerosis**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4542711/>

This longitudinal cohort study investigated the validity of the 7-item Falls Efficacy Scale International (FES-I) as a measure of fear of falling in people with MS. Scores were found significant in predicting recurrent falls in the following 3 months. (OPEN ACCESS)

### **Tai Chi for Health Benefits in Patients with Multiple Sclerosis: A Systematic Review**

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170212>

The aim of this systematic review was to evaluate existing evidence on the effectiveness and safety of Tai Chi to inform guidelines to clinicians to improve symptom management in individuals with MS. While this review didn't focus specifically on older adults, its findings regarding health outcomes particularly functional balance and quality of life can support its incorporation into individualized multifactorial fall prevention interventions. (OPEN ACCESS)

### **Interventions for Preventing Falls in People with Multiple Sclerosis**

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD012475/full>

This review evaluated the effectiveness of interventions designed to reduce the rate of falls in individuals with MS, comparing single, multiple and multifactorial interventions. (OPEN ACCESS)

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### Redesigned Fall and Injury Management of Patients with Stroke

<http://stroke.ahajournals.org/content/47/6/e92>

This article aims to provide an overview of evidence which supports redesign of fall prevention programs for patients who have experienced a stroke. Included is a recommendation for fall risk screening and assessment that includes known stroke-specific risk factors such as hemiparesis, hemiplegia, aphasia and visual neglect or loss. Redesign should also be informed by knowledge of differences between left and right brain stroke manifestations. (OPEN ACCESS)

### Effects of Continuous Visual Feedback During Sitting Balance Training in Chronic Stroke Survivors

<https://jneuroengrehab.biomedcentral.com/articles/10.1186/s12984-017-0316-0>

This study investigated the role of visual feedback during balance retraining and its limitations. (OPEN ACCESS)

### Falls and Traumatic Brain Injury Among Older Adults

<http://www.ncmedicaljournal.com/content/76/2/111.full.pdf+html>

This article provides a commentary of traumatic brain injury (TBI) related falls in older adults, common TBI sequelae, treatment, TBI-related dementia and chronic traumatic encephalopathy. (OPEN ACCESS)

### Predictors of Falls and Mortality Among Elderly Adults with Traumatic Brain Injury: A Nationwide, Population-Based Study

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0175868>

This article describes a nation-wide, population-based study reviewing data from all TBI hospitalizations for adults 65 and over between 2006 and 2011. The investigators found that fall-related TBI admissions increased 7% annually. Advanced age, comorbidity and the severity of the injury were independent predictors of TBI-related falls and mortality. (OPEN ACCESS)

### Executive Function and Falls in Older Adults: New Findings from a Five-Year Prospective Study Link Fall Risk to Cognition

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0040297>

The authors of this longitudinal study aimed to evaluate if reduced executive function (EF) is a risk factor for future falls over the course of 5 years of follow-up. Their findings demonstrated that the risk of future falls was predicted by performance on EF and attention tests conducted 5 years earlier among community-dwelling older adults. (OPEN ACCESS)

### Risk Factors Associated with Falls in Older Adults with Dementia: A Systematic Review

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5435396/pdf/ptc.2016-14.pdf>

This study aimed to critically evaluate the literature to identify the factors associated with fall risk in older adults with dementia. The investigators found that there are multiple intrinsic and extrinsic risk factors and vary between community and institution dwelling older adults with dementia or cognitive impairment. (OPEN ACCESS)

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### Preventing Falls Among Older People with Mental Health Problems: A Systematic Review <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3942767/pdf/1472-6955-13-4.pdf>

The objective of this review was to evaluate the effectiveness of fall prevention interventions for older people with mental health problems being cared for across all settings. (OPEN ACCESS)

### Despite Active Public Health Campaigns, Deaths from Falls Increased 30% in the Past Decade: Is Ageism Part of the Barrier to Self-Awareness? <https://www.sciencedirect.com/science/article/pii/S0749069019300035?via%3Dihub>

This paper reviews the evidence that ageism is creating barriers to self-awareness and the adoption of needed preventive behavior strategies that have demonstrated efficacy at reducing injury and deaths from falls. (OPEN ACCESS)

### Optimizing Function and Physical Activity in Hospitalized Older Adults to Prevent Functional Decline and Falls <https://www.sciencedirect.com/science/article/pii/S0749069019300047>

The authors reviewed the available evidence to see if there are proven approaches to best increase physical activity and prevent falls. (OPEN ACCESS)

### Nutritional Status, Body Mass Index, and the Risk of Falls in Community-Dwelling Older Adults: A Systematic Review and Meta-Analysis <https://www.sciencedirect.com/science/article/pii/S1525861018306078>

This article discusses the significance of nutrition on fall risk among older adults. (OPEN ACCESS)

### Orthostatic Hypotension and Falls in Older Adults: A Systematic Review and Meta-Analysis <https://www.sciencedirect.com/science/article/pii/S1525861018306352?via%3Dihub>

The authors utilized cross-sectional and longitudinal studies to assess the association between orthostatic hypotension and falls. (OPEN ACCESS)

### Interventions for Preventing Falls in Older People Living in the Community <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD007146.pub3/full>

This Cochrane review examined the literature to establish which fall prevention interventions are effective for older people living in the community, and included 159 randomized controlled trials. (PAID ACCESS)

### Assessment and Management of Falls in Older People <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4216276/pdf/186e610.pdf>

The authors present the available evidence from a high quality systematic review regarding the assessment of patients who have fallen and management of their care. (OPEN ACCESS)

### Fall Prevention Program Characteristics and Experiences of Older Adults and Program Providers in Canada: A Thematic Content Analysis <https://journals.sagepub.com/doi/abs/10.1177/0733464819874600>

The authors discuss the important role of health care providers for disseminating information, making referrals to fall prevention programs and advocating for reduced barriers and for services that meet the needs of older adults in their communities. (PAID ACCESS)

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### Prevention of Falls in Older People Living in the Community

<https://www.bmj.com/content/bmj/353/bmj.i1419.full.pdf>

This review includes a summary of known risk factors for falls in older adults and assessment strategies that can be used to assess fall risk. The authors discuss managing risks along with interventions to prevent falls in community dwelling older adults. **(OPEN ACCESS)**

### Interventions to Prevent Falls in Community-Dwelling Older Adults

<https://jamanetwork.com/journals/jama/fullarticle/2678104>

This article describes the findings of the US Preventative Task Force (USPSTF) evidence review on the effectiveness and harms of primary care relevant interventions to prevent falls and fall-related morbidity and mortality in older adults who were not diagnosed with osteoporosis or vitamin D deficiency. **(OPEN ACCESS)**

### Algorithm for Fall Risk Screening, Assessment, and Intervention

<https://www.cdc.gov/steady/pdf/STEADI-Algorithm-508.pdf>

This handout includes STEADI algorithm to guide screening, assessment and intervention to reduce fall risk. **(OPEN ACCESS)**

### Falls, Cognitive Impairment, and Gait Performance: Results From the GOOD Initiative

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5366266/pdf/nihms843718.pdf>

This study examined the relationship between the subtype and severity of cognitive impairment and falls with the aim of establishing an association between falls and gait parameters during the course of dementia. **(OPEN ACCESS)**

### Exercises for Osteoporosis and Fall Prevention: Practical Tips for Clinicians

<https://osteoporosis.ca/wp-content/uploads/fals-cop-2016-dec.pdf>

This pdf presentation reviews exercise guidelines, fall risk factors and recommendations with special considerations for older adults with osteoporosis. **(OPEN ACCESS)**

### The Effects of Obesity on Fall Efficacy in Elderly People

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3881484/pdf/jpts-25-1485.pdf>

This study sought to identify the effects of obesity on falls as a practical verification of the importance of obesity-targeting interventions as part of fall prevention programs. **(OPEN ACCESS)**

### Central Obesity Raises Fall Risk in Older Adults with Normal Weight

<https://www.healio.com/endocrinology/obesity/news/in-the-journals/%7Ba5b24b93-687f-4aef-8ee5-115726e1e0e6%7D/central-obesity-raises-fall-risk-in-older-adults-with-normal-weight>

This article describes the findings of a study examining the association between body mass index (BMI) category and central obesity status with the number of falls in older adults. **(OPEN ACCESS)**

### Diabetes Mellitus and Risk of Falls in Older Adults: A Systematic Review and Meta-Analysis

<https://academic.oup.com/ageing/article/45/6/761/2499230>

The investigators found that older adults with diabetes mellitus are at greater risk of falls especially in those receiving insulin treatment. **(OPEN ACCESS)**