Health Management

Effects of a multi-factorial falls prevention program for people with stroke returning home after rehabilitation: a randomized controlled trial.
Stroke victims aged 45 and older being discharged home received usual care (n = 85) which included referrals to physiotherapists and occupational therapists and follow-up by their general medical practitioner or received the intervention (n = 71) which consisted of a multifactorial, individually tailored falls prevention program. The intervention consisted of Otago home exercise program and other risk reduction strategies/information (additional exercise recommendations along with information and referrals around footwear, hearing, vision, medication information, etc.) Participants at high risk for falling were prescribed hip protectors or referred to their general practitioner for vitamin D and calcium. Results over 12 months showed no significant reduction in falls nor was it more effective than usual care in improving gait, balance and strength. Issues related to sample size, recruitment, heterogeneity of the sample, the intervention and the potential for similarity in intervention and control conditions may have contributed to the lack of a significant effect.

The Complex Interplay of Depression and Falls in Older Adults: A Clinical Review.
Depression and falls have a significant bidirectional relationship. Excessive fear of falling, which is frequently associated with depression, also increases the risk of falls. Both depression and fear of falling are associated with impairment of gait and balance, an association that is mediated through cognitive, sensory and motor pathways. The management of depression in fall-prone individuals is challenging, since antidepressant medications can increase the risk of falls, selective serotonin reuptake inhibitors may increase the risk of fragility fractures, and data are lacking about the effect of fall rehabilitation programs on clinically significant depression. Based on the current state of knowledge, exercise (particularly Tai Chi) and cognitive-behavioral therapy should be considered for the first-line treatment of mild depression in older fallers. Antidepressant medications are indicated to treat moderate to severe depression in fall-prone individuals, but with appropriate precautions including low starting dose and slow dose titration, use of psychotropic monotherapy whenever possible, and monitoring for orthostatic hypotension and hyponatremia. To date, there have been no recommendations for osteoporosis monitoring and treatment in individuals prescribed antidepressant medications, beyond the usual clinical guidelines. However, treatment of the older depressed person who is at risk of falls provides the opportunity to inquire about his or her adherence with osteoporosis and fracture-prevention guidelines.

Effectiveness of a multifaceted podiatry intervention to prevent falls in community dwelling older people with disabling foot pain: Randomised controlled trial.
Community dwelling men and women with disabling foot pain and an increased risk of falling (n = 305) were allocated to a multifaceted podiatry intervention or to a routine podiatry care. The multifaceted podiatry intervention consisted of foot orthoses, advice on footwear, a subsidy voucher for footwear, a home based program of foot and ankle exercises, a falls prevention education booklet, and routine podiatry care for 12 months. The control group received routine podiatry care for 12 months. Adherence was good, with 52% of the intervention participants completing 75% or more of the requested three exercise sessions weekly, and 55% of those issued orthoses reporting wearing them most of the time. The intervention group experienced 36% fewer falls than the control group. The proportion of fallers and multiple fallers did not differ significantly between the groups. Fewer participants in the intervention group than control group had a fracture resulting from a fall during the trial, but this did not reach significance. Authors conclude that the components of the intervention are inexpensive and relatively simple to implement, suggesting that the program could be incorporated into routine podiatry practice or multidisciplinary falls prevention clinics.

**Elderly falls associated with benign paroxysmal positional vertigo.**
This retrospective study examined the impact of the particle repositioning maneuver (PRM) on falls in elderly patients (n =121) who had Benign Paroxysmal Positional Vertigo (ear rocks). Wilcoxon's test was performed to compare the number of falls 12 months before and then 12 months after PRM. 121 patients presented involvement of the posterior semicircular canal, 16 of the lateral and 4 of the anterior. Authors found statistically significant reductions of falls in patients after receiving PRM.

**Effect on falls of providing single lens distance vision glasses to multifocal glasses wearers: VISIBLE randomised controlled trial.**
In this randomised controlled trial, authors assessed whether the provision of single lens distance glasses to wearers (mean age 80) of multifocal glasses reduces falls and injuries when used for walking and outdoor activities. In the 299 intervention and 298 control participants available to follow-up, the intervention significantly reduced falls and injuries in people who regularly took part in outside activities. A significant increase in outside falls occurred in people in the intervention group who took part in little outside activity. Authors conclude that with appropriate counselling, provision of single lens glasses for older wearers of multifocal glasses who take part in regular outdoor activities is an effective falls prevention strategy. The intervention may be harmful, however, in multifocal glasses wearers with low levels of outdoor activity. http://www.bmj.com/cgi/content/full/340/may25_1/c2265

**What Works in Falls Prevention After Stroke? A Systematic Review and Meta-Analysis.**
Thirteen studies met the inclusion criteria for this systematic review and meta-analysis on interventions that reduce falls after stroke. Studies were grouped under the following themes: physical activity interventions, including balance training, exercise, strength training (4 studies), modifying the environment or improving knowledge (1 study), models of stroke care (comparing home rehabilitation with standard rehabilitation, for example) and medication or treatment aimed at influencing bone mineral density (4 studies). No studies evaluating the effectiveness of a multi-factorial falls prevention intervention in the stroke population were found. Significant effects were found in only 1 study: vitamin D supplementation in female stroke survivors in an institutional setting, with a significant decrease found in fall rate and percentage of fallers. No significant effects were found in the other included studies.

Foot Pain, Plantar Pressures, and Falls in Older People: A Prospective Study.
In this cohort study, authors tracked randomly recruited community living, older adults (n = 303) over a 12 month period to determine whether foot pain and plantar pressure were associated with falls. Participants documented their falls in a calendar and foot pain was measured using the Manchester Foot Pain and Disability Index. Authors found that fallers had a significantly higher prevalence of foot pain than non-fallers (57.9% vs 42.1%; chi-square=4.0; P=.04). Authors conclude that high plantar pressures generated during gait may contribute to foot pain and risk of falls. Providing interventions to older people with foot pain and high plantar pressures may play a role in reducing their falls risk.

When Self-Presentation Trumps Access: Why Older Adults With Low Vision Go Without Low-Vision Services
Audio-recorded, semi-structured interviews were completed with 34 seniors with low vision (age range 70 to 94 years; 16 urban dwellers (12 women); 18 rural dwellers (14 women)). Causes of vision loss among informants included glaucoma, cataract, and less often retinal detachment and corneal dystrophy; however, the most prevalent cause by far was age-related macular degeneration (70.5%). The three major barriers to low-vision service use were being unaware of available services and how to obtain them, receiving no information around corrective or supportive services from “eye doctors”, and preferring to manage/cope until they reach a crisis. Authors conclude that services and interventions should be promoted by healthcare professionals in a manner that empowers seniors to maintain their independence.
http://jag.sagepub.com/content/29/5/579.full.pdf+html

Does Lower Extremity Arterial Disease Predict Future Falling Among Men and Women?
This study showed that older persons with lower-extremity peripheral arterial disease (PAD) were significantly less likely to fall than those without PAD. Where falls did
occur among older persons with PAD, transferring was the most common activity taking place before the fall. Walking was the most likely activity taking place before the fall for older persons without PAD. Further study needs to investigate whether fewer falls are attributed to less activity among older persons with PAD.

**Characteristics of males over 50 years who present with a fracture Epidemiology and underlying risk factors.**
One third of hip fractures occur in men and is has been suggested that 30 percent of men aged 60 years will suffer from a fracture later in life if they don’t receive preventative therapy. In this study the main risk factors for osteoporosis in men were history of smoking, alcohol excess, BMI > 21 kg/m², and family history of osteoporosis. Several risk factors seen in women were rarely seen in men. Authors point out that osteoporosis is common in men with fractures and provides a key opportunity to intervene to reduce the risk of further fractures.

**Shifting the focus in fracture prevention from osteoporosis to falls.**
Authors state that preventing fractures in older people is important and that efforts should be put into stopping falls not treating low bone mineral density. The strongest single risk factor for fracture is falling not bone density; yet, few general practitioners assess the risk of falling among their older patient and provide appropriate interventions to reduce the risk. Authors argue that bone mineral density is a poor predictor of an individual’s fracture risk and drug treatment is expensive and will not prevent most fractures in older people.

**Sleep Quality and Falls in Older People Living in Self- and Assisted-Care Villages.**
This study recruited 572 people from self-care retirement villages and assisted-care hostels to participate in this cross-sectional study where a subgroup of 169 was followed up for falls for 1 year. Approximately half of the sample rated their sleep quality as poor or fair. Analyses showed that poor circulation, use of psychotropic and diuretic medications, negative affect, pain, not having a friend in the village, lower fitness levels and daytime napping were significant and independent predictors of night-time sleep quality in both residential care groups. Daytime naps (>30 minutes) and short night-time sleep periods (<6 hours) were associated with an increased risk for multiple falls.
Anemia and the risk of injurious falls in a community-dwelling elderly population.
Anemia in the elderly is associated with a number of health-related functional declines, such as frailty, disability and muscle weakness. Health insurance claims and laboratory test results data of 47,530 individuals aged 65 years and older enrolled in over 30 managed care plans were analyzed. Anemia was significantly and independently associated with a risk increase for injurious falls. Furthermore, the risk of injurious falls increased as the degree of anemia worsened. Correction of anemia warrants further investigation as a means of preventing falls in the elderly.

Refracture following fracture liaison service assessment illustrates the requirement for integrated falls and fracture.
This article points out that a portion of treated patients receiving the Fracture Liaison Service (utilizing antiosteoporosis therapy to decrease prospective fracture risk) will experience additional breakages. The characteristics of the patients who experienced additional breakages despite FLS were listed in this work. It was concluded that patients should be assessed for risk using the characteristics identified and offered a combined program of drug treatment through a specialized osteoporosis team along with reduction of any reversible falls risk factors.

An Outreach Program Improved Osteoporosis Management After a Fracture
This longitudinal retrospective cohort study evaluated an intervention to improve management of osteoporosis: one of the leading causes of morbidity and mortality in older adults. Regardless of the availability of effective treatments, investigators have documented low rates of bone mineral density screening and treatment in patients at risk. The researches suggest that given the common gaps in osteoporosis management after a fracture, interventions could significantly improve the prevention of osteoporosis.

Hip protectors and prevention of hip fractures in older persons.
According to this article, using evidence from various biomechanical studies, the main reason for hip fractures amongst older patients with osteoporosis is falls. Hip protectors are proven prevention mechanisms for hip fractures, yet usage of them by older persons is inadequate. The study argues for an increased need for education and prevention awareness as well as an enhancement in design and wearing comfort of these devices to improve adherence to the usage of hip protectors.