

Elderly K&B Design: All's Within Easy Reach

by Carol E. Klein

One of the fastest growing markets today is housing for the elderly. By the year 2030, one in five Americans will be over 65. When designing and building kitchens and baths for this market, it's good to keep in mind that older adults will have some functional disabilities such as trouble seeing, hearing, lifting, and grasping. Stereotypes about older adults remain, but many of the elderly are neither frail nor disabled, though they may have some of these functional limitations.

Here are some suggestions for the optimal kitchen and bathroom design for older adults. It's best to design for multiple disabilities, while realizing you can't possibly provide for every functional limitation of every occupant.

Guidelines and Regulations

The basic rules of thumb for senior kitchens and bathrooms are flexibility, adaptability, safety, and convenience. Remember that each design decision is a trade-off, and in no way can an apartment be all things to all people.

Certain regulations — state, count, and city building codes — apply to all building projects. In addition, government funding on a project requires compliance with American National Standards Institute (ANSI) standards. The 1986 revision (ANSI 117.1) is the most recent set of recommendations for state and local building accessibility codes. But these recommendations are intended primarily to make public buildings accessible to wheelchair users, who make up a tiny fraction of the over-65 group. So, you need information about the rest of the senior population as well. Besides knowing the senior adults' individual needs, this will involve considering the factors that make each project unique: the condition of the building, the site configuration, financing, layout of the apartments, and space allotted for the proposed kitchens and baths.

A Human-Factors Approach

Consider the physical changes people experience with aging. Provide for changes in mobility, reach, hand grip, strength, vision, and hearing. In your design, eliminate unnecessary

movement; build in easy-to-reach cabinets, lever handles on doors, non-glare lighting, flexible shower hoses, grab surfaces, and sliding casement windows.

In all designs, be aware that you are not necessarily preparing for a single ability limited individual. The occupants of the home might be a family where only one person has a limitation.

Kitchens

An efficient kitchen layout is a basic triangle composed of work centers for food preparation/dishwashing, cooking, and storage. In the kitchen, people spend most of their time at the sink. So the most important element in your triangle would be the sink. Locate it in the pivotal corner from where the resident can turn easily to other work areas. If the counter tops are unbroken, residents can slide, rather than carry, heavy items across the countertop to the other work centers, such as the stove.

What follows are desirable features you may want to include and some layout suggestions for senior adult kitchens and baths.

- Your layout should place the sink and the stove on the same wall, so residents don't have to carry heavy items across the room.
- Cabinets and countertops should adjust to heights between 28 and 36 inches from the floor to the top of the counter surface. The 30 inch-wide base cabinets should be removable to accommodate a wheelchair, and the finished floor should extend under the counter to the wall.
- Cabinets, drawers, and shelf storage have to be handy: not too high. Similarly, residents should not have to bend too far to reach the low shelves. Shallow shelves are good for storage and retrieval; pull-out drawers are preferable.
- Drawer interiors should be light colored. Door pulls and handles for wall cabinets should be mounted close to the bottom of cabinet doors, base-cabinet handles close to the top.
- Include a counter-mounted range and a separate wall-mounted oven. (Avoid under-counter ovens.) A

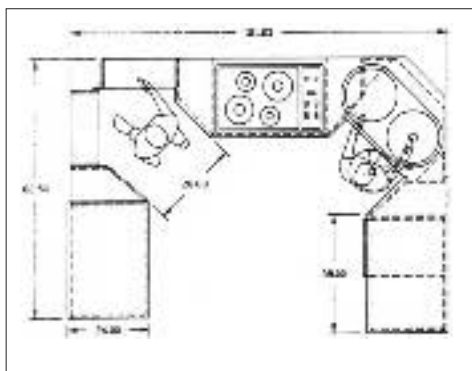
side-opening oven is preferable to the usual pull-down style.

- Electric stoves with front controls are best. A smooth cooktop without raised burners provides a continuous surface for cooking. Staggered burners are safer.
- Light switches, disposal controls, and electrical outlets should be placed on the back walls above countertops.
- Place the drain at the rear of the sink to create under-counter clearance.
- Kitchen designs should meet ANSI guidelines for wheelchair accessibility and provide adequate space for turns and approaches to the counters.
- Faucets should have lever or push handles. A spray hose is useful for on-the-stove filling of pans.
- A vertical side-by-side refrigerator is best, with a minimum of 18 inches of counter space adjacent to it.
- Provide 30 inches of counter space for food preparation.
- A front-loading dishwasher is best. Locate it between the refrigerator and the sink.
- Consider light, glare, and color together. Provide twice the level of normal illumination. In general, walls, ceilings, and floors should be light colors; furnishings should be a medium shade.

Bathrooms

Bathrooms also need to provide for the full gamut of physical abilities of residents. It is important not to design exclusively for handicapped because you may inconvenience more physically able dwellers. Make bathrooms large enough to accommodate wheelchair users, and this will include adjustable height cabinets and reinforced walls that can support grab surfaces. Focus your design decisions on maintaining independence for residents.

- Wheelchair spaces should be 5x5 feet, minimum.
- The bathroom door should open outward, so if a person falls near the door, it can still be opened.
- Put a vertical bar at the head or foot of the tub.
- Be sure that any protrusion from the wall — like a soap dish or toilet paper dispenser that might be grabbed by a panicked resident — is secure enough to hold 250 pounds.
- Ideally, the tub and shower should be separate units. Provide space at the side or end of the tub for a transfer seat. A flexible spray hose in the tub is best.
- Provide adjustable-height storage facilities. ■



The basic rules of thumb for senior kitchens and bathrooms are flexibility, safety and convenience. The best design eliminates unnecessary movement. For instance, the sink and stove should be on the same wall so residents don't have to carry heavy items across the room.

Carol E. Klein is Technical Communications Director at Advanced Living Systems. This article is reprinted by permission from the February 1988 issue of Commercial Renovation.