



# FAMILY

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## Preventing Falls in the Elderly

no. 10.242

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### Quick Facts...

The risk of falling increases with age and is greater for women than for men.

Two-thirds of those who experience a fall will fall again within six months.

A decrease in bone density contributes to falls and resultant injuries.

Failure to exercise regularly results in poor muscle tone, decreased strength, and loss of bone mass and flexibility.

At least one-third of all falls in the elderly involve environmental hazards in the home.

### Causes and Prevention

The causes of falls are known as risk factors. Although no single risk factor causes all falls, the greater the number of risk factors to which an individual is exposed, the greater the probability of a fall and the more likely the results of the fall will threaten the person's independence.

Many of these risk factors are preventable. As obvious as it may sound, a lack of knowledge about risk factors and how to prevent them contributes to many falls. Some people believe that falls are a normal part of aging, and as such are not preventable. Lack of knowledge leads to lack of preventive action, resulting in falls.

Discussed below are five key risk factors of falls among older adults. Preventive measures for each factor are briefly listed. No attempt is made to provide a comprehensive description of preventive measures. Refer to the references listed at the end of this fact sheet for more detailed information.

### Factor #1: Osteoporosis

Osteoporosis is a condition wherein bones become more porous, less resistant to stress, and more prone to fractures. Caused by hormonal changes, calcium and vitamin D deficiency, and a decrease in physical activity, osteoporosis is a chief cause of fractures in older adults, especially among women.

What is debatable is whether brittle bones break after a fall, or break when stressed and in turn cause a fall. In either event, a decrease in bone density contributes to falls and resultant injuries.

#### Prevention Tips

- Eat or drink sufficient calcium. Postmenopausal women need 1,500 mg of calcium daily. Calcium-rich foods include milk, yogurt, cheese, fish and shellfish, selected vegetables such as broccoli, soybeans, collards and turnip greens, tofu and almonds.
- Get sufficient vitamin D in order to enhance the absorption of calcium into the bloodstream. Vitamin D is formed naturally in the body after exposure to sunlight, but some older adults may need a supplement.
- Regularly do weight-bearing exercises.

### Factor #2: Lack of Physical Activity

Failure to exercise regularly results in poor muscle tone, decreased strength, and loss of bone mass and flexibility. All contribute to falls and the severity of injury due to falls.

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## Web Sites

Administration on Aging: [www.aoa.dhhs.gov](http://www.aoa.dhhs.gov)

Aging Network Services: [www.agingnets.com](http://www.agingnets.com)

American Academy of Family Physicians: [www.aafp.org](http://www.aafp.org)

American Association of Retired Persons: [www.aarp.org](http://www.aarp.org)

Andrus Gerontology Center: [www.usc.edu/dept/gero](http://www.usc.edu/dept/gero)

Elderweb: [www.elderweb.com](http://www.elderweb.com)

Home Modification Resource Center: [www.homemods.org](http://www.homemods.org)

Mayo Clinic: [www.mayoclinic.com](http://www.mayoclinic.com)

National Council on Aging: [www.ncoa.org](http://www.ncoa.org)

National Institute on Aging: [www.nih.gov/nia](http://www.nih.gov/nia)

National Osteoporosis Foundation: [www.nof.org](http://www.nof.org)

National Safety Council: [www.nsc.org](http://www.nsc.org)

Senior Alternatives: [www.senioralternatives.org](http://www.senioralternatives.org)

Senior Friendly: [www.seniorfriendly.com](http://www.seniorfriendly.com)

U.S. Consumer Product Safety Commission: [www.cpsc.gov](http://www.cpsc.gov)

## Prevention Tips

- Engage regularly (e.g., every other day for about 15 minutes daily) in exercise designed to increase muscle and bone strength, and to improve balance and flexibility. Many people enjoy walking and swimming.
- Undertake daily activities in a safe manner, such as reaching and bending properly, taking time to recover balance when rising from a chair or bed, learning the proper way to fall, and learning how to recover after a fall.
- Wear proper fitting, supportive shoes with low heels or rubber soles.

## Factor #3: Impaired Vision

Age-related vision diseases can increase the risk of falling. Cataracts and glaucoma alter older people's depth perception, visual acuity, peripheral vision and susceptibility to glare. These limitations hinder their ability to safely negotiate their environment, whether it be in their own home or in a shopping mall. Young people use visual cues to perceive an imminent fall and take corrective action. Older adults with visual impairments do not have this advantage to the same extent.

## Prevention Tips

- Have regular checkups by an ophthalmologist to discern the extent of age-related eye diseases such as cataracts and glaucoma.
- Use color and contrast to define balance-aiding objects in the home (e.g., grab bars and handrails).
- Add contrasting color strips to first and last steps to identify change of level.
- Clean eye glasses often to improve visibility.

## Factor #4: Medications

Sedatives, anti-depressants, and anti-psychotic drugs can contribute to falls by reducing mental alertness, worsening balance and gait, and causing drops in systolic blood pressure while standing. Additionally, people taking multiple medications are at greater risk of falling.

## Prevention Tips

- Know the common side effects of all medications taken.
- Talk with your physician or pharmacist about ways to reduce your chances of falling by using the lowest effective dosage, regularly assessing the need for continued medication, and the need for walking aids while taking medications that affect balance.
- Remove all out-of-date medications and those no longer in use.
- Have a physician or pharmacist conduct a "brown bag" medicine review of all current medications.
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- Limit intake of alcohol as it may interact with medications.

## Factor #5: Environmental Hazards

At least one-third of all falls in the elderly involve environmental hazards in the home. The most common hazard for falls is tripping over objects on the floor. Other factors include poor lighting, loose rugs, lack of grab bars or poorly located/mounted grab bars, and unsteady furniture.

## Prevention Tips

It is useful to conduct a walk-through of your home to identify possible problems that may lead to falling. A home visit by an interior designer or occupational therapist might also be useful in that they are trained to identify risk factors and recommend appropriate actions.

### Outdoors

- Repair cracks and abrupt edges of sidewalks and driveways.
- Install handrails on stairs and steps.
- Remove high doorway thresholds Trim shrubbery along the pathway to the home.
- Keep walk areas clear of clutter, rocks and tools.
- Keep walk areas clear of snow and ice.
- Install adequate lighting by doorways and along walkways leading to doors.

### All Living Spaces

- Use a change in color to denote changes in surface types or levels.
- Secure rugs with nonskid tape as well as carpet edges.
- Avoid throw rugs.
- Remove oversized furniture and objects.
- Have at least one phone extension in each level of the home and post emergency numbers at each phone.
- Add electrical outlets.
- Reduce clutter.
- Check lighting for adequate illumination and glare control.
- Maintain nightlights or motion-sensitive lighting throughout home.
- Use contrast in paint, furniture and carpet colors.
- Install electronic emergency response system if needed.

### Bathrooms

- Install grab bars on walls around the tub and beside the toilet, strong enough to hold your weight.
- Add nonskid mats or appliques to bathtubs.
- Mount liquid soap dispenser on the bathtub-wall.
- Install a portable, hand-held shower head.
- Add a padded bath or shower seat.
- Install a raised toilet seat if needed.
- Use nonskid mats or carpet on floor surfaces that may get wet.

### Kitchen

- Keep commonly used items within easy reach.
- Use a sturdy step stool when you need something from a high shelf.
- Make sure appliance cords are out of the way.
- Avoid using floor polish or wax in order to reduce slick surfaces.

### Living, Dining and Family Rooms

- Keep electrical and telephone cords out of the way.
- Arrange furniture so that you can easily move around it (especially low coffee tables).
- Make sure chairs and couches are easy to get in and out of.
- Remove caster wheels from furniture.
- Use television remote control and cordless phone.

## Bedroom

- Put in a bedside light with a switch that is easy to turn on and off (or a touch lamp).
- Have a nightlight.
- Locate telephone within reach of bed.
- Adjust height of bed to make it easy to get in and out of.
- Have a firm chair, with arms, to sit and dress.

## Stairways, Hallways and Pathways

- Keep free of clutter
- Make sure carpet is secured and get rid of throw rugs.
- Put non-slip threads on bare, wooden steps.
- Install tightly fastened hand rails running the entire length and along both sides of stairs.
  - Handrails should be 34 inches high and have a diameter of about 1.5 inches.
  - Apply brightly colored tape to the face of the steps to make them more visible.
  - Optimal stair dimensions are 7.2 inch riser heights with either an 11 or 12 inch tread width.
  - Have adequate lighting in stairways, hallways and pathways, with light switches placed at each end.

### **Essential Features of a Physical Exam from Your Doctor:**

*Vital Signs*

*Mental Status Testing*

*Cardiac*

*Musculoskeletal*

*Neurologic*

*Proprioception*

*Vision*

*Hearing*

*Gait and balance testing*

## Statistics

- The risk of falling increases with age and is greater for women than men.
- Annually, falls are reported by one-third of all people 65 or older.
- Two-thirds of those who fall will fall again within six months.
- Falls are the leading cause of death from injury among people 65 or over.
- Approximately 9,500 deaths in older Americans are associated with falls each year. The elderly account for seventy-five percent of deaths from falls.
- More than half of all fatal falls involve people 75 or over, only 4 percent of the total population.
- Among people 65 to 69, one out of every 200 falls results in a hip fracture, and among those 85 or over, one fall in 10 results in a hip fracture.
- One-fourth of those who fracture a hip die within six months of the injury.
- The most profound effect of falling is the loss of independent functioning. Twenty-five percent of those who fracture a hip require life-long nursing care. About 50 percent of the elderly who sustain a fall-related injury will be discharged to a nursing home rather than return home.
- Most falls do not result in serious injury. However, there is often a psychological impact. Approximately 25 percent of community-dwelling people 75 or over unnecessarily restrict their activities because of fear of falling.
- The majority of the lifetime cost of injury for people 65 or over can be attributed to falls.

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