

FALL RISK PREVENTION



What Is a Fall?

A fall is "an event that results in a person coming to rest inadvertently on the ground or floor or other lower level. This could include an event where the person landed on the ground, tripped on stairs, slipped, or lost his or her balance and hit against an object like a chair or bed."

- In the USA, it is estimated that one quarter to one third of all older adults experience at least one fall each year.
- In a one-year period, 39% of patients had one or more falls.
- Healthcare costs related to falls are \$2.4 billion – almost half of these costs are for older adults who fall.

Why Do Seniors Fall?

Usually falls have more than one cause. For example, someone who slips or falls on a slippery floor may have weak leg muscles and may be experiencing dizziness as a side effect of medication. This booklet reviews the causes of falls and recommends changes you can make in specific areas to prevent falls.

Did You Know?

- Across the U.S.A., almost one in three seniors falls each year.
- Ninety percent (90%) of broken hips in seniors are a result of a fall.
- By the age of 75, falls are a major cause of fatal injuries.
- Forty percent (40%) of admissions to nursing homes are related to falls.
- Direct costs associated with falls are \$2.4 billion dollars annually.

How Great Is the Risk?

Falls are one of the most common problems faced by elderly residing in the community, hospital or nursing home.

- Approximately one quarter of community-based persons aged 65-74, and one third of persons 75 and older fall annually; about half experience multiple falls. The incidence of falls rises steadily after middle age and tends to be highest among elders 80 years of age and older. Older women are more apt to fall than older men.
- Falls within the hospital facility setting represent a leading cause of adverse events, accounting for up to 38 percent of all reported incidents. The rate of falls in patients 65 years of age and older averages 1.5 falls per bed annually; as many as 25 percent of patients fall repeatedly. Some hospital units, such as rehabilitation, oncology, geriatrics, and psychiatry experience a higher than normal rate of patient falls.
- In nursing homes, up to 75 percent of residents fall each year, and over 40 percent experience recurrent episodes. Each year, a typical 100-bed nursing home reports from 100 to 200 falls annually. About 20 percent of residents experience recurrent falls.

What Are All the Consequences?

Mortality

Falls are a leading cause of unintentional injury and death in people aged 65 years and over. Fall-related mortality increases dramatically with advancing age, especially in elders over 70 years of age. More than half of all fatal falls involve elders 75 years of age and older. An elder aged 85 and over is 40 times more likely to die as a result of a fall than someone in the 65 to 69 years of age group.

Injurious-Falls

Although most falls produce no injury, between 5-10 percent of elders who fall each year sustain serious injury, such as fracture, head trauma, or serious laceration. Approximately 15 percent of elders who fall and injure themselves require hospitalization. Hip fractures are the most serious fall-related injury (95 percent of hip fractures are due to falls). Of the estimated 1 percent of elders who fall and sustain a hip fracture, 20-30 percent die within one year of the fracture. As many as two thirds of elders with hip fracture never regain their pre-fracture activity status and one-third require nursing home placement.

Psychological

In the absence of injury, falls often lead to self-imposed mobility limitations resulting from a fear of falling and/or injury. Fear of falling, which occurs in about half of all elders, can lead to an older individual losing confidence in his/her ability to perform activities safely. Fear of falling is associated with functional decline, increasing depression, decreased quality of life, and further fall risk.

Restraints

Physical restraints, including the use of bed side rails, are often employed to prevent falls in hospitals and nursing homes. Restraints and side rails seldom eliminate the risk of falls and injury, but conversely, they can precipitate or exacerbate the problem. Older people placed in restraints are subject to the same or added risk of falls as are individuals without restraints. Among facilities that do or do not use restraints, little difference exists in the extent of falls. Avoiding the use of restraints may increase the number of falls, but not the number that result in injury.

Immobility

Any restrictions of mobility occurring as a result of injury or psychological trauma (such as fear of falling), in turn, can lead to periods of immobility and the risk of complications, such as pressure sores, contractions, muscle weakness, bone loss, depression, etc. Mobility restrictions can precipitate further functional decline, which may contribute to increased risk of falls.

Caregiver-Burden

Falls are distressing for family members as well. About half of those who fall will need some help with everyday activities. Falls and/or functional dependency can precipitate informal caregiver burden and, eventually, institutional placement (in other words, relocation from community to assisted living or nursing home facility).

Financial-Costs

Falls are associated with an increase in health care utilization and costs; these costs escalate with severity and frequency of falls. Elders who experience one or more injurious falls, home health utilization costs increase seven-fold, hospitalization costs increase three-fold, and emergency room costs increase four-fold compared with non-fallers. Recurrent, non-injurious falls are associated with increased health care utilization; fallers use an additional \$12,000 in health care resources than do non-fallers. Even single falls are associated with greater rates of hospitalization, physician contact, and nursing home utilization.

Falls are associated with increased institutional costs that result from labor costs (for example, increased nursing time spent evaluating and treating falling episodes, completing documentation, etc.), equipment costs (bed and chair alarms, hip protectors, low beds, ambulation aids, grab bars, restraint reduction devices and other preventive equipment), and utilization costs (fallers typically experience increased lengths of stay).

The most common activities associated with falls are walking (on both level ground and going up/down stairs), and transferring from a bed, chair, toilet and in/out of the bathtub or shower. Frail elders are more apt to fall in the home while performing basic activities of daily living, whereas healthy elders are more apt to fall when they are active, both in and out of the home.

Falls and Risk Prevention

Most of us have slips and trips with no serious consequences. However, among older adults, falls are more common and more often result in serious injuries. They have serious consequences both for those who fall and for society.



Reducing Your Risk: Assistive Devices

Devices such as canes, grab bars, handrails, hip protectors, and walkers can really help prevent falls and reduce the risk of injuries. Individuals with balance and mobility problems are encouraged to use assistive devices for daily activities.

Assistive Devices Can Make Your Bathroom Safer:

- Use a long rubber bath mat inside your tub.
- Install at least two grab bars in the tub area.
- If getting into or out of the tub is difficult, consider buying a bath seat and a hand held shower or getting help with bathing.
- If sitting on or getting up from the toilet is difficult, consider buying a raised toilet seat and/or installing a grab bar.

Using a Cane

To make sure your cane is the correct height for you:

- Turn the cane upside down and put the handle on the floor.
- Stand with your arms at your sides.
- The tip of the cane should be at the level of your wrist.

To adjust a wood cane:

- Turn the cane upside down; mark the cane at the level of your wrist.
- Remove rubber tip.
- Cut the cane 1/2 inch shorter than where you marked it.
- Replace rubber tip.

To adjust an aluminum cane:

- Most aluminum canes can be easily adjusted within an inch of the desired height.

REMEMBER: Replace worn rubber tips on your cane and do not forget to attach an ice pick in the winter.

Learn to use a cane correctly:

- Always hold your cane on your strongest side.
- If you have a "bad" leg (weak or painful) hold the cane opposite the "bad" leg.
- Always move the cane and the opposite leg together.
- To go up the stairs, take the first step up with your strong leg. Then, move the cane and the "bad" leg to the same step.
- To go down the stairs, take the first step down with the cane and the "bad" leg. Then, lower the strong leg to that same step.

Using a Walker

To use a walker for safer travels:

- Adjust your walker to your height.
- Roll the walker forward as you take steps standing straight in the center of the walker.
- Learn to use the hand brakes correctly.

To sit on the seat of the walker:

- Lock firmly in place.
- Turn around slowly; transfer one hand to the opposite walker handle. Keep hands on both handles as you sit down.

To stand up from a chair or bed with your walker:

- Position walker in front of you and lock the brakes.
- Push up from the bed or chair; the walker could tip if you pull on it.
- Unlock brakes before you start walking.

To transfer to a chair with your walker:

- Walk to the chair and turn around using the walker.
- Back-up to the chair until the back of your legs touch the seat.
- Lock the brakes, reach for chair armrest for support, and sit down.



Hazards In and Around Your Home:

Safe surroundings contribute to 30% of both indoor and outdoor falls. Poor lighting, unsafe footwear, and icy sidewalks are just a few of the environmental hazards that cause people to fall.

What to do:

- Identify unsafe areas inside and outside your home.
- Complete the checklist on the following pages. Your risk of falling increases with the number of hazards identified with a "No" answer.
- Start today to make changes to reduce the hazards in your home.
- Report hazards outside your home to the proper authorities.
 - a. **In an apartment building, store, or restaurant:** contact the owner or manager.
 - b. **In a shopping mall:** contact the mall authority.

Reducing Your Risk: Exercise

Inactivity, chronic disabilities such as diabetes and arthritis, abnormal blood pressure and changes associated with normal aging can lead to gait and balance disorders and loss of mobility. Regular physical activity and exercise will increase muscle strength, improve coordination, and help to prevent falls.

Stay Active

- Flexibility activities (e.g. Tai Chi or gardening).
- Strength and balance activities (e.g. climbing stairs, or wall push-ups).

What to do:

- Talk to your doctor before you start an exercise program.
- Tell your doctor about changes in balance.
- Avoid sudden changes in position.
- Never bend down all the way to the floor, and avoid getting up quickly after stooping.
- Make sure the exercises you choose are beneficial for you.
- Make your activities as enjoyable as possible. Find a buddy!
- Find out about exercise/activity programs for seniors in your area.

Medication

Seniors are more at risk of falls if they take:

- Four or more medications daily.
- Medications to help them sleep or calm their nerves (sedatives).⁶

WARNING: Side effects of medications such as dizziness or feeling light-headed can also increase your risk of falling. Some medications react with others and this may increase side effects.

What to do:

- Review all your medications with your doctor every six months.
- Ask your doctor or pharmacist about the side effects of the medication you take.
- Take medications correctly as indicated. Use a medication box.
- Tell your doctor if your medication makes you dizzy or light-headed.
- Avoid taking alcohol with medications.
- Talk to your pharmacist before you take non-prescription, over-the-counter, and herbal remedies.
- Never take someone else's medication.
- Instead of taking medication to help you sleep, consider alternatives such as listening to soft music, reading, or relaxation exercises.
- Talk to your doctor if insomnia persists.
- Keep a list or record of all your medications with you at all times.
- Shop at one pharmacy to have all your prescriptions filled.
- Return all expired medications to your pharmacist.

Home Assessment

Throughout Your Home

- ☐ Floors are not slippery. Spills are wiped up promptly.
- ☐ Pathways are clear of extension cords and other objects.
- ☐ Rugs have no ripples or tears.
- ☐ Scatter mats are removed or securely taped to the floor.
- ☐ Low tables are removed from the middle of the living room.
- ☐ All furniture is sturdy.
- ☐ Chairs have armrests and are the correct, comfortable height.
- ☐ All light fixtures have a minimum of 60 watt bulbs. Good lighting is installed in and around the house.
- ☐ Entrance to every room has a light switch.
- ☐ Stepladders or step stools are never used.
- ☐ Items used every day are stored within easy reach.
- ☐ Exterior stairs are kept free of ice and snow. Sprinkle grit or non-clumping cat litter.

Entrance

- ☐ Doors open easily.
- ☐ There is a sturdy seat with armrests.
- ☐ Mail is within easy reach.
- ☐ Exterior and interior lighting is good.
- ☐ Outside pathways are free of lawn furniture, hoses and other objects.

Stairs (Inside and Outside)

- ☐ Stair edges are marked with contrasting colour.
- ☐ All steps are the same height and the same depth.
- ☐ Stairs are well lit with a light switch at the bottom and top of stairs.
- ☐ Stairs have a non-slip surface and are in good repair.
- ☐ Handrails are present on both sides of stairs.
- ☐ Handrail height feels comfortable when used for support.
- ☐ Handrails extend 12 inches beyond top and bottom steps.

- ☐ Hand wraps around two thirds of handrail.
- ☐ Stairs are free of clutter or any objects at all times.

Bathroom

- ☐ Bathtub plug is easy to reach; and to use.
- ☐ Full-length rubber bathtub mat is used for every bath or shower.
- ☐ There are at least two grab bars in the tub area.
- ☐ Portable grab bars (on the side of the tub) do not move when used for support.
- ☐ Rug outside the bathtub has a rubber backing.
- ☐ If you have problems getting into or out of the bathtub:
 - Use a bath seat
 - Use a hand held shower
 - Ask for help with bathing
- ☐ If you have problems sitting on or getting up from the toilet:
 - Use raised toilet seat
 - Use a grab bar conveniently located

Bedroom

- ☐ A telephone is easily reached from the bed.
- ☐ A lamp and flash-light are easily reached from the bed.
- ☐ The bed is the correct height.

Personal Habits

- ☐ I move slowly after lying or sitting to prevent dizziness; and sit on the side of the bed a few minutes before I stand.
- ☐ I do not hurry.
- ☐ I always wear well-fitted shoes or slippers with closed and low heels and non-slip soles.
- ☐ I do not use bath oil and I use liquid soap to avoid bending for soap bar.
- ☐ I do not wear long skirts, long house coats, or loose slacks that I might trip or step on.
- ☐ I turn on a night-light before I go to bed.
- ☐ I turn on a light when I get up at night.
- ☐ I avoid using a ladder or step-stool and ask for someone to help to reach high objects.
- ☐ Living alone, I use a Personal Emergency Response Calling Service or I buddy with a neighbour, family or friend for a daily phone call.

Notes

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