

Section D

RESOURCES FOR DAILY LIVING

CONSERVING ENERGY

You can help yourself by taking charge of how you perform the tasks you need to do every day. How you perform the tasks of daily living can affect how you feel for the rest of the day. No one changes the method of performing a task unless it can absolutely no longer be done as it was in the past. The change also depends on how easy it is to accomplish the task when using the new method. It has to be easier the first or second time it is attempted. The following steps will help you determine what you need to do and how you do it.

Consider what routines are necessary. Decide what you can do, what someone else can do, and what can be eliminated from the routine. Examples of routines are dressing, grooming, and bathing.

Consider the timing or scheduling of activities. The patient's time and schedule and the caregiver's time and schedule are equally important. Plan activity periods and rest periods; pace yourselves

Consider the best use of energy. A mountain climber must have enough energy left to return to base camp. Use assistive devices whenever possible to help reduce fatigue and frustration. Assistive devices include walkers with wheels, wheelchairs for covering a distance as when shopping, and special parking cards or license plates that allow parking in handicapped spaces.

Eat high-energy foods in small amounts every two to three hours. Eating large meals is tiring, and actually takes more time and energy than eating small amounts more often.

Place frequently used items in the most convenient place. Place heavier items on the lowest reachable level. This is especially important in the bathroom, kitchen, and office.

Purchase "gadgets" or other energy-saving devices based on recommendations from people who are knowledgeable about the actual

success rates. Otherwise, you may have wasted time and money. Good information can be found at support groups. However, please keep in mind that not all suggestions at support groups will fit your specific problem or situation. Check with the ALS Center staff. They can help sort out the good advice and determine if specific recommendations or techniques meet your needs.

USEFUL GADGETS AND DEVICES

The following sections include examples of equipment, devices, and gadgets that can help you with everyday tasks. Examples of sources and suppliers of the items are given, but the supplier lists are by no means exhaustive.

For Weakness in Arms and Hands

Wrist and hand muscles may become weak, affecting the strength of the grasp for eating, dressing, grooming, and work activities. Many useful, inexpensive devices and gadgets are available to help. Assessment of your specific needs will help you select appropriate items. Hand devices are usually not covered by insurance. Check with the occupational therapist to determine sources and prices for devices. Ask which devices will help you.

Aids for Eating

- built-up handles on lightweight eating utensils
- foam tubing on heavy-duty plastic eating utensils
- large handled cup for hot and cold liquids allows all four fingers to fit through the handle, so grasp does not need to be strong
- offset spoon or fork that can be angled right or left
- clear plastic, clip-on plate-guard
- “octopus” suction device, non-slip disc, or Dycem, a gel pad used to stabilize plates and cups
- long rigid or flexible straws
- sports drink container with a straw
- food blender

Aids for Dressing

- velcro closures for clothing and shoes
- knit shirts, pull-on pants, fewer closures
- elastic thread for cuff buttons, elastic cufflinks
- large-handled button hook
- stretchy shoelaces

- long-handled shoehorn

Aids for Hygiene

- baby wipes for toileting
- toilet attachments, such as Lubidet, for cleansing
- foam tubing on toothbrush handle
- disposable Dentips for mouth cleaning
- electric toothbrush with rotary brush, plaque remover (Braun, Colgate)
- electric flosser (Waterpik)
- hand-held shower hose
- plunger-type liquid soap dispenser
- long-handled sponge

Aids for Grooming

- wall-mounted hair dryer
- foam tubing on handles of comb and brush
- large-handled, lightweight comb and brush
- long-handled comb and brush
- nailbrush with suction cups
- nail clippers on stabilizing platform or board
- foam tubing on razor
- electric shaver

Aids for Recreation

- adjustable-height tilt-top over-the-bed table
- card holders
- electronic games or gadgets, with hand controls
- computer games
- electronic books
- page turners
- book holders
- rubber finger tips for help in turning pages in books, magazines, or newspaper

Telephone and Monitor Aids

- telephone adaptations such as headset, receiver holder, speakerphone, memory keys for dialing frequently used phone numbers
- emergency call device (some are worn around the neck, some on the wrist)

- fanny pack for carrying portable phone
- infant monitor, walkie-talkie, wireless pager for in-home communication

Devices for Computer Use

- computer arm supports
- keyboard aid (pointer), Futuro wrist brace
- foot-operated computer mouse
- head- or eye-control electronic-computer device

Other Useful Devices

- key holder
- Hand Keyper (key holder, letter opener, magnet, nail file)
- lever door handles
- touch light switches
- offset hinges for doors, which widen doorway without reconstruction

Mobile Arm Supports

These supports can be attached to an adjustable-height table on casters for use anywhere in the home. The supports allow horizontal and vertical arm motion, as for reaching the plate and the mouth. They also work well over the computer keyboard. Table-mount clamps attach the arm support to a table or computer desk. A supinator attachment allows some rocking motion of the forearm trough. A T-bar attachment can be added to support a weak wrist. An occupational therapist must order these attachments and can demonstrate their use.

For Weakness in Legs

Many kinds of devices, braces, and durable medical equipment, or DME, are available to assist a patient with hip, knee, or ankle weakness. The extent of weakness and of endurance should be properly evaluated before any recommendations for equipment are made. Check with the insurance company or Medicare about coverage and which preferred providers or vendors they use. Gait, or manner of walking, should be evaluated by a physical therapist in an outpatient clinic to test stability and safety when using the appropriate walking aide. A prescription and a letter of medical necessity are needed. They can be written by either the therapist or the physician, but must be signed by the physician.

Aids for walking

A **straight cane** helps provide balance and stability. Even if it seems unnecessary, using a cane will help make other people more careful, and less likely to bump into you. **Forearm crutches**, which act like two canes, give two-sided support. A **standard walker**, the lightweight, folding type, can be easily carried in a car.

Mobile walkers

The **U-Step Walker** is covered by Medicare with a prescription and letter of medical necessity. It has a seat and carrying basket. It is a good choice for tall people with severely limited hand strength, or moderate to severe leg muscle stiffness. It has a push bar for patients with weak hand grasp, and hand brakes. It locks when the push bar and hand brakes are released. It folds for transporting in a car. The walker must first be purchased and then reimbursed through an insurance carrier or Medicare. A prescription and letter of medical necessity is needed for reimbursement. The walker can be obtained from InStep Mobility, 8040 N. Ridgeway Ave., Skokie, IL 60076, 847-676-1275.

The **Nova-Deluxe Wheeled Walker** is covered by insurance and requires a prescription and letter of medical necessity. It is a good choice for patients with leg weakness, stiffness, or poor walking endurance. This walker can be obtained through most durable medical equipment companies. The manufacturer is Snug Seat, 12801 E. Independence Blvd., Stallings, NC 28105, 800-336-7684.

Other **rolling walkers** are also available. Considerations in making a selection include: overall stability for the patient's height (the three-wheeled walkers are not as stable), adjustability of the height of the hand grips, the type of hand brake system, ease of operation and stability, ease of turning the walker, folding feature for easy transport in a car, and seat and basket options. Standard folding walkers can be adapted with front casters either 5 inch non-swivel casters or 3 inch swivel casters, and back gliders.

Aids for transfers

A **gait belt** is used around the patient's waist so a caregiver can assist with standing or sitting. Some belts have buckle closures and some have Velcro. Some also have handles. Check with the clinic occupational therapist or

physical therapist for the appropriate style and for training in its use. **Transfer boards** are used to move between a wheelchair and a bed or the seat of a car. The **BeasyTrans** is a sliding transfer board, which consists of a sliding disc on a transfer board. It is available from North Health Products, Inc. P.O. Box 187, Lake Forest, IL 60045, 800-672-3279.

The **Easy Pivot Lift** is a mechanical patient lifter. The local contact is 630-961-7388, the manufacturer is Rand-Scot Inc., 800-467-7967. This lift tilts the patient forward to make dressing and toileting easier when he or she cannot stand. Call for a demonstration to make sure the patient is comfortable in it and that the caregiver can operate it in the home.

Seat-lift recliner chairs assist the patient to a standing position, change position to make the patient more comfortable when sitting or reclining, raise the legs and feet to reduce or avoid swelling, or change position to support the head and neck in a reclined, comfortable position.

Aids for swelling in lower extremities

TED hose are used to reduce mild swelling in feet, ankles, and legs; to promote circulation; to reduce risk of blood clots. They are available at a pharmacy by prescription from a physician. **Jobst garments** are used to control or reduce mild to moderate swelling in feet, ankles and legs. They require a physician's prescription and measurement for accurate fit. **Sequential compression devices** require a physician's prescription. Phlebopump, Ace-pp-1000 (888-4PHLEBO) is used for severe swelling of lower extremities.

For Weakness in Both Arms and Legs

A variety of devices are available that can make doing everyday tasks easier for a patient with weakness in both arms and legs.

Aids for toileting

A **raised toilet** seat, 4 to 5 inches in height, made of molded plastic, fits snugly inside the rim of the toilet on most toilets. It has all smooth surfaces and can be easily cleaned. It can be removed easily when other family members use the toilet. It can be carried in a zippered bag or shopping bag for use when visiting other homes. Available from Walgreens, Fitzsimmons, Apria Healthcare, and Sammons-Preston catalog. A **standard commode** can

be placed over the toilet to provide a raised seat and armrests. A **shower commode chair on wheels** can be rolled over the toilet to provide a raised seat and armrests, as well as being used in the shower.

Aids for bathing

A **shower commode chair on wheels** has a padded seat and back and floor brakes or wheel locks. Padded arm troughs can be ordered if needed. Some commode chairs have tilt seats with headrests, reclining backs, or straight backs. They can be used at the bedside, over the toilet, and in shower stalls. Brands include Activeaide, Invacare, Aqua-Tec, and Clean Shower. Check availability from Fitzsimmons Surgical Supply, Metro Rehab, Apria Healthcare, Rehab Tech, or other DME vendor. Models vary in price from \$1000 to \$3000.

Padded bath benches are set up across the side of the tub. They cannot be used with tubs that have sliding glass doors. The bench also cannot be used if a vanity is located next to the tub because the patient does not have enough leg room to turn while sitting. Available from Sammons-Preston catalog for about \$150. Tub Slide Shower Chair from RD Equipment 508-362-7498, is about \$2500. A **tub seat** is a small seat that can be placed inside the bathtub. It can be used with tubs that have sliding glass doors. A tub seat can be used only if the patient can step into the tub. It must be placed in the tub after the patient steps over the side of the tub. **High-back resin deck chairs with arms** can be used in the shower stall if the stall is large enough. They are very lightweight. A **standard walker with no wheels** can be used in the shower stall to aid stability. A simple **wooden bar stool** can be placed in the shower stall to provide a high seat, making it easier for the patient to stand up.

A **hand-held shower hose** attached to a shower head or faucet allows water to spray from an appropriate height. **Liquid soap dispensers** can be attached to a tiled wall with suction cups to hold shampoo, conditioner, or soap. There are no bottles or caps to turn or drop. One source is Bed Bath and Beyond. **Long-handled scrubbers** can help the patient clean his or her feet. Available from Sammons-Preston catalog. **Grab bars** securely fastened in the shower wall at the appropriate height can provide a shelf for weak arms to rest on while washing hair, shaving, washing the face. **Tub rail** clamps

securely to the side of the tub for added stability while climbing into and out of the bathtub. They are about 12 to 15 inches high.

Catalogs

- MOMS-Mail Order Medical Supply, 800-232-7443, www.momsup.com
- QUEST Magazine: Muscular Dystrophy Association, 520-529-2000, www.mdausa.org
- Sammons Preston Rolyan, 800-323-5547, fax 800-547-4333, www.sammonspreston.com

Chicago area suppliers of durable medical equipment (DME)

- Apria Healthcare, 630-920-0044, Burr Ridge
- Fitzsimmons Surgical Supply, 708-795-6300, Berwyn
- Metro Rehab Services, 708-361-7060, Worth
- Mobility Systems, 708-599-3500, Hickory Hills
- Rehab Tech, 630-420-8585, Naperville

ORTHOTICS

Orthotics are orthopedic appliances such as splints and braces that are used to support or straighten weak areas of the body. ALS patients may use orthotics for weakness of the neck, trunk, arms, and legs. A certified orthotist evaluates a patient's need for a specific orthotic. Most orthotics require a prescription from the physician. Contact the insurance company or case manager to check on suppliers before making an appointment. Medicare covers most orthotics, although private insurance may not cover shoes or shoe inserts.

Orthotics that Support, Protect, and Rest Weak Neck Muscles

A **Buddy Pillow** is a buckwheat travel pillow with a fleece cover. It supports the neck in bed, in a recliner chair, in a car, or on a plane. A **soft cervical collar** is a simple, inexpensive orthotic that can be purchased at Walgreens, Osco, Dominick's, or Jewel. The collar may restrict swallowing if too snug. It is not covered by insurance.

For the following collars, a prescription from a doctor and a fitting by an orthotist are required.

- A **Plastizote collar** is a lightweight, flesh-colored, firm foam, two-piece collar with a chin support. The chin support is not movable. The collar may cause pressure under the chin or on collar bones. It

does not restrict swallowing or feel tight around the throat, but does not allow the patient to speak or eat.

- **Aspen, Miami J, or CervMax collars** are light, gray, foam-lined, two-piece collars with washable liners. The structure is less firm than the Plastizote, but more comfortable. It does not restrict swallowing or feel tight around the throat.
- A **Headmaster collar** is a wire-foam collar with padded tubular frame, a chin support, and more open areas around the throat and neck.
- An **Oxford collar** is made from wire and foam. It provides support for the chin and the back of the neck, and allows side-to-side motion of the head and bending and stretching of the neck.
- A **Soma-occipital-mandibular-immobilizer** provides firm chin and neck support and has a chest harness to support the weight of the head over the shoulders. It is more important for walking than sitting.

Orthotics that Help Arm and Hand Weakness

Shoulder supports must be evaluated by a physician and a therapist. Assessment of shoulder joint mobility, circulation, and range of motion is needed for proper selection of the correct orthotic. A **wrist-hand orthotic (WHO)**, also called a **forearm** or **resting handsplint**, is used to support weak wrist and hand muscles during the day or at night. The splint should be as lightweight as possible. Most splints can be preformed, but some must be custom made. The occupational therapist will choose an appropriate splint depending on how much muscle weakness or stiffness is present. Wearing a splint on each hand during sleep is usually not advisable, since one hand should be free. Alternate wearing splints on right or left hand each night or day. The Futuro wrist brace is available in Walgreens, Osco, and Dominick's. Sammons Preston wrist braces, Neutral Position wrist supports, and TheraPlus hand positioners are available from Sammons Preston. A **thumb-wrist support**, or wrap, is a **functional hand orthotic (FHO)**, which supports the thumb and index finger to improve fine coordination. It does not place the thumb and index finger in pinch position, and it does not make the hand stronger. It is usually made from neoprene or very lightweight splinting material. Examples include the Neoprene thumb-wrist support or wrist-thumb wrap available from Sammons Preston.

Trunk Supports

Trunk Supports are used to support weak trunk muscles, improve posture, relieve muscle pain from strained muscles while sitting or walking. **Elastic abdominal supports** provide mild to moderate support to abdomen and low back. Good hand strength or assistance from a caregiver is needed to put one on. Supports are available from local pharmacies, such as Walgreens and Osco. No prescription is needed. **Lightweight corsets** give support to the trunk and low back but require more dexterity to put on. While wearing a corset, less flexibility is needed when rising from a seated position. The corset must be ordered from an orthotic company and requires measurement and adjustment for a correct fit. A prescription from a doctor and fitting by an orthotist is required.

Leg Braces Help Foot, Ankle, and Leg Weakness

A **knee-ankle-foot orthotic (KFO)** is a long leg brace. It is not useful for ALS patients because they are usually unable to take a standing position with the knee in a locked position. An **ankle-foot orthotic (AFO)**, which used to be called a short leg brace, stabilizes weak ankle muscles, as in drop foot and in weak knee extension. It fits inside the shoe and usually should be custom molded to the leg. An articulating ankle on this orthotic allows movement at the ankle joint, which assists knee extension and helps lock the knee joint. This modification will help in climbing stairs. A **supra-malleolar orthotic (SMO)** is used to stabilize the ankle and forefoot.

SOURCES FOR ORTHOTICS

Ballert Orthopedics

NW: 233 E. Erie, Ste 200, Chicago, 312-787-4400
Rush: 1725 W. Harrison, #960, Chicago, 312-563-2795
2434 W. Peterson, Chicago, 773-878-2445
U of C: 5659 S. Cottage Grove, Chicago, 773-493-2445
1250 N. Mill St. #106, Naperville, 630-637-9540
125 E. Lake Cook Road, Buffalo Grove, 847-459-9006
800 MacArthur Blvd, Ste 14, Munster, IN, 219-836-2800

Scheck & Siress

Rush: 1725 W. Harrison, #829, Chicago, 312-942-2011
2551 N. Clark, Ste 200, Chicago, 773-472-3663
U of I: 1740 W. Taylor, Rm C100, Chicago, 312-996-6450

617 E. Golf Road, Ste 108, Arlington Heights, 847-437-3929

1551 Bond St., Ste 111, Naperville, 630-637-4638

One S. 376 Summit Ave., Ct E, Oakbrook Terrace, 630-424-0392

1145 Madison Street, Oak Park, 708-383-2257

10411 S. Roberts Road, Palos Hills, 708-599-8336

6629 W. Lincoln Hwy Rte. 30 Suite 1, Schererville, IN, 219-864-9501

Rehabilitation Institute of Chicago (RIC)

345 E. Superior, Room 1764, Chicago, 312-238-2810

HOSPITAL BEDS, MATTRESSES, and PATIENT LIFTS

Hospital beds and appropriate mattresses can help in positioning the patient and in preventing such pressure-related problems as bedsores. All hospital beds require a prescription and a letter of medical necessity from a physician.

Hospital Beds

Manual frame: The mattress height can be set at low or high position; manual cranks are used to change the position of the head and foot sections.

Semi-electric frame: The height can be set at a low or high position. A power switch raises the head and foot positions.

Full electric frame: A power switch adjusts the bed frame height to make transferring possible either from the wheelchair or from standing at the bedside. The switch also adjusts head and foot positions. Full electric frame does not mean a full-size bed. **Side rails:** Full-length or half-length side rails give the patient leverage to turn from side to side if this is difficult. Half-length rails make transferring to and from the bed easier.

Pressure-Relief Pads or Mattresses

Egg-crate foam is used under the bottom sheet. It does not provide enough pressure relief for long-term use. **Artificial sheepskin** can also be used under the sheet, although use on top of the sheet allows more air circulation. It is washable and more buoyant than egg-crate foam. An **alternating pressure mattress** is used under the sheet. An electric compressor raises and lowers pockets of air under the body area. A prescription and letter of medical necessity is required to obtain this. A **Thermostest air mattress**, used by campers under sleeping bags, provides insulation and pressure padding. A nylon cover allows easier movement in bed when the mattress is placed under the sheet. It is available in various depths from sporting goods stores and from L.L.Bean.

The following items all require a prescription and letter of medical necessity to obtain. A **Roho mattress** is available as a low-profile or high profile air mattress. It can be a sectional (three sections for a hospital bed) or a full-length bed mattress. A **gel-foam mattress** or **Temperfoam mattress** or

pad provides maximum pressure relief. It is heavy once in place. Temperfoam products are also available from Brookstone stores. A **low air-loss mattress** moves air from one side of the mattress to the other to reduce pressure under the shoulders, hips, knees and ankles. The mattress can be rented from a durable medical equipment company for about \$700 per month. Purchase price is about \$12,000.

Patient Lifts

Hydraulic patient lifts, such as Hoyer and Invacare, are used with a separating sling (Transaid 309 or HD309, or Hoyer model). This type of lift supports the person in a seated position. The separating sling can be placed under a patient who is sitting or lying down without physically lifting. It also can be removed without lifting the patient. **Power patient lifts** (Hoyer and Invacare), are similar to the hydraulic lifts, but are used with a battery-powered source attached to the lift. **Ceiling track patient lifts** use electric power. You will need to check with the case manager at you health insurance in order to determine what is covered by your policy.

WHEELCHAIRS

Determining what kind of wheelchair is appropriate for a particular patient depends on the patient's short-term as well as long-term needs.

Insurance Coverage

Check the health insurance policy to find out if durable medical equipment (DME) is covered, or ask the insurance case manager. Most insurance policies will cover only one wheelchair. A manual wheelchair, needed for transportation and safety, is usually priced between \$500 and \$2000. A power wheelchair, needed for independence and weight-shifting, is usually priced between \$6000 and \$25,000. The Muscular Dystrophy Association can apply \$2000 toward a manual wheelchair for patients who are registered with them and who are seen in their clinics. Call the local Muscular Dystrophy Association office. Medicare will cover a manual or a power wheelchair. However, once a manual wheelchair has been paid for, it is unlikely that a power wheelchair will be covered. Check with the occupational therapist before a wheelchair is obtained to plan the best strategy.

Factors to Consider When Buying a Wheelchair

- the patient's age and the age, health, and strength of the caregiver, who may have to place a manual wheelchair in the car
- the type of car and its storage space; such as hatch back, minivan, full-size van, and van with wheelchair conversion; and the space available in the garage and driveway
- the entrance or exit to your home, including placement of outside steps, inside steps, railings, deck, outside porch, and enclosed porch; and the possible need for a ramp or a porch lift
- the width of the front and back doors and of the interior doors, especially the bedroom and bathroom
- the widths of the hallways and the space available for turning into and in the bedroom and bathroom

Wheelchair Features

Lightweight, manual wheelchairs are used for transportation to and from the car. They can also be useful if the patient has retained enough strength to move about or if a caregiver is available to push the chair. However, patients should not sit in this kind of wheelchair for a long period of time. The chair must have a pressure-relief seat-cushion. Other useful features include detachable armrests and swing-away footrests. Some manual wheelchairs have four small wheels, others have quick-release large back wheels; both of these kinds are easier to place in a car. Types of manual chairs include: E & J Companion, Invacare Patriot, and Quickie 2.

Power wheelchairs are used for independent mobility and for independent weight-shifting to decrease risk of pressure sores. Various features are available for these chairs. A **Tilt-in-Space seat** in a power wheelchair can be tilted back to relieve pressure on the seat or lower back. It requires special electronics to move the chair forward and change the seat position. It usually needs standard footrests. A **tilt and recline system** enables the seat and the seat back to be tilted backwards. Elevating leg rests may be needed in the reclined position. **Adjustable seat height** raises and lowers the seat from the wheelchair base.

Other seating features include molded back inserts, tall back inserts, custom contoured back inserts, lateral supports for weak trunk muscles, head rests, molded seat inserts, custom contoured seat inserts, various kinds of pressure-relief cushion fillers including air, gel, gel-foam, and foam;

adjustable height armrests; desk-length armrests; full-length armrests; regular arm pads; trough arm pads with hand supports; swing-away footrests; heel loops; elevating leg rests; and angle-adjustable footrests. Electronic environmental control devices can be attached and used to turn on lights, or to access TV, VCR, stereo-CD, computer, and telephone. The joystick control can be modified for different degrees of hand weakness. The joystick control box can be placed to the right or to the left or in the center of the wheelchair base, depending on the person's ability to manage it. Varying drive speeds can be programmed as well as varying amounts of pressure needed to push or pull the joystick. Head or foot control can be used if hand control is not possible. An attendant control can be placed near the headrest. Breath control is used for some ALS patients. All features must be jointly assessed by the therapist and the wheelchair specialty representative.

Motorized Scooters or Carts

Scooters and carts are known as power-operated vehicles for Medicare coverage. They are usually not recommended for persons with ALS because they do not provide adequate back support, head support, or arm support.

HELP FOR THE CAREGIVER

The caregiver may need instructions on how to safely assist a person with ALS, especially information regarding transferring techniques. Adequate information and instruction will help improve care, reduce anxiety, and decrease the risk of injury to both the patient and the person helping. Written prescriptions from the physician are needed for physical therapy evaluations and treatments, which may be obtained through a home health care agency. Check with the insurance company or case manager for information on policy coverage. Check with the occupational therapist for information on Medicare coverage.

HOME MODIFICATIONS

Each person with ALS has a different course of disease progression, a different lifestyle, different resources, and different family commitments. Decisions about modifying the home to ease care and mobility problems should be made with careful consideration of both short-term and long-term needs of the patient and the family. Trilevel, bilevel, and two-story homes with turning stairways are the most difficult challenges. Solutions depend on family resources. A decision to move the person with ALS to the most accessible level of the home and to make modifications on that level to meet

needs for toileting and bathing may be the most feasible solution in the long run. You may also want to check with companies that use Americans with Disabilities Act (ADA) guidelines and modify homes in your area.

Easy access to the home for walking or using a wheelchair must be considered. Keep an open mind and look at all the options. A platform area for the wheelchair is needed for safety and stability inside and outside the entrance doorway. This platform must be at the same level as the doorsill.

Ramps

A platform at least 36 x 36 inches will allow the wheelchair to safely sit outside the door before going up or down the ramp. A handrail or wheel rail should be attached along the sides of the ramp. Ramps for outside the home can be constructed from deck wood; for inside the garage or home they can be made from plywood. The maximum recommended angle, or grade, for indoor ramps is 12 inches of ramp for every 1 inch of rise or a 1:12 ratio. A 12-foot ramp is recommended as a minimum for a 1-foot rise. Sometimes a sharper, steeper rise is needed because there is not enough space for a longer ramp. Remember that more strength is needed to push and control the wheelchair on a steeper ramp. Ramps outside the house should use a 1:20 inch ratio (a 20-foot ramp for a 1 foot rise), which provides a long, generous ramp. Walkways along the side of the house may allow space for such a long ramp. A “Z”-shaped ramp is necessary where short front yards or backyards do not provide enough space for a long, safe straight incline. A 5-foot flat area at the bottom of the ramp is recommended for stopping and turning the wheelchair. Local building ordinances must also be taken into account in planning a ramp. Portable, folding aluminum ramps are commercially available. These can be taken in the car or van for use when you go to a place that has one or two steps and no ramp.

DME Access, 800-892-7400, constructs new wood or metal ramps for homes.

HandiRamps, Inc., 800-876-7267, constructs aluminum and galvanized steel ramps and concrete decks for homes and businesses.

Mobility Systems, 708-599-3500, constructs new aluminum ramps for homes and businesses.

How to Build Ramps for Home Accessibility can be obtained from www.dragnet.org or purchased for \$15 from the Metropolitan Center for Independent Living, 1600 University Ave. West, Suite 16, St. Paul, MN 55104-3825, 615-646-8342. The companion video is \$20.

Sammons Preston Rolyan Catalog, 800-323-5547, has portable aluminum ramps, www.sammonspreston.com.

Porch Lifts

Porch lifts can be placed at doorways inside or outside the home, depending on the placement of stairs and the space for the lift itself. Porch lifts can be placed inside bilevel and trilevel homes and allow use of two levels without major renovation to the home. Assessment of construction requirements must be made by the installer.

Omry Rehab and Medical Products: Cheney Lifts, 888-228-4543, **Mobility Systems**, 708-599-3500, installs new porch lifts for homes and businesses.

Stair Lifts

Stair lifts can be rented or purchased. Straight stairs and curved stairs can be fitted with the appropriate models. Costs depend on the length and curve of the track. Sitting balance and neck weakness of the patient must be considered.

American Access Systems, 800-688-0741, installs new and used stairlifts, rental and sale, for homes and businesses.

Bruno Independent Living Aids, Inc., 800-882-8183, www.bruno.com.

Mobility Systems, 708-599-3500, installs new stairlifts for homes and businesses.

Stannah Stairlift, 800-877-8247, installs new and used stairlifts, sale and rental, for homes and businesses.

Ceiling Patient Lifts

Ceiling lifts can be installed over the bed, in the bathroom, or at the top and bottom of stairs to meet individual needs.

SureHands Lift Systems, 800-724-5305, www.surehands.com.

Barrier Free Lifts, 800-582-8732, <http://bfl-inc.com>.

Moving Solutions, 800-228-7980.

Mobility Systems, 708-599-3500.

Door Width and Halls

A doorway must be least 32 inches wide with a door that swings inward. Offset door hinges can replace regular door hinges if there is enough room to set the door behind the door jamb. This will give you about 1 to 2 inches more clearance, depending on the width of the door itself. Wheelchairs are too wide to go through most bathroom doors. If the bathroom doorway is at least 24 to 25 inches wide a rolling shower commode chair can be used. Most shower commode chairs are 21 to 22 inches wide. They can be used over the toilet or in the shower and go through most bathroom doors easily.

Bathrooms

Shower stalls are easier to negotiate than bathtubs. Remodeling is very expensive, but a tiled floor with a recessed drain allows a shower commode chair easy access for patient and caregiver. An oblong shower stall can be modified by adding a wood deck and removable ramp. Glass doors must be removed and replaced with an expandable curtain rod and a shower curtain. Place the curtain rod inside the shower area to prevent the water from dripping outside the shower stall.

PASSIVE RANGE OF MOTION EXERCISES

Passive Range of Motion (PROM) decreases the risk of joint and muscle pain and subsequent immobility. When arm, leg, neck, and trunk joints are moved passively, caring for the patient is easier. Transfers, dressing, bathing, and other personal care can be performed with less pain and stiffness.

Shortened muscles cause pain most commonly in the neck, shoulders, hips, and ankles. Passive range of motion promotes elongation of muscle fibers. Instruction of techniques can be ordered by prescription through a home care agency or outpatient therapy. Caregivers need training to perform PROM correctly for the benefit of the patient, as well as a safeguard for the caregiver against injury.

The following exercises may be helpful for a person with ALS. Please consult with your physician before attempting any of these exercises.