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This publication is a compilation of well-researched articles especially for homeowners. They include valuable information and tips for helping keep families safe and their homes in top condition.

Please enjoy it with my compliments!



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# Elderly Safety

## Aging in Place

"Aging in place" is the phenomenon describing senior citizens' ability to live independently in their homes for as long as possible. Those who age in place will not have to move from their present residence in order to secure necessary support services in response to their changing needs.

### The Baby Boomers

As the baby boomers age, the 60+ population will spike from roughly 45 million in recent years to more than 70 million by 2020. Research shows that baby boomers' expectations of how they will receive care differ from that of their parents' generation. Overwhelmingly, they will seek care in their own homes and will be less likely to move into congregate living settings.

Why do many senior citizens prefer to age in place?

Nursing homes, to many, represent a loss of freedom and a reduced quality of life. Here are a few good reasons why these fears are justified:

- In 2007, inspectors received 37,150 complaints about conditions in nursing homes. Roughly onefifth of the complaints verified by federal and state authorities involved the abuse or neglect of patients. Specific problems included infected bedsores, medication mix-ups, poor nutrition, and other forms of neglect.
- The proportion of nursing homes cited for deficiencies ranged from 76% in Rhode Island to as high as 100% in Alaska, Idaho, Wyoming and Washington, D.C.
- Many cases have been exposed in which nursing homes billed Medicare and Medicaid for services that were not provided.
- A significant percentage of nursing homes had deficiencies that caused immediate jeopardy or actual harm to patients.

### Aging-in-Place Inspections

Your Certified Master Inspector® may recommend corrections and adaptations to the home to improve maneuverability, accessibility, and safety for elderly occupants. Some such alterations and recommendations for a home are as follows:

Appliances:

1. microwave oven in wall or on counter;
2. refrigerator and freezer side by side;
3. side-swing or wall oven;
4. controls that are easy to read;
5. raised washing machine and dryer;
6. front-loading washing machine;
7. raised dishwasher with push-button controls;

8. stoves having electric cooktops with level burners for safely transferring between the burners; front controls and downdraft feature to pull heat away from user; light to indicate when surface is hot; and
9. replace old stoves with induction cooktops to help prevent burns.

Bathroom:

1. fold-down seat installed in the shower;
2. adjustable showerheads with 6-foot hose;
3. light in shower stall;
4. wall support, and provision for adjustable and/or varied-height counters and removable base cabinets;
5. contrasting color edge border at countertops;
6. at least one wheelchair-maneuverable bath on main level;
7. bracing in walls around tub, shower, shower seat, and toilet for installation of grab bars;
8. if stand-up shower is used in main bath, it is curbless and wide;
9. low bathtub;
10. toilet higher than standard toilet, or height-adjustable;
11. design of the toilet paper holder allows rolls to be changed with one hand;12. wall-hung sink with knee space and panel to protect user from pipes; and
13. slip-resistant flooring in bathroom and shower.

Counters:

1. base cabinet with roll-out trays;
2. pull-down shelving;
3. wall support, and provision for adjustable and/or varied-height counters and removable base cabinets;
4. upper wall cabinetry lower than conventional height;
5. accented stripes on edge of countertops to provide visual orientation to the workspace;
6. counter space for dish landing adjacent to or opposite all appliances;
7. glass-front cabinet doors; and
8. open shelving for easy access to frequently used items.

Exterior:

1. low-maintenance exterior (vinyl, brick, etc); and
2. low-maintenance shrubs and plants.

Entry:

1. sensor light at exterior no-step entry focusing on the front-door lock; 2.
non-slip flooring in foyer;

3. accessible path of travel to the home;
4. at least one no-step entry with a cover;
5. entry door sidelight or high/low peep hole viewer; sidelight should provide both privacy and safety;
6. doorbell in accessible location; and
7. a surface on which to place packages while opening door.

Electrical, Lighting, Safety and Security:

1. install new smoke and CO detectors;
2. install automated lighting, an emergency alert system, or a video-monitoring system;
3. easy-to-see and read thermostats;
4. light switches by each entrance to halls and rooms;
5. light receptacles with at least two bulbs in vital places (exits, bathroom);
6. light switches, thermostats, and other environmental controls placed in accessible locations no higher than 48 inches from floor;
7. move electrical cords out of the flow of traffic;
8. replace standard light switches with rocker or touch-light switches; and 9. pre-programmed thermostats.

Faucets:

1. thermostatic or anti-scald controls; 2.
lever handles or pedal-controlled; and
3. pressure-balanced faucets.

Flooring:

1. if carpeted, use low-density with firm pad;
2. smooth, non-glare, slip-resistant surfaces, interior and exterior; and 3. color and texture contrast to indicate change in surface levels.

Hallways:

1. wide;
2. well-lit; and
3. fasten down rugs and floor runners, and remove any that are not necessary.

Heating, Ventilation and Air Conditioning:

1. install energy-efficient units;
2. HVAC should be designed so filters are easily accessible; and
3. windows that can be opened for cross-ventilation and fresh air.

Miscellaneous:

1. 30-inch by 48-inch clear space at appliances, or 60-inch diameter clear space for turns;
2. multi-level work areas to accommodate cooks of different heights;
3. loop handles for easy grip and pull;
4. pull-out spray faucet;
5. levered handles;
6. in multi-story homes, laundry chute or laundry facilities in master bedroom;
7. open under-counter seated work areas; and 8. placement of task lighting in appropriate work areas.

Overall Floor Plan:

1. main living in a single story, including full bath;
2. 5x5-foot clear turn space in living area, kitchen, a bedroom and a bathroom; and
3. no steps between rooms on a single level.

Reduced Maintenance and Convenience Features:

1. easy-to-clean surfaces;
2. built-in recycling system;
3. video phones;
4. central vacuum system; 5.built-in pet feeding system; and
6. intercom system.

Stairways, Lifts and Elevators:

1. adequate hand rails on both sides of stairway;
2. residential elevator or lift; and
3. increased visibility of stairs through contrast strip on top and bottom stairs, and color contrast between treads and risers on stairs with use of lighting.

Storage:

1. lighting in closets;
2. adjustable closet rods and shelves; and 3. easy-open doors that do not obstruct access.

Windows:

1. plenty of windows for natural light;
2. low-maintenance exterior and interior finishes;
3. lowered windows, or taller windows with lower sill height; and

4. easy-to-operate hardware.

Advice for those who wish to age in place:

- Talk with family members about your long-term living preferences. Do you want to downsize to a smaller single-family home, or do you plan to stay put in your traditional family home? Take a
- look at your finances and retirement funds. With your current savings and assets, will you be able to pay for home maintenance? Consider starting a separate retirement savings account strictly for home maintenance.
- Remodel your home before your mobility becomes limited. As you age, changes in mobility, hearing, vision, and overall health and flexibility will affect how easily you function in your h - -in and budgeted home
  ome. Consider making your home "age friendly" as a phased
  improvement, rather than waiting until you need many modifications at a time due to a health crisis.
- If you decide before you retire that you want to live in your current home through the remainder of your life, consider paying for big-ticket/long-life home projects while you still have a healthy income. Such items may include having the roof assessed or replaced, replacing and upgrading the water heater or cooling unit, completing termite inspections and treatment, having a septic tank inspection and replacement, as needed, and purchasing a riding lawn mower.
- The Master Inspector Certification Board advocates healthy living, as it plays a vital role in your ability to age in place. Most seniors leave their homes due to functional and mobility limitations that result from medical crises, and an inability to pay for healthcare support to stay with them in their home. Effectively managing health risks and maintaining a healthy lifestyle can help you stay strong, age well, and live long in your own home.

In summary, aging in place is a way by which senior citizens can avoid being dependent on others due to declining health and mobility.

## Aging-in-Place Checklist

EXTERIOR

_____ Slip-resistant stairs and ramp, with color contrast or glow-strips at treads

_____ Handrails are easy-to-reach, of graspable size, and slip-resistant

_____ Porch area is in usable condition and free of obstructions and dark areas

_____ Accessible doorways for walkers, wheelchairs, etc.

_____ Lighting (security or interior-controlled, or both)

_____ Low-maintenance exterior (vinyl, brick, etc.)

_____ Driveway and walkways (in good repair for safe walking)

_____ Yard, gates, fence (easy to access, locking/secured)

_____ Garage (attached or freestanding); other outbuildings

_____ Low-maintenance shrubs and plants, lawn care, trees on property

_____ Snow-blower or other provisions for snowy weather, where applicable

ENTRANCE

_____ House number is clearly visible from street for first-responders

_____ Motion sensor/security light at main exterior door

_____ Peephole of proper height for all residents (may require multiples)

_____ Doorbell in accessible location

_____ Surface on which to place packages while opening door

_____ All exterior doors have secure, easy-to-use locks, bolts and knobs

_____ Non-slip flooring in foyer

INTERIOR: Electrical, Lighting, Safety and Security

_____ Light-activated doorbell for hard-of-hearing residents

_____ Smoke and CO detectors

_____ Security alarm, emergency alert system and/or video-monitoring system

_____ Thermostats are easy to locate; settings are easy to read (and no higher than 48 inches from floor); thermostats are pre-programmed

_____ Light switches located near each entrance to each hallway and room

_____ Standard light switches, or rocker or touch light switches

_____ Two light bulbs or receptacles in each vital place (exits, bathrooms, etc.)

_____ Electrical cords out of the path of traffic

_____ Receptacles are easy to reach; receptacles are not overloaded

_____ Windows and safety locks are easy to operate

_____ Window drapes/shades/cords are easy to reach and open/close

_____ Interior stairs use contrast strip on top and bottom stairs, and color contrast between treads and risers on stairs, with use of lighting

KITCHEN: Appliances & Maneuverability

_____ Microwave oven in wall or on counter; settings are easy to read

_____ Refrigerator and freezer in a side-by-side unit

_____ Side-swing or wall oven; settings are easy to read; knobs are easy to turn

_____ Raised washing machine and dryer; settings are easy to read; knobs are easy to turn; washing machine is front-loading

_____ Raised dishwasher with push-button controls or easy-to-turn knobs

_____ Stoves with electric cooktops (safer than gas), with level burners for safely transferring between the burners; front controls and downdraft feature to pull heat away from user; light to indicate when surface is hot

_____ Space around counters, islands, etc., are wide enough for residents: 30x48-inch clear space at appliances, and 60-inch diameter clear space for turns

_____ Cabinets are easy to reach; knobs/pulls are easy to use to open/close, or shelves are open/doorless, or have glass fronts

_____ Counters are of ample area; custom-height/adequate and safe for residents; countertops have contrasting-color edges for the vision-impaired and to provide visual orientation to workspace

_____ Placement of task lighting in appropriate work areas

_____ Rugs have slip-resistant backing to prevent slips and falls

_____ Window curtains/shades/cords are easy to reach and open/close

BATHROOM: Fixtures & Maneuverability

_____ Counter heights are custom-fit/adequate and safe for residents

_____ Rugs have slip-resistant backing to prevent slips and falls

_____ Windows are easy to reach and open/close

_____ Door access to tub/shower

_____ Fold-down seat installed in shower

_____ Shower(s) equipped with adjustable showerhead with 6-foot hose

_____ Shower stall has recessed, waterproof, automatic light

_____ If stand-up shower is used in main bath, it is curbless and wide; if tub is used, it is low for easy access and egress

_____ Flooring in bathtub/shower is slip-resistant

_____ Emergency call button or intercom is located in bathroom, easy to reach, and is easily operated

_____ Wall grab-bars of appropriate height located in tub/shower/toilet areas

_____ Adjustable or appropriate-height counters with removable base cabinet for wheelchair-accessibility

_____ Countertops have contrasting-color edges

_____ Toilet is raised or height-adjustable

_____ Toilet-paper holder is designed such that rolls can be switched out using only one hand

_____ Faucet handles are lever design rather than knob, or pedal-controlled

_____ Cabinets are easy to reach and are open shelves/glass fronts/doorless

_____ At least one bathroom is wheelchair-accessible and on main level

FLOORING

_____ If carpeted, use low-density pile with firm pad

_____ Smooth, non-glare, slip-resistant surfaces

_____ Color and texture contrast to indicate change in surface levels

_____ Rugs and rug runners are secure and non-slip; edges are secured down

_____ No steps between rooms on a single level

MISCELLANEOUS TIPS

_____ In multi-story homes, laundry chute or laundry facilities located on same floor as master bedroom

_____ Main living area is on a single floor, including full bath

_____ 5x5-foot clear turn space in all main rooms

_____ For multi-level home, residential elevator or lift installed

_____ Lighting in all closets

## Anti-Scald Valves

Anti-scald valves, also known as tempering valves and mixing valves, mix cold water in with outgoing hot water so that the hot water that leaves a fixture is not hot enough to scald a person.

Facts and Figures

- Scalds account for 20% of all burns.
- More than 2,000 American children are scalded each year, mostly in the bathroom and kitchen.
- Scalding and other types of burns require costly and expensive hospital stays, often involving skin grafts and plastic surgery.
- Scalding may lead to additional injuries, such as falls and heart attacks, especially among the elderly.
- Water that is 160° F can cause scalding in 0.5 seconds.

Unwanted temperature fluctuations are an annoyance and a safety hazard. When a toilet is flushed, for instance, cold water flows into the toilet's tank and lowers the pressure in the cold-water pipes. If someone is taking a shower, they will suddenly feel the water become hotter as less cold water is available to the shower valve. By the same principle, the shower water will become colder when someone in the house uses the hot-water faucet. This condition is exacerbated by plumbing that's clogged, narrow, or installed in showers equipped with low-flow or multiple showerheads. A sudden burst of hot water can cause serious burns, particularly in young children, who have thinner skin than adults. Also, a startling thermal shock – hot or cold – may cause a person to fall in the shower as

he or she scrambles on the slippery surface to adjust the water temperature. The elderly and physically challenged are at particular risk.

Anti-scald valves mitigate this danger by maintaining water temperature at a safe level, even as pressures fluctuate in water supply lines. They look similar to ordinary shower and tub valves and are equipped with a special diaphragm or piston mechanism that immediately balances the pressure of the hot- and cold-water inputs, limiting one or the other to keep the temperature within a range of several degrees. As a side effect, the use of an anti-scald valve increases the amount of available hot water, as it is drawn more slowly from the water heater. Homeowners may want to check with the authority having jurisdiction (AHJ) to see if these safety measures are required in new construction in their area.

Installation of anti-scald valves is typically simple and inexpensive. Most models are installed in the hotwater line and require a cold-water feed. They also require a swing check valve on the cold-water feed line to prevent hot water from entering the cold-water system. They may be installed at the water heater to safeguard the plumbing for the whole building, or only at specific fixtures.

The actual temperature of the water that comes out of the fixture may be somewhat different than the target temperature set on the anti-scald valve. Such irregularities may be due to long, uninsulated plumbing lines, or defects in the valve itself. Users may fine-tune the valve with a rotating mechanism that will allow the water to become hotter or colder, depending on which way it's turned. Homeowners should contact a Certified Master Inspector® or a qualified plumber if they have further questions or concerns about anti-scald valves.