Home Accessibility Remodeling Series

Chapter 9: Controls

Disabled persons, like other members of a household, need to control the home environment in a number of ways, including:

- Adjusting the thermostat, baseboard valves, or register dampers
- Opening and closing drapes, shades and windows
- Plugging and unplugging appliances; operating light switches; resetting or replacing circuit breakers, fuses or light bulbs.

A disabled person's range of reach, hand control and strength, and the operating characteristics of any mobility equipment used will have an impact on the choice of modifications. These projects require careful attention to detail, but often are relatively simple and inexpensive.

Switches, valves and dampers for heating, ventilating and air conditioning equipment need to be mounted in fairly open areas within a comfortable range of reach. They should be matched to a user's finger/hand flexibility and coordination skills. This may only require simple furniture rearrangement or the more complex procedure of replacing and/or relocating the devices. Some dampers or baseboard valves may be operated with a simple aid, like a rod with a cap that fits over a valve or hook that catches a damper lever.

Thermostats, humidifiers and electric fuse boxes or circuit breaker panels need to be selected and located so that their moving parts can be easily reached and labels or settings easily read. This may require lowering the device in some situations, or in the case of the fuse box/circuit breaker panel, may require relocating from a basement to the main floor (particularly for a disabled person living alone).

Opening and closing windows is often another problem. They may be inaccessible or unusable for any number of reasons, including:

- Placement (too high, too low, too near a corner)
- Window type (e.g., lifting vs. sliding)
- Hardware type (may require too much finger control)
- Controls' locations (e.g., drapery cords, locks, etc., may be out of reach)

Replacing window hardware or reversing a drapery rod's cord location involves little or no expense. To replace a window requires removing trim and the interior wall surface to allow access to the opening's framing. If the window will be relocated or a new unit of a different size installed, the exterior siding may have to be cut back, replaced and/or patched. When a window is relocated, make sure to position it so that the sill or other components don't block the view for a seated person and so locks and latches are within easy reach.

Residential windows come in five hinged and sliding varieties:

- Casement (side hinged)
- Awning (top hinged)
- Hopper (bottom hinged)
- Double-hung (vertical slide)
- Glider (horizontal slide).

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Controls continued

Each style varies for how easy or hard it operates, depending in part on how disability affects hand control, arm and upper body strength. Each style also has a standard hardware type/location. The awning window probably has the most favorable set of locations because both the locks and the crank or handle are at the sill, rather than up on a side or on a transom (cross bar). Windows also don't just come in manual styles these days - some of the major manufacturers now carry powered units with remote controls.

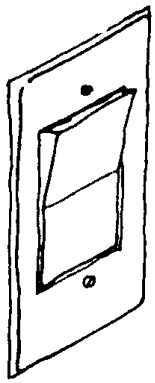
Another important environmental element is access to electricity - plugging in lamps, fans and small appliances, etc. Electrical outlets located between 24" and 30" above the floor can help persons who have difficulty bending over or with a reduced downward range of reach use.

Persons with severely impaired hand control may not be able to operate conventional wall "toggle" light switches. Pad-sized "rocker" switches or "rheostat" switches that click on and off and adjust lighting intensity can be easily installed instead. Motion-sensing switches are also marketed that automatically turn lights on and off when a person enters or exits a room. Outlets and switches can be relocated from walls to a lower bathroom/kitchen cabinet face to bring the controls into a better range of reach.

Persons who use a wheelchair or who have balance problems may be unable to change the bulbs in ceiling light fixtures. Floor, table and/or wall-mounted lamps are better than relying on ceiling lights. Control of these lamps and equipment like wall-mounted air conditioners can also be modified by rewiring them so the unit is turned on and off with a new wall switch.

Sophisticated systems are also on the market that operate several appliances, lights, or objects from a central panel or remote control. This type of equipment may be appropriate for a severely disabled person and can also provide special cues for someone with a sensory impairment. For example, a system can be set up to "hear" the doorbell or a baby's cry and then turn on a light, fan, or vibrator to attract the attention of a person who is hearing impaired or deaf.

Rocker Switch



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