

**Safety Literature 12<sup>th</sup> April 2020****Atrial fibrillation and falls: a mechanistic or age-confounded relationship?**

Hu T, Noheria A, Asirvatham SJ. Mayo Clin. Proc. 2020; 95(4): 632-635.

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**Abstract**

Beyond age, traditionally recognized risk factors for falls include unsteady gait, muscle weakness, impaired cognition, and poly-pharmacy. Malik et al<sup>2</sup> present a detailed systematic review evaluating the role of atrial fibrillation (AF) in falls/syncope and conclude that AF is independently associated with falls (odds ratio [OR], 1.19; 95% CI, 1.07-1.33) and syncope (OR, 1.88; 95% CI, 1.20-2.94) based on a meta-analysis of 7 and 3 observational studies, respectively. They offer potential mechanisms and call into question the issue of AF-attributable vs merely AF-correlated mechanisms of fall/ syncope.

Language: en

## **Atrial fibrillation is associated with syncope and falls in older adults: a systematic review and meta-analysis**

Malik V, Gallagher C, Linz D, Elliott AD, Emami M, Kadhim K, Mishima R, Hendriks JML, Mahajan R, Arnolda L, Sanders P, Lau DH. *Mayo Clin. Proc.* 2020; 95(4): 676-687.

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### **Abstract**

**OBJECTIVE:** To examine the potential association of atrial fibrillation (AF) to syncope and falls, we undertook a systematic review and meta-analysis given the increasing prevalence of AF in older adults as well as emerging data that it is a risk factor for dementia.

**PATIENTS AND METHODS:** CENTRAL, PubMed, and EMBASE databases were searched from inception to January 31, 2019, to retrieve relevant studies. Search terms consisted of MeSH, tree headings, and keywords relating patients with "AF," "falls," "syncope," and "postural hypotension." When possible; results were pooled using a random-effects model.

**RESULTS:** A total of 10 studies were included, with 7 studies (36,444 patients; mean  $\pm$  SD age, 72 $\pm$ 10 years) reporting an association between AF and falls and 3 studies (6769 patients; mean  $\pm$  SD age, 65 $\pm$ 3 years) reporting an association between AF and syncope. Pooled analyses demonstrate that AF is independently associated with falls (odds ratio, 1.19; 95% CI, 1.07-1.33; P=.001) and syncope (odds ratio, 1.88; 95% CI, 1.20-2.94; P=.006). There was overall moderate bias and low-moderate heterogeneity (I<sup>2</sup>=37%; P=.11) for falls and moderate bias with low statistical heterogeneity (I<sup>2</sup>=0%; P=.44) for syncope. Persistent AF, but not paroxysmal AF, was associated with orthostatic intolerance in 1 study (4408 patients; mean  $\pm$  SD age, 66 $\pm$ 6 years).

**CONCLUSION:** AF is independently associated with syncope and falls in older adults. Further studies are needed to delineate mechanistic links and to guide management to improve outcomes in these patients. **TRIAL REGISTRATION:** PROSPERO: trial identifier: CRD4201810721.

Language: en

## **Building nutrition into a falls risk screening program for older adults in family health teams in north Eastern Ontario**

Laur C, Carew W, Keller H. *Can. J. Aging* 2020; ePub(ePub): 1-17.

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### **Abstract**

Approximately 30 per cent of those over the age of 65 living in the community fall at least once each year, and a similar proportion are at nutrition risk. Screening is an important component of prevention. The objective of this study was to understand how to add nutrition risk screening to a falls risk screening program in family health teams (FHTs). Interview participants (n = 31) were staff/management, regional representatives, and clients from six FHTs that had started integrating screening. Thematic analysis was conducted. Themes identified how to develop screening programs: setting up for successful screening, making it work, and following up with risk. An overarching theme recognized "it's about building relationships". Adding nutrition risk to a falls risk screening program takes effort, and is different for each FHT based on their work flow and client population. Determining how to integrate screening into the work flow and planning to address identified risk are necessary components.

Language: en

### **Keywords**

aging; dépistage; falls risk; nutrition risk; older adults; personnes âgées; primary care; risque nutritionnel; risques de chutes; screening; soins de première ligne; vieillissement

## Effects of obesity and fall risk on gait and posture of community-dwelling older adults

Lockhart TE, Frames CW, Soangra R, Lieberman A. *Int. J. Progn. Health Manag.* 2019; 10(1): e19.

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### Abstract

Epidemiological studies link increased fall risk to obesity in older adults, but the mechanism through which obesity increases falls and fall risks is unknown. This study investigates if obesity (Body Mass Index: BMI>30 kg/m<sup>2</sup>) influenced gait and standing postural characteristics of community dwelling older adults leading to increased risk of falls. One hundred healthy older adults (age 74.0±7.6 years, range of 56-90 years) living independently in a community participated in this study. Participants' history of falls over the previous two years was recorded, with emphasis on frequency and characteristics of falls. Participants with at least two falls in the prior year were classified as fallers. Each individual was assessed for postural stability during quiet stance and gait stability during 10 meters walking. Fall risk parameters of postural sway (COP area, velocity, path-length) were measured utilizing a standard forceplate coupled with an accelerometer affixed at the sternum. Additionally, parameters of gait stability (walking velocity, double support time, and double support time variability) were assessed utilizing an accelerometer affixed at the participant's sternum. Gait and postural stability analyses indicate that obese older adults who fell have significantly altered gait pattern (longer double support time and greater variability) exhibiting a loss of automaticity in walking and, postural instability as compared to their counterparts (i.e., higher sway area and path length, and higher sway velocity) further increasing the risk of a fall given a perturbation. Body weight/BMI is a risk factor for falls in older adults as measured by gait and postural stability parameters.

Language: en

## **Examining the feasibility of a mindfulness intervention for the prevention of falls: a pilot study**

Hoang P, Moore K, Kwan M. *Can. J. Aging* 2020; ePub(ePub): ePub.

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### **Abstract**

This pilot study was designed to assess the feasibility of implementing a mindfulness intervention in the prevention of falls. We employed a quasi-experimental design consisting of 22 participants from two retirement homes in Ontario partaking in the regional falls prevention class. Participants were assigned to either an eight-week intervention, comprising mindfulness exercises incorporated into the standard falls prevention class, or to the standard falls prevention class. Participants were assessed using the Tinetti Balance and Gait Scale and the Timed Up and Go (TUG) test. The mindfulness intervention showed no significant effect on TUG or balance scores; however, there was a significant effect on assessments of gait. Given the ease of implementation of mindfulness-based interventions, further research may be warranted in mindfulness as a potential modality for falls prevention.

Language: en

### **Keywords**

ageing; chutes; falls; falls prevention; geriatrics; g riatrie; mindfulness; older adults; personnes  g es; pleine conscience; pr vention des chutes; vieillissement

## Factors influencing the implementation of falls prevention practice in primary care

McConville A, Hooven K. J. Am. Assoc. Nurse Pract. 2020; ePub(ePub): ePub.

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### Abstract

**BACKGROUND:** Patient falls in the primary care setting are a complex problem and are detrimental to the independence and quality of life of older adults.

**OBJECTIVES:** The purpose of this integrative review is to identify what factors influence the implementation of fall prevention practice in the primary care setting. This review explores qualitative and quantitative research published between 2004 and 2018 on barriers to fall prevention management in primary care. **DATA SOURCES:** The authors conducted a systematic search of the evidence and identified 18 articles which met the inclusion criteria.

**CONCLUSIONS:** Five themes were identified that described barriers in fall risk management in the primary care setting. These included provider beliefs and practice, lack of provider knowledge, time constraints, patient engagement, and financial issues. **IMPLICATIONS FOR PRACTICE:** The lack of screening and assessment regarding fall risk identification demonstrates a gap in the management of older adults in primary care. Using the evidence- and theory-based Stopping Elderly Accidents, Deaths, and Injuries toolkit and algorithm is an effective method to assist practitioners with fall assessment and preventative measures.

Language: en

## **Falls in older adults are serious**

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### **Abstract**

**BACKGROUND:** Falls in older adults are a reasonably common occurrence and about 10% of these experience multiple falls annually. These falls may be serious and may cause significant morbidity and mortality. These can also threaten the independence of older people and may be responsible for an individual's loss of independence and socioeconomic consequences. These falls may add extra burden to the health care and to direct and indirect costs.

**METHODOLOGY:** An extensive search of literature was done on the important data bases of PubMed, SCOPUS, and Google Scholar on this topic and all the useful information was derived from the relevant articles for this review.

**RESULTS:** We found that the falls in older individuals are often multi factorial and hence a multidisciplinary approach is required to prevent and manage these falls. The risk factors leading to the falls could be divided into extrinsic, intrinsic and situational factors. The commonest and serious injuries are to the head and fractures, due to fragility of bones.

**DISCUSSION:** The falls in elderly are on rise and taking the shape of an epidemic. Prevention of these falls is far better than the management. Safe living environment of the elderly people helps in prevention of these falls. The management of the falls should focus on the causative factors, apart from treating the injuries caused by the falls.

Language: en

### **Keywords**

Fall; Fractures; Geriatrics; Older adults; Prevention; Risk factors

## **Clinical features of fallers among inpatient subacute stroke: an observational cohort study**

Morone G, Martino Cinnera A, Paolucci T, Beatriz HDR, Paolucci S, Iosa M. *Neurol. Sci.* 2020; ePub(ePub): ePub.

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### **Abstract**

**BACKGROUND AND PURPOSE:** The aim of this study is to observe the differences between fallers, common fallers, and non-fallers in stroke patients compared with the global ability in a rehabilitation setting.

**MATERIALS AND METHODS:** An observational and prospective study has been carried out. A total of 476 subacute stroke patients have been observed. The main outcome measures were assessed using the Canadian Neurological Scale (CNS), Barthel Index (BI), Functional Ambulatory Category (FAC), and Trunk Control Test (TCT) at admission to the rehabilitation unit and after 90 days of the rehabilitation treatment (nearly 3 h for day for 5 days for week) at the discharge with intermediate evaluations after the first and second months.

**RESULTS:** Out of 397 patients, 109 reported 1 or more falls (27.5%), of whom 67 fell 1 time (fallers) in the hospital (16.9%) and 42 fell 2 or more times (common fallers) (10.6%). For fallers, BI and FAC scores had a significant effect ( $p = 0.003$  for both). Common fallers had statistically significant differences in BI ( $p = 0.002$ ), FAC ( $p = 0.012$ ), and TCT scores (0.023) compared with non-fallers.

**CONCLUSIONS:** The severity of stroke may directly increase the risk of fall, and also indirectly, lengthening the hospitalization. Our study seems to suggest that patients with BI scores of between 21 and 30 on admission are more prone to fall in the first period of hospitalization, whereas in the second month, those with scores of between 11 and 20 on admission have a higher risk of falls. In the third month, patients with BI scores below 10 on admission are more susceptible to falls.

Language: en

### **Keywords**

Accidental falls; Gait; Postural balance; Rehabilitation; Stroke; Stroke rehabilitation