

A design primer for the aging eye; Interior design features to consider when accommodating fading vision.(ENVIRONMENTS FOR AGING

By Julie Moller | June, 2008

[Long-Term Living](#)

The Alliance on Aging Research reports that visual impairment is one of the top four reasons for a loss of independence among seniors. For example, 18% of all hip fractures among older people are attributed to age-related vision loss. Senior living communities are known for promoting independence. These days, many devote capital as well as human resources to wellness programs that come in all shapes and sizes--from small exercise sessions to on-site golf courses and Olympic-sized swimming pools. But communities also grapple with keeping residents safe during their activities.

Unfortunately, the affects of an aging eye can provide impediments to resident function and well-being because of (1) safety issues resulting from slipping on unseen spills or falling because of poor lighting, and (2) lifestyle diminishments resulting from a lack of legible signage or such things as poorly designed appliances.

When creating new interior solutions for your community, why not design with the senior eye in mind? This article will look at numerous ways senior living interior designers create environments that work to the best advantage of senior eyes through application of light, color, and eye accessories. Readers will be given a list of "Ten Tips When Designing for the Senior Eye" encompassing these three categories. The tips are summarized as:

1. More & Mixed
2. Consistency
3. Safer, Not Sorrier
4. All that Glares Is Not for the Old
5. Let the Sun Shine In
6. Warmer Colors "Read" Better

7. Contrast Colors and Tones

8. Legible--Larger

9. Simplify for Contrast

10. Complement Seeing With Hearing

Lighting

Listed below are the advantages and disadvantages of the three major light sources:

* Fluorescent fixtures maintain a high level of diffused light. While the most common bulbs wash color out, a reasonable number of color-correct bulbs are on the market.

* Incandescent lighting provides indirect or ambient lighting while simultaneously avoiding glare and brings out the warmer colors in an object.

* Natural light promotes health (disperses vitamin D), although it tends to lighten colors.

Lighting tips

More & Mixed. Mixing light sources increases overall light levels and adds visual interest to interior spaces while balancing individual light inadequacies. For example, sunlight streaming through windows warms and illuminates a room, whereas using general lighting at night with lamps and wall washers can provide soft glows in certain areas while highlighting others.

Think about "jazzing up" (as well as lighting up) corridors by using general fluorescent lighting with incandescent wall sconces and/or an incandescent recessed downlight at each unit. Consider cove lighting because it delivers a great deal of value relative to its price, i.e., it can break up the monotony of general lighting, reduce glare, offer interest, and maintain consistent lighting levels, while making the ceiling seem higher.

Consistency. All interior spaces need to be lit at a consistently even level to reduce glare and decrease shadows. Consistency needs to be applied from wall to wall and from floor to ceiling, as well as from corridor to public or private rooms. As a standard rule of thumb, overall light levels for seniors need to be 25-50% higher and luminance at task locations needs to be two to five times the normal level.

Also, don't forget that elevator lighting needs to be consistent within adjacent corridors and/or adjoining rooms.

Safer, Not Sorrier. Brighter lighting is recommended for signs and hazards such as stairwells, exposed pipes, steps, sharp/moving objects, and all surface changes, as well as in areas that may be subject to frequent spills. This is also particularly true for bathrooms.

[ILLUSTRATION OMITTED]

Install motion sensors on foyer or entry lights in resident units for safer senior nights. Light switches also need to be visually prominent either through illumination and/or color.

Along with ensuring bright light in resident rooms and hallways, a system of brightly illuminated paths, or "bright-ways," through the garden for evening walks might be considered.

All That Glares Is Not for the Old.

Refrain from using highly polished wood tables and shiny counter surfaces. Consider fitting outdoor windows with yellow-, amber-, or plum-colored glass in public areas or where cars might shine their lights into the residence. Use resilient flooring with low-gloss finish. Hang faux oils or artwork that does not need glass in sunny rooms to avoid glare on the artwork. Choose frosted glass fixtures and shades for chandeliers. Remember to mount bathroom light fixtures aimed upwards toward the ceiling when placed above mirrors. Use brushed or satin finishes (avoiding polished metal finishes) on walls or in elevators.

And, remember, when increasing the quantity of lighting do not increase the wattage of lights in overhead fixtures. This can create more glare on the task surface below.

[ILLUSTRATION OMITTED]

Let the Sun Shine In. Older people need three to five times more natural light than younger people for health as well as for vision, according to the Center of Design for An Aging Society. Insufficient vitamin D at crucial times of life or for prolonged periods appears to increase the risk of several cancers, including breast and bowel cancer, diabetes, high blood pressure, schizophrenia, multiple sclerosis, and many other chronic diseases (including tooth decay).

[ILLUSTRATION OMITTED]

Having access to natural light helps senior residents with orientation toward time and season and gives physical as well as psychic warmth. From a design standpoint, natural lighting tips can be applied either outside or inside:

Outside. Design resident rooms with balconies or patios. Include walking paths, green spaces, gardens, and gathering spots for socializing. Make sure all spaces have cover from the sun's rays, i.e., large trees, umbrellas, or awnings. Lighting levels should gradually change upon entering a facility so a resident's sight can adjust; made possible by means of an entry awning or cover of some kind.

Inside. Consider windows and doors with glazing (glass) and skylights, if possible. Window treatments should open fully, allowing maximum sun exposure. Sunlight bulbs can also be used in areas lacking natural light and/or if gray days are commonplace.

Color

While there is no empirical evidence to support the assertion that color has a direct effect on function in the elderly, there is supportive literature for using color for environmental legibility (wayfinding), creating mood, and providing visual interest. Furthermore, designers can alleviate visual handicap, maximize physical independence, and aid social integration by using colors best suited to the needs of senior eyes.

Color Tips

Warmer Colors "Read" Better. Color perceptions change as the eye ages. Since "blue" light (i.e., short wavelengths) is filtered away by the aging eye, blues look darker and mixtures containing blue tend to go gray. For example, purple (a mixture of red and blue) may gray-out to such an extent that it becomes invisible. As a result, the senior eye sees only red when looking at purple and, as a direct corollary, a purple object on a red background will be difficult for seniors to see.

On the other hand, it is easier for older people to differentiate yellows, oranges, and reds. As a result, highly saturated colors at the warm end of the light spectrum with a high degree of brightness are best for the senior eye. Use flesh-tone colors such as peach, salmon, and light cinnamon in beauty salons and bathrooms. Use yellow with care, because it can make residents look sick.

Contrast Colors and Tones. To increase color contrast as well as gain color clarity, fluorescent fixtures with color-correct full-spectrum lights are the best light source. They make the entire environment much easier for residents to see. With contrast the watchword, nearly all surfaces need to be separated from one another by color, as the tips below indicate:

Door frames should be different colors from walls and other trim. Floors and walls should be differentiated by color. Baseboards should be different colors from the floor. Handrail/chair rails should be different colors from the walls. Fireplace hearths should contrast with surrounding colors. Especially in memory support units (for cueing purposes), bathroom doors need to be a different color than the walls.

Ceilings should be white to gain maximum lighting coverage through reflectivity. However, if ceilings are painted a color, make sure the lighting levels compensate for the color, i.e., the darker the color, the more light is necessary to maintain consistently high light levels.

As a final note, please keep in mind that providing color contrast may not differentiate enough for the senior eye if the colors have the same tonal quality. For instance, an orange and a red of the same tone are difficult to distinguish when next to each other. However, if the tonal value of one of these colors changes the two colors will then contrast.

A final color tip: To ensure enough contrast when viewing colors, interior designers often squint their eyes to simulate the "senior eye."

Accessories

When considering the aging eye, it is also important to review, alongside the basic interior adornments of color and lighting, the entertainment and household needs of seniors. As with wardrobe accessories, these "eye accessories" can transform the everyday senior lifestyle into one that is more convenient, safer, and even enriching. A number of manufacturers are already producing these in anticipation of the Boomer deluge. These companies range from publishers to appliance and computer manufacturers, and the "accessories" range from large-print books and from table linens to thermostats that are activated by either the voice or by clapping one's hands.

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