



Shepherd Center

What are Home Modifications?

Modifying the home might be necessary when the home no longer meets the needs of those who live there. For someone in a wheelchair, it might mean building a ramp or widening the doorways. For someone who has difficulty walking, it might mean adding rails by stairs or installing grab bars in the bathroom.

The goal is to create a space where routine activities can be done safely and as independently as possible.



Who do I call?

The following resources may be helpful to get you started:

The National Resource Center on Supportive Housing and Home Modification

(213) 740-1364

<http://www.homemods.org>

Center for Universal Design

1-800-647-6777

<http://www.design.ncsu.edu/cud/index.html>

Abledata: Sponsored by The National Institute on Disability and Rehabilitation Research- U.S. Department of Education

<http://www.abledata.com>

The American Association of Retired Persons

<http://www.aarp.org/universalhome/>

Beyond Barriers

<http://www.beyondbarriers.com>

The Center for Inclusive Design & Environmental Access

<http://www.arch.buffalo.edu/~idea>

Center for Rehabilitation Technology
<http://www.arch.gatech.edu/crt/crthome.htm>

Independent Living Centers
<http://www.rahul.net/designlinc/centers.htm>

Infinitec, Inc
<http://www.infinitec.org>

Institute on Independent Living
<http://www.independentliving.org>

The Research and Development Center
<http://www.trace.wisc.edu>

The DoAble Renewable Home
(202) 434-2277...you may order free booklets with the above title (D12470)
<http://www.usc.edu/dept/gero/hmap/library/drhome>

Getting Started...

When looking for someone to do home modifications, you may want to consider the following:



- ~get ideas from friends who may have had this type of work done
- ~hire a licensed and bonded contractor with proper liability and worker's compensation insurance
- ~get all estimates in writing
- ~hire only an experienced contractor who will guarantee his/her work
- ~have your payment plan/agreement in writing; pay a small deposit in the beginning and make the final when the project is completed to your satisfaction
- ~make any changes to the work or payment plan in writing
- ~do not sign a certificate of completion or make a final payment until the work is done
- ~check with your local Better Business Bureau about the contractor's record
- ~always ask for references

How do I pay for it?

There are several ways to modify and repair your home. You can find information through your local:

- ~area agency on aging
- ~state department on aging
- ~state housing financing agency

- ~department of public welfare
- ~department of community development
- ~senior center Independent Living Center

Getting In and Out

Sloping walks provide an accessible approach when there is a gentle incline and no drop off to the sides. Sloping walks have a maximum slope of 1" in 20". Anything steeper would require a ramp.



Photo provided by:
The Center for Universal Design
College of Design
North Carolina State University

A ramp has a maximum slope of 1" in 12" as well as handrails and curbs. A level landing at a minimum of 5' x 5' at the doorway and at each turn of the ramp will provide ample space for moving around.

A bridge can be used to connect a deck or entrance to a high point in the yard.



A sloping walk added to the side of the stair can offer a second route.

A vertical platform lift can be used when there is not enough space for a ramp or a sloping walk. The lift should be covered to protect it from harsh weather by an awning or extending a porch roof over it. Bushes or decorative fencing could screen the lift.

(Lift Picture provided courtesy of Access Industries)



Exterior doors ideally should be 36" wide and require no more than 5# of force to open. The exterior thresholds should be a maximum of 1/4."



Threshold ramps/threshold rocker can be used when the threshold is greater than 1/4". The wedge can be made of materials that have a non-slip finish.



Lever handles are easier to use for someone with impaired hand function.



French doors need to be wide enough to accommodate the passing through of a wheelchair with one door open. French Doors off the bedroom should open large enough for a hospital bed to be pushed through in an emergency



Can install a power door. Independence in opening a door that is too difficult to open can be done with a "power door."

A switch keypad or motion detector can operate the power door. Security systems with an intercom will improve home security.



Getting Around



A 42" wide hallway will allow a wheelchair to make a 90 degree turn into a 32" door opening.
Doorway at least 4 inches wider than wheelchair

Handrails on the wall could be helpful for someone who is unsteady when walking.

Ample space needs to be available in each room for ease in getting around.

A clear space 5' in diameter provides enough space for a wheelchair user to turn around.



Replacing existing hinges with an "off set" hinge will increase the door opening by about 1 1/2- 1 3/4". The off set hinge allows the entire door to swing out of the doorway.





Residential elevators can help access other levels of the home. They can be placed behind a door that looks like any other interior door.

Sometimes accessibility can be as simple as rearranging furniture.

Flooring can also make a difference. Tight weave carpeting such as Berber without padding, hardwood floors and vinyl can all be good choices.



Mechanical chair type stair lifts can also be used to help get up stairs. People who can transfer on to the chair independently use this lift. Any mobility aids, such as a wheelchair or walker would need to be available on all levels in the home.



Mechanical powered platform lifts will help get a person in a wheelchair from one floor to another.

(Lift pictures courtesy of Access Industries)



The Kitchen & Utility Room

These modifications are for long-term wheelchair users



Cook tops with knee space below may make it easier to access but it could put the wheelchair user at risk for accidental spills. Pocket doors can be pushed in to get out of the way.



Roll under cook tops can be placed in a kitchen island. The island can also provide an accessible roll under workspace.



Front mounted controls are necessary safety features for ranges. They are also easier to use. There should be a clear knee space next to the range so it will be safer and easier to open and close the oven.



A pullout shelf or cutting board can be placed near a microwave to provide a surface for cooking items. This accessible counter top can be stored under the microwave and out of the way when not in use.



Full extension shelves bring stored items out to the user.



Full extension shelves help bring the trashcan out too.



Narrow full extension shelves make it easy to reach items such as cereal boxes.



Lowering the counter top/sink height and clearing knee space underneath can make it easier for a wheelchair user. Lever controls for the faucet are easier to use for someone with impaired hand function. Raising the dishwasher puts it at an easier to reach height for someone standing and someone in a wheelchair.



Rotating shelves increase access to corner shelves.



When doors under the sink are removed to create clear knee space, a curtain can be used to hide this area.



Height adjustable shelves also make it easier to reach high shelves. Counter tops and cook tops can also be height adjustable. Wall mounted ovens can be used easier when there is clear knee space beside it.



Height adjustable cabinets make it easier to reach items on shelves of over-the-counter cabinets. Clear knee space below the counter allows a wheelchair user to get closer. Sinks placed in a corner can be a good use of this space.



Front loading appliances can be more accessible for someone in a wheelchair but more difficult for someone standing. Raising appliances on a platform positions the doors at lap height for a wheelchair user.



A refrigerator drawer can be an easier place to store drinks and simple snacks.

The Accessible Bedroom



A bed that has the ability to raise and lower the head and feet is helpful with transfers, mobility and dressing. Plexiglas can be placed over the frame to protect it from the "wear and tear" of wheelchair footrests. A plastic floor pad placed where most transfers occur can also protect the carpet from this "high traffic" area.

A minimum of 3' is needed between walls and furniture where a wheelchair needs to pass. An overhead lift can assist in transfers to the bed. Tracks from an overhead lift can be routed where needed, such as from the bedroom to the bathroom.



"Roll in closets" include a 5' diameter turn around space. Pocket doors are one way to create a wide, clear door opening. Shelves are easiest to use at 15" to 4' above the floor for most wheelchair users.





Consider an environmental control unit (ECU) for your home. There are options that can increase a person's ability to use devices in the home for safety reasons. This picture shows an adapted telephone, an emergency call system and a voice activated ECU that will allow easier use of the lights, TV, VCR, fan, etc by voice command. Many options are available depending on a person's needs. **Please note this may not be appropriate for brain injury patients.**

The Accessible Bathroom



A roll in shower is a "curbless" shower that is big enough to fit a shower chair. A 5' x 5' shower provides enough turn around space for a wheelchair. It can include grab bars, a hand held shower nozzle and a slightly sloping floor for good drainage for someone dependent with transfers, decreased sitting balance that cannot sit on a tub bench.



"Retrofit" roll in shower floors or "retrofit" roll in showers are also commercially available.



A half-wall on one side of the roll in shower can provide a shield from the water for someone who is helping bathe.



There are many types of grab bars for the toilet. Fold down grab bars can be used when the toilet is not by a wall or not by a wall that can be reinforced. Grab bars need to be reinforced so they can support 250 pounds of pressure. Placement of the toilet is important depending on the type of transfer someone must perform.



A built in transfer seat and grab bars can make it easier to get in and out of a bathtub. Clear floor space next to the tub makes it easier to position a wheelchair.



When full immersion into the tub is not possible or safe, a portable tub transfer bench can be used. This bench makes it possible for someone to sit and take a sponge bath or shower using a hand held shower nozzle.



Sinks with knee space below will allow for a closer approach. This counter top has also been lowered. Doors have covered the pipes



Here an attractive wood panel apron has covered the wood pipes.

Another way to insulate pipes is with a commercially available snap and clip insulation kit. Insulating pipes is important to prevent burns to a person's legs while using the sink. Sometimes pipes can become very hot when the hot water has been running.



Home Safety

1. Install smoke alarms and carbon monoxide detectors in your home. Have one on every floor.
2. Have a fire extinguisher nearby.
3. Place good lighting in all indoor and outdoor areas especially by steps and stairs.
4. Have a telephone that you can use when in bed or when up in the house. A medical emergency alert system is can be put in your home for safety reasons.
5. Consider an environmental control unit (ECU) for your home:



There options that can increase a person's ability to use devices in the home for safety reasons. This picture shows an adapted telephone, an emergency call system and a voice activated ECU that will allow easier use of the lights, TV, VCR, fan, etc by voice command. Many options are available depending on a person's needs.

6. Make your flooring safe. Tape down electrical cords and area rugs. Do not wax floors; use nonskid, non-glare products to clean and polish floors.
7. Remove all loose rugs. Loose rugs may cause you to trip and fall.
8. Avoid clutter. Keep walkways clean and clear.
9. Make sure you have an emergency exit for home and that everyone knows where it is.
10. Also make sure everyone in your home knows the emergency exit plan. Practice your emergency exit plan with your family on a regular basis.
11. Place anti-scald mixer valves in tubs and showers to prevent getting burned by hot water.

Make an evacuation route for your home