



Home Safety Guidelines for Older Adults

Housing Fact Sheets

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As seventy-year-old Alicia Lopez steps inside the front door of her ranch-style home, the screen door swings closed too fast, catching her finger as it slams. Her finger is bruised and slightly fractured.

Eighty-two-year-old George Caster bends down to check his garden along the perimeter of his mobile home. When he stands, he bangs his head on the casement window that has been opened overhead. He receives a nasty cut on the top of his head and a mild concussion.

While walking up a flight of stairs in her home, Evelyn Jackson, age seventy-nine, has a dizzy spell. She reaches for a railing to steady herself but finds none. She falls and sustains a leg injury.

Each year, millions of older adults are injured in their own homes. These injuries involve consumer products and architectural features ranging from doors to footstools to stairs. Injuries limit people's activities, cause considerable pain and suffering, may precipitate a decline in general health, and contribute to health care costs.

Fortunately, you can avoid many home injuries if you are aware of potential hazards and follow preventive measures to make your home safer. This fact sheet is intended to help you do more than simply be cautious in your home. Rather, we suggest that the first step toward preventing injury is to have accurate *knowledge* of what items in your home are most often involved in injuries among older adults. A recent study conducted at Cornell University suggests that older adults are not entirely accurate in their perception of home injury risks. They tend to overestimate the riskiness of some items and underestimate the riskiness of others. The second step in injury prevention is to review appropriate *safety measures* and to make modifications to your home to reduce risk. This publication summarized the findings of the Cornell University research, identifying features in the home that older adults and design professionals, such as interior designers and architects, tend to over- or under-estimate as being related to injury. Checklists are provided to help you improve the safety of your home.

The U.S. Consumer Product Safety Commission (CPSC) publishes annual injury rates for hundreds of products and architectural features, including the eighteen items examined in the Cornell study. The figures in Table 1 are an estimate of the number of injuries sustained by people over age sixty-five in one year.

Cornell researchers asked older adults and design professionals specializing in design for older people to estimate the risk of injury associated with eighteen household items. Their ratings were then compared with the CPSC annual home injury rates shown in Table 1. From this comparison, the accuracy of the participants' risk perception was assessed and the riskiness of certain products and architectural features was identified as being over- or underestimated.

Designers and older people were equally unable accurately to judge the riskiness of residential products and architectural features. Nonetheless, both groups recognized certain items such as stairs and bathtubs/showers to be among the most risky items examined in the study.

Research participants underestimated the riskiness of several items in this study (Table 2). Doors, which are third (among the eighteen items examined) in injury involvement among older people, were not considered very risky by either group. Both groups ranked doors twelfth. People often get their fingers, hands, or feet caught or slammed in a door.

Toilet-related injuries were also underestimated, especially by older adults. Most toilet-related injuries occur when one falls off the toilet or loses one's balance while standing and falls against the toilet. Riskiness of architectural features such as porches/balconies and windows was also underestimated. Many injuries involving porches or balconies result from slips on wet or icy surfaces. Sink-related injuries are also underestimated by both older people and design professionals. People often hit the sink while falling or slipping.

Both groups of participants also overestimated the injury risk of several items, including stoves, swimming pools, footstools and other stools, and hot water (Table 3).

The CPSC data show that injuries associated with some of the riskiest home products (floors and flooring material and stairs and steps) often involve a fall. In many cases a person might take a fall that is not caused by any particular product or architectural feature. Falls are most likely to occur in bedrooms, kitchens, bathrooms, and on stairs.

Injury Prevention Measures

Flooring materials, rugs, and carpets

Flooring materials, rugs, and carpets together account for more than 250,000 injuries among older people each year. Many of these injuries occur when a person trips on an uneven surface and falls. This is particularly likely where the surface changes from flooring to carpeting and there is a slight change in elevation. Falls also commonly occur if a person does not realize that a rug is present. This may happen if the lighting is too dim or the surroundings are unfamiliar. Falls may also result from slipping on a throw rug that is not securely affixed to the floor.

Use the following list to check the safety of floors, rugs, and carpets in your home.

Lighting is sufficient at all times of day. *Good visibility, enabling persons to see where rugs begin and end as uneven spots in carpets, will help prevent tripping. Install night-lights where appropriate.*

Carpeting is wall-to-wall and low pile.

Carpet edges are tacked down.

Carpeting is adequately padded.

Throw rugs are securely attached to the floor so that they are not a trip hazard.

Hard floor surfaces are slip-resistant.

Floor wax, if used, is a nonskid wax.

Stairs and steps

The second greatest number of injuries occur on stairs and steps, especially during descent. People commonly miscalculate the dimensions of the stair because of poor lighting in the stairwell or trip because of uneven stair heights (risers) or clutter on the steps. A person's foot can get caught on stairs or stair coverings that are in poor condition. Sturdy railings on both sides of stairs can help reduce stair-related injuries.

Use the following safety checklist to help reduce the risk of injury on stairs in your home.

Steps, stairs, and landings are well lit. *Stairways should be lit such that steps are clearly visible but a slight shadow is cast on the steps. This will enhance depth perception and make it less likely for a person to misjudge a step. Light fixtures should not be in line with a person's direct light of sight as he or she goes up and down the stairs because this can create a blinding effect that can be hazardous.*

There is a light switch at the top and bottom of the stairs.

Step size and height are consistent. *For example, a 5-inch riser after a series of 7-inch risers can be a serious hazard.*

Stairs are free of clutter and debris.

Stair treads are dry, not wet or icy.

Carpeting, if present, is securely attached to all the steps on the stairs.

Edges of treads are clearly visible. *Dark stair coverings or busy carpet patterns can obscure step edges and make a misstep, trip, or fall more likely.*

Stair covering is in good condition. *Loose or torn covering on stairs can cause you to catch your foot and fall.*

Railings are securely attached to the wall.

Railings are installed on both sides of the stairs. *Railings must be securely attached to provide adequate support. Railings on both sides of the stairs ensure support regardless of which direction you might slip or trip. This is particularly important for individuals who have a stronger and weaker side of their body.*

Doors

The risk of injury associated with doors was most underestimated by both older adults and designers. Such injuries can happen for many different reasons relating to design, installation, or use. Common accidents occur when one walks into a sliding glass door, thinking that it is open; trips and falls into a door while closing or opening it; catches a hand or finger in a door; or pushes on the glass part of a door rather than on the handle or latch, causing the glass to shatter.

The following checklist may help you to reduce door-related injuries.

Sliding glass door has a decal at eye level. *This will help people avoid walking into the glass.*

Doors are properly installed. *Doors that are improperly hung may bind or stick and could cause someone to fall while trying to pull the door open.*

Doors swing out of traffic areas and away from other open doors.

Fingers and hands are kept clear of door hinges.

Flexible door stops are attached to the wall or hinge-mounted door stops are present.

Doors on springs (screen doors) do not swing closed too quickly to permit safe entry.

A shelf or bench is located near the front door. *A shelf or bench can provide a place to set your packages or to rest while you look for your keys. This may help you avoid dropping items or tripping as you open the door.*

Windows

Windows account for more than 8,000 injuries annually among the older population. Injuries often occur when windows are difficult to open or risky to clean.

To help prevent window-related injuries, complete the following checklist:

Windows open easily. *Electric window-opening devices can be installed.*

Screens are secure but removable.

Projecting windows open away from walkways and recreation areas. *You may plant shrubbery or install planters below projecting windows to prevent people from colliding with an open window.*

If windows are being replaced, new ones can be cleaned from inside the house.

Bathtubs and showers

Bathtubs and showers account from more than 26,000 injuries per year among the older population. Although research participants estimated the dangers of bathtubs and showers fairly accurately, some additional information and safety guidelines may be useful. Bathtub and shower injuries occur most often when a person slips on a slick tub or shower surface or when a bath mat slips or slides when stepped upon. Falls also occur when a person's hand slips on the side of the tub while getting in or out. A person may also be scalded by hot water in the tub or shower. This may occur if the faucet controls are poorly designed or difficult to read.

The following safety checklist can help you to reduce the risk of injury in your bathtub or shower:

Bathroom lighting is adequate. *Bathrooms should have good overall lighting so that puddles of water or other potential hazards will be easily visible. At the bathroom mirror; lighting at the sides rather than overhead is appropriate for tasks such as putting on makeup and shaving but is less harsh than overhead lighting. In addition, "warm color" fluorescent bulbs provide a soft, non-glare light.*

Water temperature controls are properly installed and clearly labeled.

Tub or shower has a nonslip floor surface. *If not, you can buy a nonslip mat or decals.*

Bath oils are used with care. If possible, apply oils outside of the tub, so that excess falls on a towel, not on a potentially slippery surface.

Tub or shower has at least one grab bar. *A towel rack is not sufficient to support a person's weight. Grab bars should be attached, through the tile, to structural supports in the wall. Alternatively, grab bars designed to attach to the side of the tub may be installed.*

Water temperature is safe (water heater is set at "low" or 120°F). *This can prevent scald injuries.*

Toilets

Injuries related to the toilet are among the most underestimated by older adults. A few simple guidelines can help minimize the likelihood of such an injury.

Grab bars are located near a toilet. *If you have difficulty standing up from a seated position, you may want to consider having sturdy grab bars installed on either side of your toilet.*

Toilet seat is approximately 18 inches from the floor. *A seat height between 17 and 20 inches will facilitate getting up from the toilet.*

Porches and balconies

Injuries involving porches and balconies rank seventh in frequency on our list of eighteen products. Many such injuries occur because of disrepair such as loose railings or posts. Other injuries result from slips on wet or icy surfaces.

The following checklist will help you assess the safety of balconies and porches on your home.

All floorboards on porch are well secured.

Rotten posts or railings have been replaced.

Balcony or porch railing is approximately 40 inches high.

Railing is secure.

Porch steps are in good repair and have railing on both sides.

We hope that this fact sheet has been informative and has helped you to improve the safety of your home. By taking a few simple steps, you may prevent a potentially serious injury. For more information, you may want to consult the following sources.

References

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