


# ASSISTIVE TECHNOLOGY AND OLDER ADULTS

## The Journey Through Caregiving

### Safety questions for the exterior and entrances include:

- Is there adequate lighting to see walkways and entrances?
- Are steps in good repair and do they have non-slip surfaces?
- Are there handrails for the steps and are handrails securely fastened?
- Do the handrails run continuously from the top to the bottom of the entire flight of stairs?



## Safety questions for the exterior and entrances include, cont.:

- Are walkways and entrances free of objects that could be tripped over?
- Can you clearly see the edges of steps?
- Are entrances wide enough to provide unobstructed entering with or without an assistive device, such as a wheelchair?



## Safety questions for proper lighting

- Do areas have adequate lighting for reading, seeing where one is walking, and performing activities?
- Are light bulbs the appropriate size and type for the lamp or fixture?
- Are light switches accessible to a person before entering rooms?
- Are lights glare-free?



## Safety questions for stairways

- Are stairways adequately lighted?
- Are handrails present on at least one side of the staircase?
- Are the handrails securely fastened to walls?
- Do the handrails run the entire length of the flight of stairs?
- Are the step edges clearly visible?
- Are stairways free of objects?
- Are light switches located at the top and bottom of stairs?



## Safety questions for flooring/rugs/obstructions

- Are carpet edges taped or tacked down?
- Are all rugs and mats slip-resistant?
- Is the flooring slippery?
- Are rooms free of obstructions to allow safe mobility?
- Are rooms set up to promote easy and safe mobility?



## Safety questions for electrical outlets and cords

- Are electrical cords in good condition?
- Do outlets and switches have cover plates?
- Are cords placed out of the flow of traffic?
- Are cords out from beneath furniture and rugs or carpeting?
- Do extension cords carry more than their proper load?



## Safety questions for telephones

- Are emergency numbers posted on or near telephones?
- Do you have access to a telephone if you fall?



## Safety questions for heaters

- Do heaters have a 3-prong plug or use an adaptor for grounding?
- Are heaters placed out of the way and away from flammable materials?
- Is there proper ventilation for wood burning heaters?



## Safety questions for alarms

- Are smoke detectors and carbon monoxide detectors properly located?
- Do the smoke detectors and carbon monoxide detectors work properly?
- Do you have an emergency exit plan in the event of a fire?



## Basement / Garage / Storage areas / Workshops

Safety questions for these areas are:

- Is there adequate lighting, especially in areas of power tool use?
- Are light switches located, so a person does not have to walk through a dark area?
- Are containers of flammable/hazardous liquids properly labeled and tightly capped?
- Are containers of flammable/hazardous liquids stored out of living areas and away from other materials that may cause sparks?
- Do power tools have a 3-prong electrical plug that is used as a grounding feature?



## Safety questions for the kitchen

- Are all flammable objects located away from the range?
- Do you wear clothing with short or close-fitting sleeves when using the range?
- Are ventilation systems working properly?
- Are all electrical cords located away from the sink and range?
- Are storage areas easily reached without having to stand on tiptoe or on a chair?



## Safety questions for the kitchen, cont.

- If you have a stepstool, is it in good condition, strong enough to support you, and does it have non-slip surfaces?
- Are chairs without wheels armrest equipped and of proper height for safe transfers?
- Are linoleum floors slippery?
- Do outlets have ground fault interruption?



## Living Room / Hallways

Safety questions for these areas include:

- Are chimneys clear of any material that may clog them?
- Has the chimney been cleaned in the past year?
- Is there a guard on the front of the fireplace to block embers and sparks?
- Are passageways well lit?
- Are exits and passageways kept clear of obstructions?
- Is all furniture at a height to allow for easy sitting and standing?



## Bedrooms

Safety questions for this area include:

- Are lamps or light switches within reach of each bed?
- Do you ever go to sleep with a heating pad that is turned on?
- Are beds of appropriate height to allow safe on and off transfers?
- Can you reach objects from closets and shelves without standing on tiptoe or on a chair?
- Do outlets have ground fault interruption?



## Safety questions for the bathroom

- Do bathtubs and showers have non-slip surfaces?
- Is the water temperature 120 degrees or lower?
- Are electrical appliances unplugged when not in use?
- Are electrical appliances and cords away from the sink and/or bathtub?
- Are medications properly labeled and stored in the containers they came in?
- Are toilet seats high enough to allow for ease in transfers?



## Safety questions for homes of persons with cognitive impairments include:

- Are safety hazards such as chemicals, power tools, heaters, appliances, knives, medications, and matches placed in locked cabinets, removed from the home, or modified so that they are inoperable if the person tries to use them?
- Are safety plugs placed in electrical outlets not being used?
- Is the home environment familiar to the individual?



## Modifications to lighting

- Add lighting to poorly lit areas of a home, both interior and exterior.
- Install motion sensitive lighting to the exterior of the home for security and visibility for safe mobility.
- Use the highest wattage bulb allowed for light fixtures.
- Use non-glare light bulbs.
- Lower light switches for people in wheelchairs to access.
- Install touch or rocker type light switches for persons with minimal hand use.



## Modifications to Water Controls

- Install a single-handed control that controls both temperature and water flow.
- Install hot water feeds and draining pipes to prevent scalding.
- Install thermostatic valves to regulate water temperature and prevent scalding.



## Modifications to Entrances/Doorways

- **Widen exterior walkways for safety.**
- **Widen entrances and doorways to provide easier access for both wheelchair users and non-users; minimum doorway width for wheelchair passage is 32 inches.**
- **Install handles, pulls, latches, and locks on doors that are easier to grasp with one hand and that do not require tight grasping, pinching, or twisting.**
- **Place lever, push types, or U-shaped handles over existing round doorknobs to allow easier opening of doors.**
- **Lower thresholds to allow safer and easier entrance for wheelchair users and non-users.**



## Modifications specific for wheelchair users include:

- Install mechanical lifts or ramps for accessibility to the home.
- Have a five foot level space inside and outside each doorway for easier mobility.
- Install kick plates on doors for protection from wheelchair footrests.
- Open doors outward, especially in small rooms, to provide more room to move.
- Install remote control doors or pneumatically assisted doors.



## Modifications for mobility

- Remove cords or place cords out of the way for safety and easier mobility.
- Rearrange rooms for better flow.
- Install grab bars for support.
- Provide areas to sit and rest in different areas for persons who fatigue easily.



## Modifications for storage

- If possible, locate all storage areas within the shoulder to waist area, eliminating the need to bend down or to stand on tiptoe.
- As with doors, replace cabinet and drawer hardware with handles, pulls, and latches that are easier to grasp with one hand and that do not require tight grasping, pinching, or twisting.



## Modifications for flooring / rugs / hallways

- Replace glaring or slippery flooring with non-glare and non-slip flooring.
- Remove any throw rugs that may be a fall hazard.
- Replace rugs without non-slip backing with rugs that have slip-resistant backing or add non-slip material to back of rugs.
- Widen hallways to four feet wherever possible, allowing enough room for easy mobility.



## Modifications for stairways

- Outline the edges of stairs with contrasting colored material to increase step visibility.
- Install treads to increase the traction of both outdoor and interior stairs.
- Install light switches at each end of the stairs to allow access to lighting.
- Install handrails.
- Install a stair lift to access all levels of a home.



## Modifications for telephone / communication

- Arrange telephones around the house to provide access in case of a fall.
- Tape emergency numbers to all phones.
- Install an intercom system for people with limited mobility to eliminate the need to get up.



## Modifications to the kitchen

- Install a wall oven for appropriate height and access.
- For wheelchair users, install or modify floor cabinets to allow toe space at the bottom for footrests.
- Use a side-by-side refrigerator with adjustable shelves and drawers.
- Install adequate counter space to allow for sliding of heavy items and to eliminate heavy lifting.



## Modifications to the kitchen, cont.

- Install lazy susans for easy access of items.
- Install easy-glide pull-out shelving to decrease the need for reaching and bending.
- Adapt or replace knobs on appliance controls to a larger size for easier use.
- Install ground fault interruption outlets.



## Modifications to the bedroom

- Rearrange furniture closer to light switches or more lamps closer to beds.
- Convert a room close to the bath and toilet rooms for convenient access.
- Elevate the bed to allow for easier transfers on and off the bed.



## Modifications to the bathroom

- Install a wide, walk-in shower with no lip for wheelchair users.
- Lower counters for wheelchair users.
- Eliminate throw rugs and replace with non-slip flooring or non-slip mats.
- Install raised toilet seats for easier transfers.
- Install grab bars in the shower/bath and by the toilet for stability and safety.
- Position toilet flushing device and toilet paper within easy reach.



## Modifications to the bathroom, cont.

- Configure fixtures and accessories so a person can easily maneuver without obstructions.
- Install automatic faucets, hand dryers, and soap/shampoo dispensers for a person with limited hand function and upper-body strength.
- Use a shower curtain instead of a shower door for easier access to the shower.
- Install an anti-scald device and a hand-held shower head.
- Install ground fault interruption outlets.




## Types of home modifications for low vision / blind

- Place Braille stickers on cabinets, drawers, etc. to label storage of items.
- Provide adequate lighting.
- Use color contrast of surfaces to improve visibility of items.
- Use touch indicators, raised letter, or voice output for items such as thermostats, stoves, and showers.



## Types of home modifications for low vision / blind, cont.

- Eliminate busy patterns on wallpaper, carpet, and rugs.
- Remove obstacles and clutter from commonly used paths in the home.
- Install grab bars with color contrast.
- Replace glass paneled doors with solid doors.



## Types of home modifications for hard of hearing / deaf

- Install closed loop or amplification devices in the home for increased hearing.
- Install alarms with bright flashing lights.
- Arrange furniture so all people are facing each other.



## Types of home modifications for cognitive impairments/dementia

- Install a burglar alarm and post a fire escape plan.
- Install smoke alarms with battery back-ups.
- Install emergency lighting in case of power failure.
- Label cabinets or remove doors on cabinets so the person can view the contents.
- Place signs on objects or rooms for better recognition.
- Paint rooms with neutral or pastel colors to provide a relaxed environment.