

Older Adult Wellness: Preventing Falls

Older adults wellness can be improved by zeroing in on high risk areas, identifying the research base related to risks and promoting the best practices that will reduce these risks. Falls are a common experience for older adults. Approximately one third of people over age 65 fall each year. And, although only 15 percent of these falls result in injuries requiring medical attention, falls that result in injury increase a number of risks for the older person. Serious falls can lead to permanent impairment in functioning resulting in a major loss of independence. Falls are associated with 40 percent of nursing home admissions. Serious falls can also precipitate a cascade of events leading to death. The consequences of falls are costly in both human and fiscal terms. Factors known to contribute to falls in older adults are reviewed below with several “best practices” for fall prevention at the individual and community level highlighted. Additional websites for further statistical and resource information are also provided.

Physical Factors that Contribute to Falls

While aging and disease are not synonymous, there are some changes associated with aging and other diseases that occur in later life that contribute to risk for falling. Increased reaction time and decreased vision are two specific age-related changes affecting risk. Increased reaction time occurs through a lengthening of the decision making process for physical actions and can result in loss of the “catching yourself” capability. Increased need for more light and difficulty in adjusting between light and darkened environments puts older adults at risk to missing visual cues for surface or level changes or hazardous objects. Since most falls occur on stairs, vision change is an important risk factor that can be reduced by increasing illumination. Regular vision check-ups and always wearing corrective lenses is important. Diseases such as glaucoma and macular degeneration, which contribute to risk, can be identified.

Diseases such as Parkinson’s disease, arthritis, osteoporosis affect risk. Parkinson’s disease through gait “stalling” and difficulty in getting “started” in walking and arthritis’ effects of stiff knee or hip joints, difficulty walking and lifting feet can affect safe mobility. Bone thinning from osteoporosis increases risk for broken bones, known to precipitate falls as well as be a result of falling. These diseases require medical attention and through medications, assistive devices and physical therapy, fall risk may be reduced.

Conditions such as balance disorders, stroke, taking multiple medications, orthostatic hypotension (drop in blood pressure upon standing), loss of muscle strength and flexibility, and having previous falls can also contribute significantly to fall risk. These conditions require the involvement of a health care practitioner to assess fall risk. Balance disorder clinics may help in diagnosis or ruling out particular factors in fall risk. Intermittent physical therapy has shown benefits for those affected by stroke even six years prior to receiving therapy. Therapy can improve mobility, transfer capability and reduce fall risk. Multiple medications require physician and pharmacist review to uncover side effects such as dizziness, unsteadiness, confusion, blurred vision, drowsiness, slowed reactions and fatigue and to evaluate alternative medications or

modify doses to reduce fall risk. Because orthostatic hypotension creates dizziness and unsteadiness, a person experiencing this condition will need to sit after lying and to rise slowly before walking.

Muscle strength and flexibility do not have to decrease with age. However, older people who are inactive due to arthritis pain, obesity, depression or conditions such as stroke or Parkinson's diseases will be at risk for reduced muscle function. The benefits of increased physical activity including walking, dancing, yoga, and weight training are well demonstrated. Tai Chi, a form of Eastern 'movement sequences' is quite effective in improving balance in older adults.

Environmental Factors that Contribute to Falls

Most falls occur in or around the home of community dwelling elders. High risk locations include stairs, the bathroom, and the bedroom at night. Other environmental factors include low levels of lighting, improper footwear, clutter or scatter rugs on the floor, slippery surfaces such as a wet floor or tub, improper or lack of use of prescribed assistive devices and unfamiliar surroundings.

At the community level, uneven surfaces, changes in sidewalk or curb level, heavy entry doors, lack of guard rails on stairs and inadequately lit parking areas contribute to falls in older adults. There are many interventions that can decrease environmental risk for falls including adding assistive devices such as grab rails or side bars to the tub or toilet, using non-skid rugs or mats, improving lighting using more lights and night lights, raising low chairs to more functional heights, taping down cords or using a cordless phone, and adding handrails to stairs. A home assessment and intervention tool is available. Getting proper training from a physical therapist on using an assistive device is critical for safe mobility.

Behavioral and Emotional Factors that Contribute to Falls

Risk avoiding behaviors such as holding on to stair rails, using proper foot stools for climbing, using grab bars in shower, and using caution when going into dark or bright environments help maintain wellness in older adults and can be encouraged and reinforced by friends and family.

Another issue related to behavior but also emotional state is how an individual responds to a fall. Having a previous fall puts the older person at higher risk for additional falls. Fifty percent of older adults who fall do so repeatedly. Needless to say, the idea of falling evokes fear in the minds of older adults. This emotional state has been studied by Jonathan Howland and others and has been found to be intense in those who have fallen but also in those who have not fallen but had known someone who had. Fear can lead to restriction of activities, in turn resulting in loss of muscle strength and even social connectedness. Some specific ways to reduce fear while improving caution were identified including the recommendations previously discussed. In addition, practicing ways to get up after a fall with the assistance of a physical or occupational therapist and having an emergency response plan were recommended.

Web Resources

Universal Design Home Modification – A Home for All Ages

<http://www.aarp.org/life/homedesign/>

AARP's universal design site.

National Institute of Neurological Disorders and Stroke has a searchable database

<http://ninds.nih.gov/>

Falls Among Older Adults

http://www.cdc.gov/ncipc/fact_book/15_Falls_Among_Older_Adults.htm

Centers for Disease Control and Prevention's fact book on falls among older adults.

Also search the CDC Web site for fall prevention research. <http://www.cdc.gov/>

The Enigma of Aging

<http://www.hcoa.org/aging/enigma.htm>

Baylor College of Medicine's Huffington Center on Aging has an excellent on-line course, Aging 101, that focuses on age-related changes in older populations.

Falls and Hip Fractures

http://www.aoa.gov/prof/notes/notes_falls.asp

Administration on Aging's Aging Internet Information Notes has a searchable database.

Fall Prevention for Older Adults (Texas Cooperative Extension)

http://aging.tamu.edu/fall_prevention/

References

Howland, J., Lachman, M.E., Peterson, E. W., Cote, J., Kasten, L., and Jette, A. Covariates of Fear of Falling and Associated Activity Curtailment, *The Gerontologist*, Vol 38(5), 1998, pp. 59-555.

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