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Let's Get Together

A valuable field of design unites all ages and abilities

Universal design is dropping a misconception – it's for everyone, not just the disabled or elderly. While easy-to-use elements and safety features make aging in place possible, the field is more about inclusion.

"Universal design has the power to make life better for every person, no matter his or her stage of life," said designer Kerrie Kelly of Sacramento, Calif.-based Kerrie Kelly Design Lab. "It isn't more complicated or more expensive to create an effective, functional space for all – it's just much more thoughtful."

Thoughtfulness includes preferred aesthetic, convenience, health and safety.

"We are living longer, which means some are living longer with diminished mobility or disabilities," said designer Anne-Marie Brunet of Cornwall, Ontario-based Sheridan Interiors. "This demands better planning and innovative products for individuals to maintain their dignity and independence. Universal design looks to answer these challenges through continued study, innovative spatial planning and new product offerings."

Dangers in the Kitchen

According to the Centers for Disease Control and Prevention, 2.5 million older people and 2.8 million children a year are treated in emergency departments for fall injuries. Every day, more than 300 children are treated for burn-related injuries, and two children die as a result of being burned.

Whatever the age or ability, some of the most obvious dangers in the kitchen involve cooking appliances. Burns result from reaching across hot elements for controls, accidentally brushing a hot surface or coming in contact with scalding water.

"It is not uncommon that in our busy lives, we forget to turn off the stove or cannot prevent a loved one from touching an off-but-still-hot burner grate," said Valentina Bertazzoni, director of brand management and style for Bertazzoni. "With induction technology, this is avoidable."

An induction cooker produces a high-frequency electromagnetic field that penetrates the metal of a magnetic-material cooking vessel and sets up a circulating electric current, which generates heat. The field affects nothing outside of the vessel, so as soon as a pot or pan is removed or the top turned off, heat generation stops. Thermal-resistant materials on touch points and front- or side-mounted controls further decrease injuries.

Handles also have a significant role in water safety, since anyone can be scalded by accidentally turning a faucet knob too far. Forward-rotating lever handles are on the rise, allowing for single-hand operation that doesn't require the user to reach far into the sink. Touchless faucets accommodate most mobility problems, and improved faucet technology also has lowered hazards.

"Adding a faucet with an integrated temperature limiter can reduce the risk of scalding," said Cheryl Dickson, head of brand and trade marketing of Grohe America, who added that visual cues like indicator lights in the faucets also keep users from harm. "Touch technology can minimize difficulty reaching and operating faucet handles with just a touch to the faucet."

Coming in 2016, Grohe will also offer foot-controlled faucets, which use infrared technology activated by waving a foot under a unit.

Less Trips and Falls

Second to burn accidents in the kitchen, trips happen because of problems with traffic flow or object blockage. According to the ADA, the minimum clear width for a single wheelchair passage should be 32 inches. This roomier corridor also allows for entertaining larger groups, carrying several bags of groceries or for children's play.

In that wider corridor, avoiding rugs or a drastic change in flooring material will reduce the risk of trips and falls. New technologies, such as underfloor heating, make up for the lack of heat.

"Replacing the traditional forced air system, electric radiant heat is an invisible heat source that eliminates airborne particles that often bother seniors' and infants' respiratory systems," said Wally Lo, product manager for Nuheat. "The WiFi-enabled thermostat allows [users] to ensure the heat is at a warm enough temperature."

With rugs out of the way, cabinet doors are the main culprits in impeding traffic. Hinge-based cabinet doors block off spaces when opened, which can cause trips and falls. Traffic can improve by expanding the space between the base cabinets and the islands, and thinking about height difference and reach would additionally reduce the risk of falls.

"Installation of sliding hardware allows shelves and storage baskets to extend out to consumers," said Daniel Tripp, kitchen product manager for Häfele. "Similarly, some fixtures can fold down from above for easy access and then back into cabinets for smart storage."

The Right Level

Accessories for cabinetry, like the cabinet pull-down system, are also on the rise. While some of these accessories need to be planned for new cabinets, others can retrofit existing cabinetry. Rollout drawers for base cabinets often are another easy retrofit and greatly improve cabinet accessibility.

"Cabinetry units and sections that can be raised or lowered on demand offer greater flexibility for multiple users in one household," said Brunet. "Think of couples who have large height differences, a family member in a chair or an aging member who prefers to sit while doing prep work. All can function effortlessly in a kitchen that quickly adapts to their individual needs."

The same applies for ovens, where any taller individual or one with mobility issues can scald themselves on drop-down oven doors. A wall oven at the right height for the user allows for a safer and more comfortable option, and now several manufacturers are also offering a swing-out door or French door.

"The doors on these [French-door ovens] are linked, allowing one-handed operation to open both simultaneously," said Brent Bailey, vice president of brand management for Viking Range. "This type of function makes the oven interior and food content more accessible and reduces the risk of touching hot surfaces."

Similar design details, like placing a microwave at the right height,

make snack time easier for children and pre-made meals simpler for adults. Multi-level countertops – particularly with lowered counters – are growing in popularity, while islands with bar tops are decreasing.

"Everything from the height and depth of countertops to the positioning of cupboards and undercounter spaces are looked at from the perspective of creating a safe and accessible working environment," said designer Sally Swanson, CEO and founder of San Francisco-based Sally Swanson Architects. "No detail is too small to consider, whether it's the positioning of outlets within arm's reach to accommodate small appliances or the right amount of space to maneuver around an open oven or refrigerator door."

Function and Aesthetic

While the same rules apply to refrigerator doors – manufacturers are improving on ergonomic lever handles and side-by-side refrigerator/freezer towers – more focus is placed on health and well-being. Whether because of a busy schedule or the inability to go to the grocery store independently, quality food storage is a priority.

"A simple, intuitive appliance should benefit young and old," said Josef Steigmiller, vice president of Liebherr Refrigeration for the Americas, who added that new homebuyers especially are looking for less ornamentation, easy-to-clean elements and environmentally friendly qualities.

With manufacturers realizing that every age group looks for long-lasting products suited for everyone, practical and stylized features are now more frequently available in universally designed products. Lever handles fulfill a more modern design aesthetic and are easy to use for children and the disabled, and glass-front doors create an open layout with simpler visibility. Lower, deep drawers organize pots and pans and reduce bending, and trendy pot-fillers by the stove eliminate heavy lifting.

"Manufacturers have begun to realize that products need to be both functional and attractive for people to consider bringing them into their home – especially in a room they'll be working in and interacting with on a daily basis, such as a kitchen," added Tripp.

Spreading the Design

As universal design grows in popularity and technology becomes even more a part of daily life, products are likely to integrate easy-to-use technology. The advances in WiFi will likely create more remote interconnectivity, allowing for refrigerators to notify the user if a door is ajar or for an oven to turn off when cooking is finished.

"Expect to see controls and displays that allow the user to modify however it makes sense to them," said Bailey, who added that reviews are such a huge part of product success that consumers rating a product as complicated equates to major loss. "If they have trouble seeing, text and buttons can be set to large. Volume and sounds can also be changed, and control guides can walk users through various functions. This type of flexibility will be offered without sacrificing design."

The field is likely to become more commonplace as multigenerational living increases and the younger generations, which tend to put high value in flexible spaces and quality, buy homes. While considering families and years down the road, homebuyers and designers alike will learn to cater to future families, potential situations and thoughtful design.

11. As the largest in the industry, the 4.7-cu.-ft. 7 Series Built-In French-Door Double Oven from **Viking** has six porcelain-coated rack positions and includes three extension racks and three halogen lights inside. Opening either door with one hand opens the other door simultaneously, and the metal knobs are accented with LED lights when the unit is turned on for easy visibility.

