



Housing for the Lifespan: Furnishing a User-Friendly Home

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If you were to become disabled—from an accident, from an illness, or simply from aging—how “user-friendly” would your home be?

During the aging process, sensory and physical changes occur. As people age, they often can't see quite as well, glare becomes more annoying, and it is more difficult to differentiate between colors. Therefore, it's harder to make out details. Physical strength, flexibility, dexterity, and endurance decline. Tasks such as grasping, twisting, walking, and going up and down stairs may become difficult. An accident or an illness can limit a person's ability to get around, too. Changes in furnishings, lighting, color, and design can help you carry out daily living activities, maintain your physical well-being, and even make your home a safer place.

Lighting

If you have fading eyesight, decreased alertness, and/or uncertain balance, you will need more overall lighting. In addition, you may need more lighting near the bed or chairs where you read, do handwork, or prepare meals. To keep the same reading speed you had at age 20, you need 50 percent more light when you are age 50, twice as much light when you are age 60, and three times as much light when you are age 80.

The amount of light is not the only important factor. The quality of light is also important. Light rooms evenly so that there are no dark areas or glares.

Here are some guidelines for planning good lighting for a person with failing eyesight:

- Use frosted glass globes in wall and ceiling fixtures to reduce glare.
- Lighting for watching TV should be relatively indirect and even in the room. Avoid contrast between a dark room and a bright TV picture.
- Use light-colored, translucent shades on lamps to distribute light more evenly.

- Be sure table lamp shades hide bulbs. Three-way switches on lamps will allow for extra lighting when it is needed.
- Use night lights in bathrooms, hallways, and bedrooms.
- Use lighted cover plates for light switches in the bedrooms, hallways, stairs, and bath areas.
- Arrange furniture in the rooms so the person does not face a large window.
- Cover windows with a transparent or translucent material to filter natural light and eliminate glare. Adjustable blinds or shades, sheers, or transparent reflecting film can help control glare.
- All storage areas should have lights controlled by wall switches or easy-to-reach pull-cords.
- In kitchens, provide lighting over counters and the sink. Track lighting or fluorescent light sticks that plug into electrical outlets can be added.
- All surfaces should be mat-finished. Avoid any surfaces (i.e., floors and counter tops) that are shiny and can produce glare.
- Switches on table lamps should be easy to use. Twisting switches may be more difficult for the arthritic hand or an accident victim. Ask a physical therapist or occupational therapist about convenience devices to make lamps easier to turn on and off.

Color

Color can also make homes safer and more enjoyable. Light colors reflect light back into the room. Dark colors absorb light. For example, a white wall will reflect 85 percent of the light back into the room. A dark brown wall will reflect only 10 percent back into the room.

The ability to perceive certain colors declines with age. By age 75, many people are not able to distinguish between shades of blue, blue green, green, and violet. Dark colors and colors of similar intensity (brightness or dullness) are more difficult to distinguish. They also may become overtiring and depressing. Examples of these include black,

brown, navy, charcoal gray, and maroon. Light, pastel colors such as light pinks, salmon, peach, light yellows, pale greens, off whites, and light blues may be difficult to distinguish from each other, too. Plan to use warmer, brighter colors in rooms.

Bright colors can help the visually handicapped "read" the environment more effectively. Dark and light color contrasts can make objects more visible. For example, a dinner plate with a colored border or a white plate on a colorful placemat can help the person see the plate better and avoid hitting the glass on the edge of the plate. Light colored food, such as ice cream, served in a dark dish can be seen easily. Contrast is also effective in signaling changes in the floor level. It can be used to show where stair treads begin and end.

- Select light colors for walls and ceilings. Use medium colors for floors and wood finishes.
- Furniture that contrasts with the carpet and walls is easier to see. Slipcover a sofa or chair, or use a throw cover to save re-upholstering expenses.
- Avoid glossy finishes on floors and wood furniture to eliminate glare.
- Use cloth tape in a bright, contrasting color on the edge of kitchen or bath countertops that are similar to the floor color. The counter edge will be more visible.
- Avoid very large patterns or small "busy" wallpaper designs. They can become confusing, produce blurred vision, and cause eye fatigue.
- Use light colors in areas which tend to be dark, such as hallways, closets, and cupboards.

Furniture

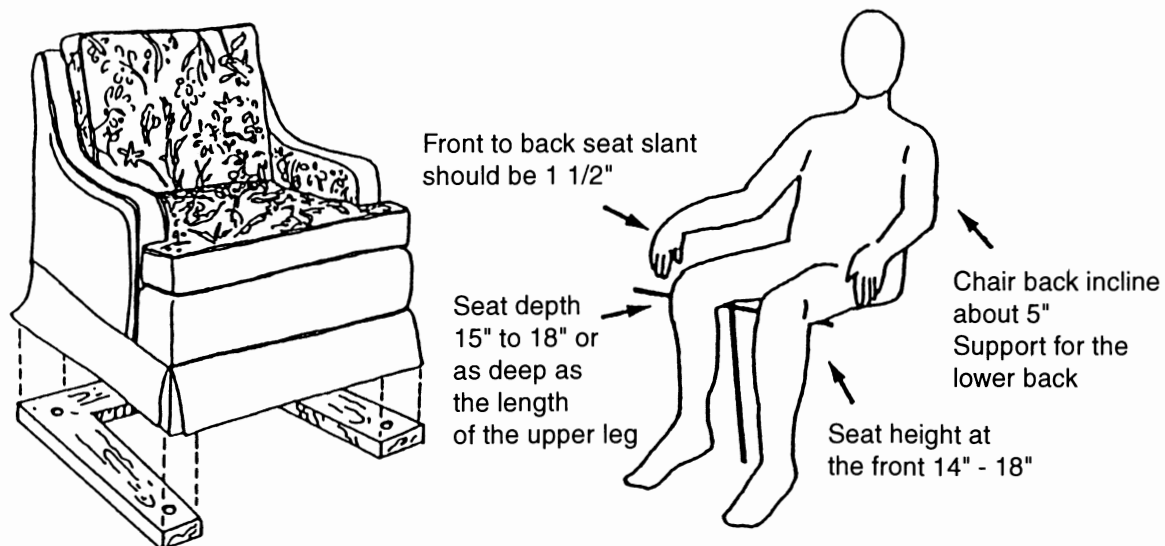
A sick, injured, or elderly person may have limited strength and energy. Even standing up and sitting down can be hard. For them, furniture must have both good support and good leverage. These requirements ensure their independence and safety. Always have the disabled or elderly person try out chairs, sofas, and beds before purchasing to be sure they are comfortable and easy to use.

Consider a side chair and how dimensions affect support and comfort. The chair seat should be as high as the length of the lower leg (14 to 18 inches), and as deep as the length of the upper leg (15 to 18 inches). When a person is seated, both feet should be flat on the floor. A chair that is too high or too deep puts pressure on the thighs causing aching legs, circulatory problems, and numbness. A chair that is too low can cause lower back pain and make getting up awkward and difficult. The seat front should be gently curved so there is no pressure behind the knees. This, too, prevents circulation problems. There should be two to three inches of space between the seat front and the seated person's thigh. The cushion should be firm and resilient.

Easy Chair

For relaxing, the elderly or disabled person needs a chair that will help him or her sit somewhat upright. This avoids compressing internal organs and helps with proper circulation. The figure below shows the dimensions for a comfortable easy chair.

Chair arms provide comfort and leverage in



getting in and out of the chair. The person's arms should lie naturally and relaxed on the chair arms. Armrests that are too high strain the shoulders. If they are too low or not forward enough, they do not allow for leverage. The disabled or elderly person will have to lean over too much and could easily lose his or her balance.

Rockers and recliners may not be the best chair choices. A person who has to use the chair arms in order to stand up needs steady support. Some recliners have mechanisms that are difficult to operate. Recliners with an electronic button are best for an elderly or disabled person with reduced arm strength. Chairs with a reclining mechanism in the base will be less hazardous than rockers, as a person could trip over protruding rockers

Existing chairs can be improved with some inexpensive adjustments.

- An ottoman or footstool 12 inches or so in height can be used for relaxing.
- Blocks or boards can be used under chair legs to raise the height of a low chair. Drill holes or grooves in the blocks so the chair will not slip.
- Replace an overly soft cushion with a firm one. Put a board under the cushion itself.
- Add a seat cushion if the armrests are too high, or a back cushion if the seat is too deep.

Furniture must be more than attractive. It should also be functional and safe. Here are some additional safety suggestions:

- A table beside a chair or sofa should be the same height as the armrest. An inch or two higher is okay, but, for safety, it should never be lower.
- Table legs should be sturdy and straight. They should not stick out beyond the table edge.
- Use pedestal and drop-leaf tables carefully. They can tip if someone leans on them for support.
- A coffee table 18 to 24 inches high is the safest to use. It is easy to trip over a low coffee table that is below the line of sight of a standing person.
- Bedside tables should be two to three inches higher than the mattress, never lower. The table should be large enough to hold necessary supplies (glasses, lamp, reading material, telephone).
- Beds should be sturdy, with headboard and footboard 12 inches taller than the mattress to offer support and leverage. They should be smooth and easy to grip. A footboard will also keep extra blankets off the floor.

- A bed should be 16 to 17 inches high or even with the wheelchair seat.
- To raise a bed, drill a hole or recessed area in a heavy wooden block (two by four inches or four by four inches). Place the blocks under the legs of the bed.
- To lower a bed, cut off the legs or use a four-inch dense-foam mattress instead of an inner-spring mattress.

Arranging Furniture

Think about where people will walk before you begin placing furniture. The entrance from one room to another should be 36 inches wide. Keep traffic paths uncluttered.

Place furniture so the elderly or disabled person may view and enjoy the outside. However, never place a chair for reading so outside light comes from the front of the seated person; the glare will interfere with reading.

In general, keep rooms uncluttered. A room crowded with seldom-used furniture can be a hazard. A person in a wheelchair needs a 60 by 60 inch turning area. Arrange the furniture to provide that space.

Floors

Anyone with limited vision or an uncertain sense of balance needs to feel secure when walking. Consider safety, ease of maintenance, ease of mobility, as well as aesthetics when selecting floor coverings. The floor should be level and firm underfoot.

- Select a non-skid material with a satin or dull finish. Reflected glare from glossy finishes can give a sense of instability.
- Avoid waxing. The glare and the slippery surface can be a hazard.
- Floors in kitchen, bath, laundry area, and entry should be easy to care for and slip-resistant when wet.
- If carpet is used, select a low-level loop pile. Pile height should be no greater than one-fourth inch. Use no padding or thin padding underneath and glue the carpet directly to the subfloor.
- Avoid patterns, strong color contrasts, and sculptured carpet. "Busy" designs can cause visual problems and thus poor balance.
- Use no or low thresholds between different flooring materials.
- Do not use area rugs. They tend to slip and can easily cause falls.

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