

SINCE YOU CARE

A Series of Guides from **MetLife** in Cooperation with the National Alliance for Caregiving

Falls and Fall Prevention

About the Subject

Falls are the leading cause of injury-related visits to the emergency room in the U.S. and the primary cause of accidental death in people over age 65. Each year more than one-third of older adults experience a fall, and between 20% and 30% of those falls result in moderate to severe injuries such as hip fractures or head injuries. In 2004, about 1.8 million individuals age 65 and over received emergency room treatment for fall-related injuries, with 433,000 requiring hospitalization. Additionally, in that same year, more than 14,900 people age 65 and over died from fall related injuries.¹

The risk for death, serious injury, and disability from falls increases as one ages. Close to 85% of deaths from falls in 2004 were among individuals age 75 and over. Those in this age group who fall are four to five times more likely to be admitted to a nursing home for a year of more.²



MetLife

Caregivers face many challenges as they search for information and make decisions about how best to provide care to their loved ones. To help meet their needs,

MetLife offers SinceYouCare® — a series of guides which provide practical suggestions and useful tools on a variety of specific care-related products.

According to an AARP analysis of data from the 1997 and 1998 National Health Interview Survey (NHIS), among older Americans most falls occur inside the home (55%) or outside but near the house (23%). Only 22% take place away from home. This is quite different from the pattern in other age groups. For instance, among those ages 35-64, only 26% of falls occur inside the house, 26% outside the house but nearby while 48% occur away from home. About 43% of falls among older individuals both indoors and outdoors occurred on the ground level, not from a height, with 14% happening from stairs or a step, 11% from the curb, and 9% from a chair, bed, or other furniture. About 4% involved the bathtub, shower, or toilet.³

In looking at fall injuries among older persons in the above study, 59% of fall injuries relate to slipping, tripping or stumbling, 22% to loss of balance, dizziness, fainting, or seizure and 19% other miscellaneous causes. Among older persons injured in falls, 28% have short or long-term limitations in one or more activities of daily living (ADLs), such as bathing or dressing, or instrumental activities of daily living (IADLs), such as shopping and meal preparation.⁴

Older adults who have had a fall often fear falling again and in response reduce their level of activity. This actually serves as a risk factor, since a reduction in activity can lead to a decline in physical abilities and actually increase the risk of falling. As a caregiver, it is important for you to understand this and other risk factors related to falls and know the steps you can take to minimize their impact. This guide is intended to look at key considerations and preventive measures to reduce the risk of fall and injury to your family member.

Things You Need to Know

Aging often causes changes in vision, hearing, reflexes, coordination, and strength. There may be the progression of chronic illnesses such as diabetes, heart disease, and arthritis, or acute events such as a heart attack or stroke. While the changes in eyesight and hearing often cannot be stopped, nor a heart attack or stroke always foreseen, there are measures that can be taken to help prevent falls.

Risk Factors

Falls can have an especially significant impact on individuals who are already in need of assistance. Recognizing the risks that may

impact your loved one is a first step toward minimizing his or her chance of falling. It is important to understand that the more risk factors individuals have, the greater the likelihood is that they will fall. In general, risk factors can be grouped into two categories:

- internal factors
- external factors

Internal Factors

Bones

- As people age, their bones become more porous, weaker, and more vulnerable to fractures. Falling and having osteoporosis may increase the possibility of a fracture. Bone density testing can diagnose osteoporosis and monitor the progress of its treatment. There are measures that can be taken to combat the development and progression of osteoporosis. Medication, diet, and regular weight bearing exercise can help prevent deterioration of the bone in both men and women.

Eyes

- Diseases of the eye, such as glaucoma, cataracts, and macular degeneration, can increase the risk of falls. These diseases can alter depth perception and peripheral vision, cause blurriness, and increase sensitivity to glare. It is important for

your loved one to have regular eye examinations, wear properly fitted eyeglasses, and take eye drops as prescribed.

Muscles, Balance, and Gait

- Issues related to muscle strength, balance, and gait can be significant risk factors in falls. Older individuals who have weak leg muscles, poor balance, or difficulty walking are more likely to fall than others. Lack of exercise or medical problems, such as arthritis, may contribute to problems in these areas. Treatment for a contributing medical problem and/or exercise can, in many instances, help to improve difficulties in these areas. Check with

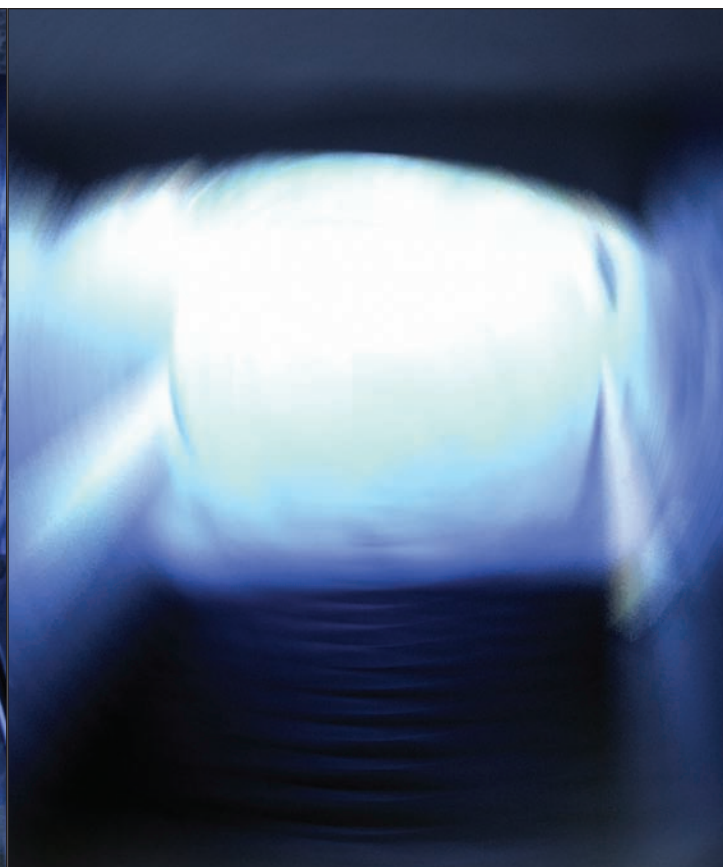
your loved one's physician to determine what exercise would be appropriate for him or her. Sometimes a physical therapist, with an order from the doctor, can evaluate the problem and provide an exercise regimen to promote improvement.

Diseases

Certain diseases or medical conditions can pose an increased risk for falls. It is important that symptoms such as muscle weakness, light-headedness, dizziness, decreased sensation in the arms and legs, and difficulty with balance and walking be evaluated by a physician to determine the cause of the symptoms and initiate treat-

ment or modify existing treatment, where possible, to address the problem. The following are examples of conditions that can increase an individual's risk of falls.

- Parkinson's disease impacts gait, balance, and coordination.
- Alzheimer's disease distorts judgment and perceptions of physical limitations. In later stages limited mobility and impaired judgment put the individual at a high risk for falls.
- Diabetes can lead to neuropathy, altering sensory perception such as lack of feeling in the legs and feet. Neuropathy can put individuals at a high risk for falls.



- Multiple Sclerosis (MS), Amyotrophic Lateral Sclerosis (ALS), and similar disorders can affect balance, gait, coordination, and muscle strength posing a high risk for falls.
- Hypotension (low blood pressure) can cause lightheadedness and dizziness especially when changing positions (e.g. going from lying to sitting or sitting to standing) and can lead to falls.
- Inner ear infections can cause dizziness and balance problems, increasing the risk of falling.
- Strokes can lead to weakness or paralysis and an increased risk for falls.

External Factors

Medications

- Medications used to treat both acute and chronic health care problems can sometimes increase an individual's risk for falling. The use of multiple medications leads to a greater chance that someone might fall. Medications can cause changes in mental alertness, balance, a person's ability to walk, and alterations in blood pressure leading to dizziness. For instance, a medication used to treat high blood pressure may result in a lowering of the blood pressure too quickly when someone changes position, causing lightheadedness and weak-

ness. Tranquilizers and anti-depressants can cause changes in mental status and alertness, as well as excessive fatigue.

- It is important to be alert to potential side effects of any medications your loved one may be taking and any interactions medications may have with each other. When considering side effects, do not forget to include over-the-counter medications and dietary supplements. They

too can have side effects or interact with other medications. Your family member's pharmacist and doctor are important resources to answer questions about side effects. You should consult with them whenever your loved one is given a new medication. Always be sure to alert any doctor your family member may be seeing to all of the medications he or she is taking, both those purchased



over-the-counter and those prescribed by other doctors.

Alcohol

- Alcohol is metabolized more slowly as a person ages and can cause alterations in cognition and perception of spaces and events, thereby increasing the risk for falls. Alcohol, in conjunction with medications, can cause increased fatigue and confusion. Alcohol intake should be limited so as not to impair balance, coordination, and mental alertness.

Environmental Hazards

- As discussed earlier, the majority of falls among older Americans occur either inside the home or just outside the home. Environmental hazards both in and outside of the house often contribute to falls. These include:
 - poor lighting,
 - cluttered pathways,
 - uneven surfaces,
 - stairways without railings,
 - bathtubs and showers without grab bars,
 - furniture that is too high or too low for an individual to get up from or on to safely,
 - throw rugs,
 - loose carpeting,
 - wet floors, and
 - icy or wet pavement outside the house.

- While some risk factors such as the progression of a chronic illness like Parkinson's disease are more difficult to manage, eliminating or modifying other risk factors such as those in the environment can go a long way toward preventing your loved one from falling.

Helpful Hints

Fall Prevention

A comprehensive fall prevention program should consist of a medical evaluation that includes assessment of blood pressure, vision, hearing, balance, muscle loss, mental status, and a review of medications. It should also include a thorough evaluation of the environment in which the older person lives.

You can check with your local Area Agency on Aging, which can be located by accessing the *Eldercare Locator* (see *Resources to Get You Started*) to see if they can suggest programs or individuals who can assist with an in-home safety evaluation program. Sometimes, occupational therapists can come to the home to evaluate the bathroom and general living quarters and suggest safety improvements. Changes needed may be as simple as installing grab bars in a shower

or as complex as building ramps, widening doorways, and installing security systems. Home modification and maintenance can make the living environment a safer place for older adults and reduce the possibility of a fall.

To Help Prevent Falls

There are a number of steps you can take to help reduce your family member's risk of falls. These include assuring that he or she:

- changes positions slowly to prevent falls related to drops in blood pressure. When first getting up in the morning, it is wise to sit at the edge of the bed for a short time before standing up,
- wears supportive, low heeled, rubber-soled shoes,
- exercises caution when walking on thick pile carpets,
- does not wear smooth-soled slippers or socks on smooth floors such as wood or linoleum,
- uses caution when walking outdoors, especially when it is wet or icy,
- limits intake of alcohol,
- does not wear glasses that are meant for reading when performing activities other than reading, and
- takes medications as prescribed and reports any apparent side effects.

It is important that your loved one understands how to use any prescribed assistive devices (e.g. wheelchairs, canes, and walkers) properly and keeps them in good working order. Assistive devices if not used properly or if not in working order (e.g. worn down rubber on the bottom of a cane) can actually increase rather than reduce the risk of falls. A physical therapist can assist with training in the use of assistive devices and help evaluate the appropriate device for a particular individual.

If your family member has cognitive problems, you and other caregivers will need to watch for potential side effects of medications, and provide supervision to reduce his or her risk of falls. As a caregiver, you may need to advocate on behalf of him or her with health care professionals and assure that they are aware of any health related changes, apparent changes in vision, gait, strength, or mental alertness or signs that he or she may be experiencing side effects from medication. Early evaluation and intervention can help to prevent a fall.

If your family member is at risk for falling and is alone at times, you may want to obtain a personal emergency response system, so that he or she can call for help in the event of an emergency. The system would typically have him or her wear a watch-like band or pendant

with a button he or she can hit should assistance be needed e.g. if your loved one has fallen. For more information on this product and its features as well as the costs involved you can go to www.alertusa.org or www.lifelinesys.com or call Lifeline at 1-800-380-3111.

Helpful Home Modifications

In addition to taking the steps above to help prevent falls, it is important to look at the living environment and potential changes that can reduce the risk of falls. These include changes related to lighting, access, and mobility.

Lighting

- Assure that all rooms are well and evenly lit.
- Use night lights in halls and bathrooms for the evening.
- Avoid very bright lights that could increase glare.
- Have a light by the bedside or a flashlight that your loved one can use if he or she needs to get up during the night.
- Be sure that lighting is bright enough in hallways, stairways, and bathrooms.
- Place light switches at the top and bottom of the staircase.
- If your family member is out in the evening, make sure that all walkways, stairways, and entries to the house are well lit to prevent falls when returning home.

Access

- Keep walkways clear of electrical cords or telephone wires.
- Arrange furniture so it does not interfere with walking.
- Check to see if thresholds present a tripping risk; widen doorways, if possible.
- Make sure that furniture is not too low to the floor, or too high to allow your family member to get up from or on to without difficulty.
- Remove throw rugs and secure carpets.
- Ask family, friends, or caregivers to always return furniture to its original location. This is especially helpful if your loved one is sight-impaired.
- Make phones easily accessible from various rooms in the home, so that your family member will not have to get up quickly and risk falling when trying to answer the phone.
- Make certain living areas are free from clutter to avoid the risk of your loved one tripping and falling.
- Make certain daily items that your loved one needs to use are easily accessible so that he or she does not have to get up on a stool or ladder or bend over to get items.

Mobility

- Install handrails on both sides of stairways, if possible.



- Mark the first and last stair with a strip of bright paint or colored adhesive tape made specifically for stair steps.
- Place non-skid strips in the tub or shower.
- Install grab bars in the tub or shower and next to the toilet.
- Install an elevated seat on the toilet if it is too low and your loved one has difficulty getting on and off.

If you need to hire a contractor for home modifications, be sure that the contractor is reliable. Use recommendations from friends, check references, insist on a valid contract, do not pay in cash, and do not pay the bill in full until the job is

complete. You can check with your local Better Business Bureau or your city/county Consumer Affairs Office regarding the contractor's reliability and performance record.

Resources to Get You Started

Books and Publications

How To Care for Aging Parents

This book is a useful starting point for those finding themselves in a caregiver's role for parents or any other older relative. It provides information on health care issues, caregiver concerns, community and facility based services as well as an extensive listing of helpful agencies

and organizations, with contact information to assist caregivers. It includes a section with information and tips specific to safety and fall prevention. Morris, Virginia, (2004), Workman Publishing Company, \$18.95
ISBN: 0761134263

The 36-Hour Day: A Family Guide to Caring for Persons With Alzheimer Disease, Related Dementing Illnesses, and Memory Loss in Later Life

This book provides valuable information for families coping with Alzheimer's and other similar disorders. It gives factual information related to both the physical and psychological aspects of the disorders and the impact they have on the caregivers involved. The book looks at safety concerns, including falls that are present with dementia, and provides guidance for caregivers to address these concerns. Mace, N.L., Rabins, P.V., (2006). Mass Market Paperback, \$9.99
ISBN: 0446610410

Balance Your Life: A Guide to Preventing Falls

This 28-page guide, produced by the New York Presbyterian Hospital, provides an overview of the factors that can increase the chance of falling and measures that can be taken to reduce the risk. It covers home safety measures, use of assistive devices, health issues,

medication concerns, and vision changes. It discusses the importance of exercise as a preventive measure and provides illustrations and guidelines for exercising. The brochure can be downloaded and printed at: www.nyprehabmed.org/pdf/Falls_BROCHURE.pdf.

Internet Sites

Caregiver Adaptations to Reduce Environmental Stress (CARES)

The National Resource Center for Supportive Housing and Home Modification, with a grant from the Administration on Aging (AoA), Department of Health and Human Services as part of the National Family Caregiver Support Program, has developed a program called “Caregiver Adaptations to Reduce Environmental Stress” (CARES). The program is intended to encourage improved systems of supportive services, including assistive devices and home modification to reduce the strain on caregivers.

The site includes a brochure and fact sheets in five languages related to home modifications and assistive devices that can assist caregivers. Access the site at: <http://homemods.org/folders/cares-project/index.shtml> and click on “Center Publications.” Caregivers can also obtain a listing of helpful resources by clicking on the heading “Link” at the web address above.

Dynamic Living

This site offers products and equipment to make life easier and safer. It may be accessed on the Internet at www.dynamic-living.com, or call 888-940-0605, Monday-Friday 9 a.m. to 6 p.m. EST.

MedlinePlus

MedlinePlus brings together information from the U.S. National Library of Medicine (NLM), the National Institutes of Health (NIH), and other government agencies and health-related organizations. It provides information on medical conditions, medications, healthy living, and the latest health related news. It includes an extensive section on falls with a tutorial with frequently asked questions and a slide show on how to prevent falls. It can be accessed at: www.nlm.nih.gov/medlineplus/falls.html.

National Association of Area Agencies on Aging (n4a)

The n4a at www.n4a.org is the umbrella organization for the 655 Area Agencies on Aging throughout the United States, which provide information and services for older adults and their families. The federally-funded Eldercare Locator, administered by n4a, provides callers with information about local services by zip code. Call 800-677-1116, 9:00 a.m.-8:00 p.m. ET, or access it at www.eldercare.gov.

National Center for Injury Prevention and Control

The National Center for Injury Prevention and Control, part of the Centers for Disease Control and Prevention, provides an on-line program with tips for preventing falls. It covers the benefits of exercise, measures to promote home safety, the importance of reviewing medications and their possible side effects with a health care professional, and issues related to vision and fall prevention. The website can be accessed at: www.cdc.gov/ncipc/duip/spotlite/falls.htm. The site also contains a toolkit for preventing falls and offers two brochures, *What YOU Can Do To Prevent Falls* and *Check For Safety: A Home Fall Prevention Checklist for Older Adults*, which are available in English, Spanish and Chinese. They can be downloaded and printed or ordered through the website at: www.cdc.gov/ncipc/duip/fallsmaterial.htm.

Home Safety Checklist

This document is intended to be a starting point in helping to spot potential fall hazards in your family member's home.

Living Areas

	Yes	No
1. Are appliance, lighting, extension and phone cords out of the flow of traffic?	<input type="checkbox"/>	<input type="checkbox"/>
2. Are light switches conveniently located in each room?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are hallways well-lit, using non-glare bulbs?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are rooms and hallways free of obstruction such as boxes or plants?	<input type="checkbox"/>	<input type="checkbox"/>
5. Are all stairways well-lit, with sturdy handrails?	<input type="checkbox"/>	<input type="checkbox"/>
6. Are stairs painted with rough-textured paint or edged with non-stick tread?	<input type="checkbox"/>	<input type="checkbox"/>
7. Are stairways and walkways free of clutter?	<input type="checkbox"/>	<input type="checkbox"/>
8. Is wall-to-wall carpeting securely tacked down?	<input type="checkbox"/>	<input type="checkbox"/>
9. Are area rugs laid with a non-skid padding?	<input type="checkbox"/>	<input type="checkbox"/>
10. Are doorways and entry ways wide enough to accomodate your family member's needs?	<input type="checkbox"/>	<input type="checkbox"/>

Bath and Shower

1. Are there tightly secured grab bars on the wall next to the bathtub and toilet?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is there a bathmat or are there non-skid strips on the floor of the bathtub?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are the floor surfaces slippery when wet?	<input type="checkbox"/>	<input type="checkbox"/>

Be sure to periodically review these areas in your loved one's home for hazards.

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The National Resource Center for Safe Aging (NRCSA)

The National Resource Center for Safe Aging (NRCSA) was established to increase awareness and knowledge about injuries among older Americans by providing reliable and useful information to public health professionals, older adults, caregivers, and family members. It provides an online resource with articles, brochures, on-line courses, safety checklists, and links to other helpful websites. The website can be accessed at <http://www.safeaging.org/model/default.asp>.

The Do-Able Renewable Home

The Do-Able Renewable Home is an on-line resource created by AARP to provide information on how to make one's home safer in the face of challenges that may accompany aging including limited mobility, decreased strength or dexterity, and changes in vision and hearing. The site can be accessed at: www.homemods.org/library/drhome/. It provides information related to a number of impairments and looks at adaptations in various rooms to accommodate changes in ability.

The Fall Prevention Project

Temple University's Fall Prevention Project is a federally-funded grant project established to inform and educate older adults, health care practitioners and students about the causes of falls in older adults. Assessment, rehabilitation, and health promotion measures are discussed. *In-Home Safety Check* and *Check It Out* brochures with information about home safety, the causes of falls, and fall prevention are available in multiple languages. They can be ordered by e-mail or downloaded and printed from the website. The website also provides links to other resources for fall prevention. www.temple.edu/olderadult/.

The Wright Stuff-Health Care Products That Make Life A Little Easier

This site offers adaptive equipment and products to individuals with various health care needs. Access it on the Internet at www.thewright-stuff.com or call 877-750-0376, Monday-Friday, 8 a.m. to 5 p.m. CST.

Useful Tool

Attached within is a *Home Safety Checklist* to help you assess the fall prevention readiness of your family member's environment.

Endnotes

- ¹ *Falls Among Older Adults: An Overview*, Centers for Disease Control and Prevention <http://www.cdc.gov/ncipc/factsheets/adultfalls.htm>, accessed via internet 8/07.
- ² Ibid.
- ³ Kochera, A., *Falls Among Older Persons and the Role of the Home: An analysis of Cost, Incidence, and Potential Savings from Home Modifications*, AARP Public Policy Institute, Issue Brief Number 56, March 2002, http://assets.aarp.org/rgcenter/il/ib56_falls.pdf.
- ⁴ Ibid.

About the Authors of Since You Care

Since You Care guides are prepared by the MetLife Mature Market Institute in cooperation with the National Alliance for Caregiving and MetLife's Care Coordinators.

MetLife Mature Market Institute[®]
Staffed by gerontologists, the MetLife Mature Market Institute, part of the company's Retirement Strategies Group, has been providing research, knowledge management, education, and policy support for over ten years to Metropolitan Life Insurance Company, its corporate customers, and business partners. MetLife, a subsidiary of MetLife, Inc. (NYSE: MET), is a leading provider of insurance and other financial services to individual and institutional customers. For more information about the MetLife Mature Market Institute, please visit the Mature Market Institute's website at www.MatureMarketInstitute.com.

MetLife Care Coordinators are available to MetLife's long-term care customers and their caregivers to help identify and resolve caregiving questions and concerns through counseling and referral.

National Alliance for Caregiving
Established in 1996, the National Alliance for Caregiving is a non-profit coalition of national organizations that focuses on issues of family caregiving across the life span. The Alliance was created to conduct research, do policy analysis, develop national programs and increase public awareness of family caregiving issues.

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This booklet offers general advice, however, it is not a substitute for consultation with an appropriate professional. Please see a health care professional, attorney, or other appropriate professional when determining how the information and recommendations discussed in this booklet apply to your specific situation.