

SECTION A: ASSISTIVE TECHNOLOGY TO ADDRESS SAFETY AND MOBILITY

SAFETY

Sensory and/or mobility limitations can create a dangerous atmosphere for someone with a disability who is living partially, or completely, independently. There are a number of considerations around a residence that should be considered to assure the person is able to complete tasks in a safe manner, and that any sensory deficits are compensated for.

One of these lower technology options may be appropriate:

- Color code or label items around the house
- Post emergency numbers at each phone
- Speaker phone
- Replace all rugs with non-skid rugs

Some higher technology examples that may benefit people with disabilities who are living independently but have sensory or mobility limitations that affects their safety are provided below.

<p><u>Remote door lock:</u></p> 	<p>There are both deadbolt (shown) and door handle options. This technology allows someone with limited mobility to lock and unlock their door without having to physically be at the door. It increases safety, especially for persons who use personal care assistance and need to both let them in and lock the door when they leave. http://www.smarthome.com/ /Doorlocks Access Control/ /7/nav.a spx has a wide selection and prices vary.</p>
<p><u>Doorbell with flashing strobe and chime:</u></p> 	<p>This device uses a transmitter to activate the receiver. Upon activation the system flashes a bright strobe and emits a chime simultaneously. This device may benefit a hard of hearing user, as well as a hearing user who is often in a loud environment. This model can be purchased at www.rehabmart.com.</p>
<p><u>Flashing door beacon:</u></p> 	<p>The door beacons responds to the vibration caused by knocking on the door. The knocking shakes the beacon which causes it to flash in alert for several seconds. It has adjustable sensitivity. It has several mounting options and can be easily moved between doors as needed. http://www.maxiaids.com/store/prodView.asp?idstore=0&idProduct=350</p>

<p><u>Flashing/ Silent call smoke alarm:</u></p> 	<p>These devices emit an audible signal as well as sends a silent signal to a silent transmitter (sold separately) to reliably alert both hearing and hearing impaired persons of the presence of smoke. There are both portable and hard-wired (requires an electrician) options. Some models have battery backup (which only activates the audible alert). A variety of options are available, several of which can be purchased at www.beyondhearingaids.com or http://www.harriscomm.com/catalog/advanced_search_result.php?keywords=smoke</p>
<p><u>Flashing carbon monoxide alert:</u></p> 	<p>This device emits a signal to a transmitter or strobe light (both purchased separately) to alert the user of an increased carbon monoxide levels. A variety of options are available, several of which can be purchased at www.beyondhearingaids.com or http://www.harriscomm.com/catalog/advanced_search_result.php?keywords=carbon%20monoxide%20detectors.</p>
<p><u>Lifeline:</u></p>	<p>Lifeline is an alert system that is recommended for elderly or individuals with limited mobility, at risk for falling or other accidents (e.g. heart attack, seizure). More information can be seen at http://philips.lifelinesys.com/lifeline_101aa/?gclid=CKvrubrR9pECFQ9THgod6yKEqg</p>
<p><u>Door wedge alarm:</u></p> 	<p>This device slips under the edge of your door and anyone that would attempt to open your door would set off a siren alarm. It is a good option for someone who feels the need for added safety. It is simple to use, and has a convenient on/off switch.</p>

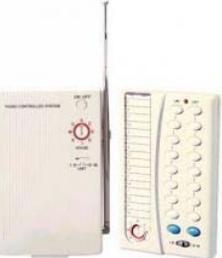
MOBILITY

Mobility impairments can create an unsafe living condition, as well as limit a person's ability to be independent in and out of the home. Applying assistive technology to address mobility issues can allow a person freedom to complete tasks and hobbies around the home, as well as pursue hobbies outside the home.

One of these lower technology options may be appropriate:

- Traction grips on shoes and/or rugs
- Walking cane
- Handrails on both side of the stairs
- Non-slip reflective tape on stairs

Some higher technology examples that may benefit people with mobility limitations are provided below.

<p><u>Voice activated remote controls:</u></p> 	<p>The voice activated remote control allows the user to turn electronics on and off, as well as activate the buttons via voice commands. This is beneficial for someone who cannot physically access the buttons on a remote due to a lack of fine motor skills or grip strength, as well as for someone with limited vision who cannot see the buttons.</p>
<p><u>X-10 Wireless hand-held remote control system:</u></p> 	<p>A wireless X-10 remote control allows the user to remotely access devices that are controlled with wiring, such as lamps and fans. A variety of models are available at Smarthome.com, x10.com and smarthomeusa.com.</p>
<p><u>Self-righting cane:</u></p> 	<p>A self-righting cane provides an added level of stability for someone with balance difficulties, gross motor limitations or general muscle weakness that affects their ability to independently ambulate. The cane also never requires the user to bend over to pick it up, and if it's knocked over, it stands back up by itself.</p>

<p><u>Folding Reacher:</u></p> 	<p>The folding reacher can help the user grasp items from a seated position, or otherwise out of reach, while in or out of the home. It weights approximately half a pound, has non-slip rubber lined jaws, and an efficient trigger grip that is able to grasp things up to 3” wide.</p>
<p><u>Transfer board:</u></p> 	<p>Sliding boards, made of wood or plastic, can be used to assist with independent or assisted transfers from wheelchair to bed, toilet, commode, couch or chair. Price varies.</p>
<p><u>Transfer Systems:</u></p> 	<p>The Beasy transfer system includes a circular disc that rotates 360 degrees to provide a frictionless transfer for an individual from a wheelchair to an automobile, bed, commode, shower bench, etc. The system uses no-lift technology as the seat rotates to put the user at the exact angle needed for comfortable placement. The cost is \$250.00. One could also use a Swivel Transfer Board which helps reduce risk of tissue breakdown for people with limited mobility with a cost around \$320.</p>
<p><u>Ice cane/crutch attachment:</u></p> 	<p>This multi-pronged cleat aids a user in walking over icy areas. The attachment can be flipped up and out of the way when not in use. Its made out of heavy duty steel and fits most crutches, walkers and canes. One model can be purchased at AllegroMedical.com.</p>
<p><u>Shoe ice tread:</u></p> 	<p>Non-slip straps slip onto shoes to improve the user’s traction when on ice and/or snow. Some models slip over the entire heel of the shoe, others strap onto the front of the shows. They come in men and women’s sizes and range in price from \$10.00 to \$20.00.</p>
<p><u>Walker:</u></p> 	<p>A walker can add an element of stability for users who experience balance problems or muscle weakness. The metal frame is sturdy; most models feature adjustability and are foldable for storage and transportation.</p>

<p><u>Intercom system:</u></p> 	<p>An intercom system can increase the security of a users' residence, as well as increase their comfort level of living alone. Several models are available from http://www.intercomsonline.com/</p>
<p><u>Wheeled laundry cart:</u></p> 	<p>Using a wheeled cart to transport laundry or when running errands eliminates the needs to carry most items one would purchase (e.g. pharmacy, grocery store items, and general shopping) or laundry. It would be useful for a person with limited strength or balance to complete laundry tasks or safely transport purchased items to their home. A couple of alternatives would be a mesh laundry bag so that they can be dragged or using a child's wagon.</p>
<p><u>Wheelchair:</u></p> 	<p>Wheelchairs can provide a form of mobility for someone with a low physical tolerance for walking. Having a wheelchair can allow someone the ability to spend more time in the community that if they were ambulating without assistance.</p>
<p><u>Scooter:</u></p> 	<p>A motorized three or four wheeled scooter can provide a mode of transportation for running errands or leisure activities. These can be beneficial for someone who is unable to walk more than a few blocks at a time, and may or may not be able to carry items while they walk.</p>
<p><u>Uplift Seats:</u></p> 	<p>These are a portable hydraulic lifter that assists a person with standing up out of a chair. It adds 1.5" to the height of a chair and supports 80% of the person's weight. As the user leans forward, to stand up, the seat lifts them. It has six settings, up to 230 pounds and can work on hard or soft seating surfaces.</p>

Battery operated lifts:



These have a full travel height range that allows lifting from the floor. The battery operated lift has legs that adjust outward to increase safety. There are several Easy-to adjust base legs which lock securely into position. There are options for customization. Most have a 600 pound capacity. Cost is around \$1600.

Transfer slings:



Transfer slings distribute a person's weight load, thus helping caregivers transfer someone to and from different environments.

SECTION B: ASSISTIVE TECHNOLOGY FOR PERSONAL CARE

EATING/COOKING

Eating and cooking tasks can present serious difficulties for people with a range of disabilities. Disabilities related to mobility and gross and fine motor skills (e.g. grip strength, muscle control) especially.

You may find that one of these low-tech options may be sufficient:

- Sports water bottle for drinks
- bendable straws
- create non-skid surfaces

Some higher technology examples that may benefit people with disabilities who have difficulty working independently in the kitchen or during meals are provided below.

<p><u>Arthritis mug:</u></p> 	<p>Made of unbreakable plastic, has 2 angled handles with thumb rests. This might be useful for someone with tremors or limited grip strength. One model can be purchased at http://www.maxiaids.com/store/prodView.asp?idproduct=1024</p>
<p><u>Non-skid dishware:</u></p> 	<p>These types of dishes are useful for wheelchair trays, bed tables, and dining tables. Allow user to eat more independently or to secure dishes to a surface while caregiver feeds. A range of styles can be purchased at http://www.caregiverproducts.com/site/270651/page/911661/bedridden-products</p>
<p><u>Non-skid mat:</u></p> 	<p>This allows for the use of standard dishware, creating a non-slip surface for the dishware while eating at a standard table. It could be useful for persons with tremors, muscle spasticity or poor gross/fine motor control. One model can be purchased at http://www.caregiverproducts.com/site/270651/page/911661/bedridden-products</p>
<p><u>EZGrip weighted utensils:</u></p> 	<p>These utensils have a larger handle grip and additional weight to add resistance to movement for those with hand tremors. The non-slip handles assure a good grip. A set of four can be purchased at http://www.comforthouse.com/utensils.html</p>

<p><u>Hand specific utensils:</u></p> 	<p>These utensils have a larger handle and are angled to assist either a right- or left- handed eater with tremors or motor control issues. Both styles can be purchased at http://www.flaghouse.com.</p>
<p><u>Utensil cuff:</u></p> 	<p>This cuff makes it possible to hold silverware when the person has limited or no grip strength. It also assists with being able to feed oneself, which would benefit anyone who has limited muscle control and has difficulty with the motions for eating. One model can be purchased at http://www.flaghouse.com</p>
<p><u>Food Guards:</u></p> 	<p>This food guard fits securely onto a dish and allows people who have difficulty eating to scoop food up against it. The guard fits plates 8.5-10” in diameter and can be purchased at http://www.lifesolutionsplus.com/surefit-clear-food-guard-p-94.html</p>
<p><u>The Nosey cup:</u></p> 	<p>This molded plastic cup is designed to eliminate the need to tip your head back when drinking a beverage. It is designed for use by people who have limited movement in their head, neck and shoulders (e.g. arthritis, paralysis, spinal fusion). A set of 3 cups in 4, 8, and 12 oz. sizes can be purchased at http://www.kcup.com/nosey.htm</p>
<p><u>One-way valve straw:</u></p> 	<p>The one-way valve straw is designed so that liquid only flows up the straw, keeping the straw full of liquid when the user removes their lips. This prevents the user from having to suck the liquid back into the straw each time they take a drink, as well as prevents sucking air from an empty straw. This device may benefit someone with limited head control, limited muscle strength in their mouth or who has weak swallowing muscles. It can be purchased at a number of places, including http://www.caregiverproducts.com/site/270651/product/AMCST1001</p>
<p><u>Rocker Knife:</u></p> 	<p>This device allows for food to be cut with a rocking motion. It has a curved blade with a solid handle. There are many different styles of rocker knives, with a variety of grips and angles. A rocker knife would benefit someone who only has the use one hand.</p>

<p><u>A walker tray:</u></p> 	<p>This tray fits folding and standard walkers with an 18” horizontal bar. It clips to the side of the walker when not in use. Weight is 28 oz. There are several styles and models. This particular one can be purchased at http://www.lifesolutionsplus.com/walker-tray-p-236.html</p>
<p><u>One handed can opener:</u></p> 	<p>A one handed can opener is useful for people who have hand weakness and can only use one hand (e.g. arthritis, stroke). It requires no pressure after the cutter has been activated; the cutter automatically goes around the can, and then shuts off. Charges in a standard electrical outlet. There is a model for left or right handed users. This model can be purchased at http://www.wisdomking.com/product15717.html</p>
<p><u>Scooper plate:</u></p> 	<p>The design purpose of the curved edges is to prevent spills and overflow, while making scooping food easier. This would benefit someone who has limited rotation in their wrists or just needs some extra guidance when scooping food. SIZE: 6 1/2" This model can be purchased at http://www.flaghouse.com</p>
<p><u>Scooper bowl:</u></p> 	<p>The high rim and reverse curve help to guide scooping food without spilling. This would benefit someone who has limited rotation in their wrists or just needs some extra guidance when scooping food. The rubber suction helps prevent the bowl from sliding. This model can be purchased at http://www.flaghouse.com</p>
<p><u>Flo-Trol cup:</u></p> 	<p>This cup is designed to regulate liquid flow using finger placement over an air inlet hole opposite the mouthpiece. The lid features a mouthpiece with a hole large enough for a straw. This cup is ideal for drinking while laying down, and would benefit someone who spends most of their time in a reclined position. 8 Oz. One model can be purchased at http://www.flaghouse.com</p>
<p><u>Big number measuring cups:</u></p> 	<p>These have easy to read numbers, are approximately 1/4” all and color coded for easy identification. They also include a pour spout for easy pouring. They come in four different sizes (1/4, 1/3, 1/2 and 1 cup).</p>

<p><u>Specialized Cutting Board:</u></p> 	<p>This specialized cutting board is mounted on four suction cups to anchor the board securely to the counter. The surface is white, food grade polypropylene and has stainless steel spikes to hold down food for peeling and slicing. Corner guards keep bread from sliding when spreading butter or cutting. There is an anchor for the knife to reduce risk of injury.</p>
<p><u>Cordless jar and bottle opener:</u></p> 	<p>This device starts automatically and the power twist cone opens the jar or bottle slowly and safely. It can be mounted in a variety of easy to access locations and requires very little muscle strength or coordination to work the opener.</p>
<p><u>Clip on vegetable peeler:</u></p> 	<p>This device is a combination of a peeler and a clip on handle which makes peeling vegetables much easier for people with weak grip strength.</p>

GROOMING/BATHING/DRESSING

Grooming, bathing and dressing tasks can present significant difficulties for people with a range of physical disabilities. Disabilities related to mobility and gross motor skills (e.g. Arthritis, muscle weakness, muscle spasms, tremors, balance, mobility) can especially make these tasks difficult. One of the following low technology options may be sufficient.

- Use 35mm film containers, prescription bottle, sponge hair roller, or tennis ball to build up grip on an object.
- Use a wooden spoon duct taped to an object to extend the handle on that object.
- In lieu of zipper rings, tie loops of fishing wire to zippers (less conspicuous).
- Soap on a rope
- Hand mitt instead of a wash cloth
- Absorbent terrycloth robe instead of towel drying
- Install a phone in the bathroom

Some higher technology examples that may benefit people with disabilities who have difficulty with grooming and dressing tasks are provided below.

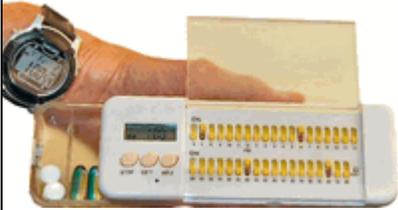
<p><u>Flexible stands for hairdryers:</u></p> 	<p>This technology lets users blow dry their hair using only one hand. This would benefit people with muscle weakness, tremors, or other fine motor disabilities. The stand will accommodate most blow dryers, and the flexible neck is fully adjustable. One model can be purchased at http://www.sammonspreston.com</p>
<p><u>Long handled examination mirrors:</u></p> 	<p>These mirrors have a long handle and an adjustable hand loop. The user can examine all parts of their body. People with limited range of motion, paralysis, or diabetes may find this useful to help maintain good skin health. One model can be purchased at http://www.wisent.com/hygiene.htm</p>
<p><u>Extended /contoured handle grooming tools:</u></p> 	<p>These various tools are designed to be easy to hold, and the extended handle provides a great reach. They may help users who have a limited reach and desire to be able to do some of their own grooming. They range in style and price. Some products may be found at http://beat-arthritis.org/personal-care-aids.php.</p>
<p><u>Shampoo bowls:</u></p> 	<p>They are an inflatable, single or double tube basin for hair washing. They may be useful for anyone who receives personal care assistance and/or spends most of their time in a reclined position. One model can be purchased at http://www.independentneeds.com/catalogue/index.php?do=productlist&category=personal</p>
<p><u>Elastic shoelaces:</u></p>  <p>ActiveForever.com</p>	<p>These allow the user to convert standard lace-up shoes into slip-on style shoes. Once they are laced and tied into place the user can simply slip their foot into the shoe. The elastic expands slightly, and returns to its original position when the shoe is on. This may benefit users who have poor fine motor abilities, the use of only one hand or are unable to bend over to put on their shoes. There are many brands, but one can be purchased at http://www.dynamic-living.com/elastic_shoelaces.htm.</p>

	<p><u>Dressing sticks:</u></p>	<p>Dressing sticks come in a range of style and options depending on the need of the user. They usually have two hooks at one end and one hook on the other. They are used to accomplish all sorts of dressing tasks. Users with poor fine motor control, the use of only one hand, poor joint range of motion, or other similar difficulties may find these useful. Some examples can be found at http://www.activeforever.com/s-54-shoe-horns-and-dressing-sticks.aspx.</p>
	<p><u>Easy-pull hairbrushes:</u></p>	<p>These brushes have a Velcro strap to hold the brush for those with poor grip strength, hand weakness. The wide spread plastic bristles are designed to require minimal effort to pull through the hair. One model can be purchased at http://www.allegromedical.com/daily-living-aids-c519/easy-pull-hairbrush-p187044.html?engine=froogle&utm_source=froogle&utm_medium=feed</p>
	<p><u>Weighted cuff for disposable razor:</u></p>	<p>This cuff secures a disposable razor with a strap that is easy to use and comfortable to wear. The hidden weights help to steady a shaky hand. May benefit users who have tremors or poor grip strength and are unable to independently hold the razor (e.g. stroke, muscle spasms, numbness). This model can be purchased at http://www.caregiverproducts.com.</p>
	<p><u>Suction base nail clippers:</u></p>	<p>Designed to help people with fine motor disabilities or weakness. The suction cups will adhere to any smooth surface. These can be purchased at http://www.caregiverproducts.com/site/270651/product/AMI220.</p>
	<p><u>Toenail scissors:</u></p>	<p>The molded grips enhance gripping and leverage. The angled blades provide a good cutting position. They are designed to give extra reach to those who have difficulty bending. One model can be purchased at http://www.footsmart.com/P-Toenail-Scissors-50235.aspx.</p>
	<p><u>Zipper rings:</u></p>	<p>They snap onto zippers to extend the pull tab. They may benefit users who have difficulty grasping and pulling small zipper tabs. A package of 6 can be purchased at http://www.lifesolutionsplus.com/ring-zipper-pull-p-188.html.</p>

<p><u>Single lever faucets:</u></p> 	<p>Single lever faucets reduce the difficulty of turning the water on and off, as well as adjusting the temperature. They allow someone with low grip strength, low fine motor skills or an inability to turn a knob access to the sink. Prices vary.</p>
<p><u>Bathmats with non-slip backing:</u></p> 	<p>Non-slip bath mats help increase the safety of independently taking a shower. They feature suction cups on the bottom which anchor the mat to the bathtub or shower to help prevent slipping. Someone with decreased balance or limited mobility may find a non-slip bath mat useful.</p>
<p><u>No rinse bath wipes:</u></p> 	<p>These are alcohol free, pre-moistened No Rinse Bathing Wipes that help clean and deodorize with the use of 8 wipes. They may be beneficial for users who require personal care assistance and cannot take daily baths/showers, as well those users who desire to freshen up between baths. One brand can be purchased at a local drug store or at http://www.lifesolutionsplus.com/no-rinse-bathing-wipes-p-410.html.</p>
<p><u>No rinse shampoo cap:</u></p> 	<p>This cap is latex and alcohol free. It is a one piece cap that transfers all massaging directly to hair and scalp. It leaves the hair fresh and clean. This type of shampooing is more efficient than traditional shampooing, and is easier for care givers. When the shampooing is complete all that is required is to towel dry the hair, comb and style. No rinsing required. One brand can be purchased at http://www.nwmedicalsolutions.com/pd_no_rinse.cfm.</p>
<p><u>No rinse body bath:</u></p> 	<p>This product is a concentrated solution that is odor and alcohol free. One oz. produces 32 ozs. of no rinse bathing solution. There is no rinsing necessary. It is an excellent perineal cleanser, is gentle, safe, and effective. It can be purchased at http://www.nwmedicalsolutions.com/pd_no_rinse_body_wash_8.cfm.</p>
<p><u>Touch-free automatic soap dispenser:</u></p> 	<p>This eliminates the need to hold a bar of soap. It uses infrared technology to dispense a predetermined amount of soap. It requires 4 AA batteries. It can be purchased at http://www.nextag.com/HYDAS-INC-Hydas-8360-521579760/prices-html.</p>

<p><u>Transfer bath benches:</u></p> 	<p>There are a number of styles of transfer benches depending on the users' needs and ability to independently sit upright. Many styles extend over the edge of the bathtub and are designed to make transfers into and out of the bathtub as safe as possible. This technology might be advantageous for users who have a mobility restriction and/or use crutches, a walker, or a wheelchair. Using a transfer bench may reduce the users' fear of slipping when getting in and out of the tub. There is often an arm rail for added support.</p>
<p><u>Swivel transfer bench:</u></p> 	<p>This bench serves a similar purpose to stationary transfer benches, with the added feature of a swiveling seat. This further assists with getting in and out of the bathtub safely. Many models have seat belts, safety locks, a moveable backrest, allow for left or right handed entry, have a non-slip surface, a moveable backrest, and suction feet. This technology might be advantageous for users who have a mobility restriction and/or use crutches, a walker, or a wheelchair. One model can be purchased at http://www.dynamic-living.com/portable_bath_bench_pivoting.htm.</p>
<p><u>Silicone ear plugs:</u></p> 	<p>These are soft and prevent water from entering the ear canal. They are disposable and can be purchased at most drug stores.</p>
<p><u>Portable grab bars:</u></p> 	<p>These bars are appropriate when a stationary bar cannot be installed, such as when the person rents their residence. They provide added support when getting in and out of the bath/shower, but should be checked often to ensure they remain secure.</p>
<p><u>Stationary grab bars:</u></p> 	<p>These can be installed anywhere in a home to add support. The installation can be quite involved, and may require the walls to be reinforced in order to hold the users weight. Safety grab bars are the first step in creating a safer bathroom for users who may have a mobility restriction or unsteady gait.</p>

<p><u>PVC shower matting:</u></p> 	<p>PVC shower matting creates a non-slip surface to reduce the risk of falling, and absorbs up to 93% of the impact if the user does fall. Most of the styles of these mats are anti-mildew and prevent bacterial growth. They can be cut to fit a bathtub, shower or bathroom floor. They can be purchased at http://www.alimed.com/ProductDetail.asp?style=70506&fprd=Posey%26reg%3B+Sure+Step+Cushioned+Bath+Mat&oid1=&oid2.</p>
<p><u>Horizontal transfer bars:</u></p> 	<p>These ceiling-to-floor mounted transfer bars are appropriate for people who require a moderate amount of support transferring from bed, can assist with their transfer and weigh less than 450 pounds. They pivot and lock back into place. One model can be purchased at http://www.livsolutions.com/productcatalog.html.</p>
<p><u>Bath lifts:</u></p> 	<p>Bath lifts such as the one pictured are fully height adjustable and recline to a variety of angles. It allows the user to transfer to a chair at the edge of the tub, then lower themselves into and out of the bathtub. This technology would benefit someone who is not fully independent for transfers, as well as someone who is ambulatory, but unable to lower themselves into the tub and stand up to get out of the tub. One model can be purchased at http://www.accessibility4less.com/bathroom_lifts.htm. Prices vary.</p>
<p><u>OTHER</u></p>	
<p><u>Raised toilet seat:</u></p> 	<p>For persons with limited mobility, balance and/or gross motor skills using a raised toilet seat may reduce some of the physical demand that comes from sitting on and standing up from the toilet seat. Styles vary. However, they can be purchased with or without arms and can be easily removed.</p>
<p><u>Automatic flushing toilet seat:</u></p>	<p>An automatic flushing toilet seat limits the number of tasks required to independently use the toilet. The user does not have to focus energy on standing up and turning around and pushing the lever to flush the toilet. This can be difficult for someone with a mobility or balance impairment, as well as for someone with limited motor skills.</p>

<p><u>Toto Washlet:</u></p> 	<p>The Toto Washlet combines automatic flushing and self-cleaning. This piece of equipment would benefit someone who has difficulties flushing the toilet and/or cleaning themselves after using the toilet. It allows for an increased level of independence and privacy when using the bathroom. There are a variety of models with different features, depending on the users' preferences.</p>
<p><u>Foot Flush:</u></p> 	<p>The foot flush hands free flusher allows the user to flush the toilet with a light foot pressure. This may be beneficial for someone with limited fine motor abilities or who is unable to use a standard lever flusher on the toilet.</p>
<p><u>Commodes:</u></p> 	<p>Placing a commode next to the bed or even the user's favorite chair so they can reach the toilet before having an accident. There are models with and without wheels. Cost is \$60.00 and up.</p>
<p><u>Reusable bed/chair pads:</u></p> 	<p>These pads have a leak proof barrier that helps to keep bedding and chair seats dry in the case of an accident. Some have wings that tuck into the side of a chair to hold the pad in place. Prices vary by size and absorbency. Several versions are available at http://www.northshorecare.com/underpads1.html.</p>
<p><u>Medication dispenser:</u></p> 	<p>This multi-alarm pillbox allows for a persons pills to be organized and for 37 alarms to be set throughout the day. The alarms automatically reset every night at midnight. It will help keep a person's medication organized and help assure that medications are taken on time. This one can be purchased at http://www.epill.com/dispenser.html?source=google&gclid=CIzD_cmJupICFQMelgodQwIcbg.</p>
<p><u>Jumbo Portable Pill box with tactual markings:</u></p> 	<p>This container has seven removable pill holders and it comes in a 9.25 x 6.50 inch plastic frame. Each individual pill holder has four large compartments marked tactual in Braille. Pills can be distributed to the individual compartments at the beginning of each week and a bar can be removed each day.</p>

<p><u>Magnifying Tablet cutter:</u></p> 	<p>The magnifying tablet cutter helps a user make sure their pill is cut exactly in half, when required. The pill is placed in the holder, with a 2x magnifying lid, and then the steel blade is pushed onto the tablet. Halves can be stored in the container.</p>
<p><u>Timex 7 Day talking reminder pill dispenser:</u></p> 	<p>This device has seven pill holders, each with four sections that correspond with four daily alarms. The timer slides over the pill holders so that the pills can be divided into the seven containers and the patient can use one holder per day. The timer can be used with the pill holder or separately.</p>

SECTION C: ASSISTIVE TECHNOLOGY TO AID WITH COGNITION AND MEMORY TASKS

Head-trauma, general aging or the onset of neurological conditions can affect ones memory. This can often have an impact on one’s ability to complete daily tasks and live independently.

One of the following lower technology options may be appropriate:

- Post visual cues
- Create daily checklists
- Create a wall calendar for appointments

Some higher technology examples that may benefit people cognition and memory impairments are provided below.

<p><u>Vibrating alarm watch:</u></p> 	<p>These devices provide scheduled vibration and/or sound alarms that can be used to remind a user to use the bathroom, take medication or complete another task. The reminders range from a few reminders a day up to 30. They can be programmed with a short message that appears with the alarm to inform the user why the alarm sounded. Many models look like a normal sports watch and tells real time. Prices vary. One model can be purchased at http://www.epill.com/medose.html .</p>
<p><u>PDA with or without pocket coach software:</u></p> 	<p>A PDA can be greatly beneficial in assisting users with cognitive deficits in maintaining their schedule, remembering their appointments or taking notes from meetings. When The Pocket Coach Software is added to the basic PDA the user is able to receive verbal prompts and audio recorded step-by-step instructions.</p>
<p><u>Tapmemo voice activated PDA:</u></p> 	<p>The Tapmemo is a revolutionary, handheld, battery powered voice activated personal data assistant. It contains only one multi-functional button and two volume buttons. All verbal commands are Speaker Independent which means the user does not need to train the unit – it will work 'right out of the box'. This type of device can be useful for people with cognitive deficits which affect memory. They can be used to remind the user of errands, messages or a to-do list. It can be purchased at http://www.cnib.ca/en/services/products/tapmemo/Default.aspx.</p>



Talking calendar/thermometer/clock:

This device can help someone monitor the date, time and temperature with auditory feedback. It would also be good for someone with a visual impairment.

Talking calculator:



A talking calculator is useful for a user who is blind or has low vision. The buttons and display are larger than a standard calculator.

Sonic Boom Alarm Clock:



The Sonic Boom alarm clock will wake up even the heaviest sleeper. The user can select to wake up to any combination of loud pulsating audio alarm, flashing lights, or shaking bed vibrator. This would benefit a user with a hearing impairment, and help assure they wake up on time and make their appointments. Several models are available at

<http://www.sonicboomalarmclocks.com/?gclid=CPX8jLuktZMCFQNfFQodwmlrCA>.

SECTION D: ASSISTIVE TECHNOLOGY FOR HOME MANAGEMENT

CHORES/CLEANING/ERRANDS

Cleaning, chores and running errands can present serious difficulties for people with a range of disabilities. Disabilities especially related to mobility can create unsafe conditions for someone to independently do chores and run errands. Persons with disabilities that effect gross and fine motor skills (e.g. grip strength, muscle control, balance, mobility) can also benefit from assistive technology related to cleaning, chores and errands.

Some higher technology examples that may benefit people with disabilities who have difficulty with cleaning, chores and errands are provided below.

<p><u>Long handled Duster:</u></p>  <p>Click to enlarge</p>	<p>This is a 20 foot rod with a duster on the end. It allows for the user to keep their feet on the ground, or remain seated and be able to dust high, out of reach places (e.g. ceiling fans, hanging plants, corners of high ceilings). One model can be purchased at http://www.touchoforanges.com/12dusmagexro.html.</p>
<p><u>Long handled dustpan:</u></p> 	<p>This product allows the user to collect sweepings without having to physically bend over. This would benefit someone with a mobility or balance impairment, joint pain or similar conditions. They can be purchased through many hardware stores.</p>
<p><u>Electric Broom:</u></p> 	<p>This allows a user to sweep without the use of a dustpan, and with minimal motion. Prices vary.</p>

<p><u>Self-propelled Vacuums:</u></p> 	<p>These are useful for people who have limited strength, poor physical tolerance for activity, balance impairments or mobility impairments. A self-propelled vacuum may allow a user to vacuum independently when it would not otherwise be possible. Prices vary.</p>
<p><u>Power scrubber:</u></p> 	<p>This is a battery powered scrubbing tool that allows for the user to clean without having to scrub. This would benefit someone with a strength or range of motion impairment that prevents them from applying force or using back-and-forth or circular motions. Black and Decker has a model for \$30.</p>
<p><u>Wheeled cart for laundry:</u></p> 	<p>Using a wheeled cart to transport laundry or when running errands eliminates the needs to carry most items one would purchase (e.g. pharmacy, grocery store items, and general shopping) or laundry. It would be useful for a person with limited strength or balance to complete laundry tasks or safely transport purchased items to their home. A couple of alternatives would be a mesh laundry bag so that they can be dragged or using a child's wagon.</p>
<p><u>Large print washer/dryer labels:</u></p> 	<p>These low vision overlays increase the size of the text on the washer/dryer. They have large, bold text that will help identify small, hard to read buttons. A set comes with 104 stickers. They can be paired to create more accurate labels. Can be purchased at www.maxiaids.com.</p>
<p><u>Front loading washing machine:</u></p>  <p>White Finish (Photo Showing Arctic Blue)</p>	<p>Front loading washers increase independence because clothes can be put in and taken out of the washer without standing and reaching, and also because the controls are on the front of the washer instead of the top.</p>

Hangers with rotating hooks:



These hangers will make hanging clothes a less physically tiring task for people with a low physical tolerance or who are unable to hold the hanger and put the clothes on simultaneously.

MONEY MANAGEMENT/DAILY TASKS

Basic daily tasks and independent money management can become difficult tasks for someone with motor or vision impairments, as well as other disabilities. Some low and higher technology examples that may benefit people with disabilities who have difficulty with daily tasks (e.g. writing) and money management tasks are provided below.

Sheet magnifiers:



Sheet magnifiers come in a variety of sizes and can be used with something like a checkbook, or full page documents, such as bills or money management documents. They can also be used for non money management tasks like reading menus, maps, books and more. The smaller ones fit easily in a pocket or on a key chain. May help someone with low vision or tremors. Can be purchased at a number of locations for approximately \$3.00.

Plastic check writing guide:

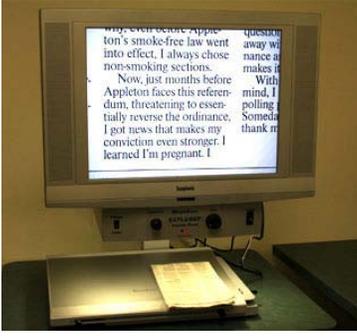


The check writing guide can help people with a vision impairment that makes tracking across lines of text difficult, or people with tremors continue to pay their own bills. Available in standard or business check sized.

Metal writing guides:



The complete set of writing guides helps persons with low-vision to complete a range of writing tasks. The stencil like guides can help with letter writing, checks, addressing envelopes, and signing documents. The set comes with a 20/20 pen and 20 sheets of bold lined writing paper. A 20/20 pen has bold ink and thicker writing tip to make writing easier to see. One model can be purchased at <http://www.azhearing.com/cgi-bin/shopper.cgi?preadd=action&key=204059>.

<p><u>Large print check register:</u></p> 	<p>This product provides large, bold headings and larger amounts of space to enter check data. Each transaction is recorded on its own page. Each register provides for 40 entries. One model can be purchased T www.maxiaids.com.</p>
<p><u>Weighted universal holders:</u></p> 	<p>These will hold most round or irregular shaped pens and pencils. The set comes with 2 pen and pencil holders, a pencil, a pencil sharpener, and an Allen wrench and tiny screws to adjust for smaller objects. These holders will benefit someone with poor grip strength who has difficulty holding onto a typical pen or pencil. The can also benefit someone with tremors as the added weight can sometimes help improve penmanship. One style can be purchased at www.maxiaids.com.</p>
<p><u>Closed Circuit Televisions (CCTVs):</u></p> 	<p>These devices magnify items from 2x to 40x using a 14” television monitor and up to 75x using a 20” television monitor. Users can use this to fill out forms, read documents, read labels from medication bottles or food items or to magnify the paper so they can write a letter. This type of technology can greatly increase he level of independence someone with low vision is able to experience. Each model is different, and offer different controls for color combinations, black/white reversal, brightness, contrast, light settings. Most models have continuous and auto focus features. The cost is \$1800.00 and up depending on the model.</p>

RECREATION/ENVIRONMENTAL CONTROL

Recreational activities are an important aspect of a persons life, whether it be something out in the community or reading a book or playing a game at home. It is also important in an independent living situation that the consumer have the ability to control aspects of the environment (e.g. lights and television). Some high technology options for these areas of living are discussed below.

<p><u>Electronic Aids for Daily Living (EADL) systems:</u></p> 	<p>These systems allow the user to access their environment using a remote control type device (accessible with a switch or by direct selection) or voice activated device. These systems are complicated to set up, but easy to use. Recommend an assistive technology assessment through a therapists, hospital or organization.</p>
<p><u>Computer and Internet:</u></p>	<p>If a person has limited mobility and is unable to get into the community to run errands and do their shopping, being able to shop via Internet (e.g. www.peapod.com/). Additionally, the computer can be used as a means of communication and recreations (e.g. email, news, games) that may relieve a sense of loneliness that comes with living alone and having limited ability to experience the community.</p>

SUPPLEMENT E: ASSISTIVE TECHNOLOGY TO AID COMMUNICATION

There are a number of disabilities that may result in a speech impairment. If it is felt that there is a serious concern about an ability to communicate, it may be necessary to *schedule an assessment with a Speech and Language pathologist* for specialized recommendations.

One of the following low-tech options may be appropriate:

- Symbol or Text based Message Boards
- Pocket portable TTY
- Voice activated Autodialers

A lack of communication can cause loneliness when living independently. There are several other assistive technology options that may aid in increasing communication between the user and their friends and family, especially if the user has a physical disability that prevents them from accessing a standard phone or computer.

A computer with internet access (for email) may also be beneficial to increase a users communication with friends and family. For users with a physical disability that prevents them from directly accessing a computer there are a variety of assistive technology options to allow access.

Telestroke telephone ring signaler:



A telestroke telephone ringer alerts someone who is deaf or hard of hearing to a telephone ring by providing a bright, flashing light. Unit plugs into both phone unit and electrical outlet. These can help assure someone with a hearing impairment does not miss phone calls.

Clearvoice 100A emergency telephone:



This is a full featured amplified telephone for people with partial hearing and/or sight loss. It includes wireless remote for pickup of incoming phone calls and to speak from a distance, a talking Caller ID, Teleemergency' renowned Emergency Help System. The emergency system automatically activates the speaker phone from up to 20 feet away with the press of a button and calls up to 10 entered emergency numbers from the phone directory in sequence sending to each called number the emergency message. It includes an adjustable amplified handset with tone controls. It features many audio feedback features (e.g. keypad, phone book, call waiting), a super loud ringer (adjustable) with strobe light, and unanswered call alert.

<p><u>Large button speaker phone:</u></p> 	<p>This style of phone can be help alleviate the difficulty in using the phone for someone with low-vision. It features large, easy-to-see black on white buttons, a 10 number speed dialing, flashing ringer light, ringer volume control and both desk and wall mounting options. Various models are available. Cost varies.</p>
<p><u>Talking Caller ID speaker phone:</u></p> 	<p>This style of phone can be help alleviate the difficulty in using the phone for someone with low-vision. It features large, easy-to-see buttons, and also a talking caller ID (in 10 languages), a 110 number phone book, 90 call caller ID memory, and a range of ringer melodies.</p>
<p><u>Amplified cordless telephone with talking caller ID and phone book:</u></p> 	<p>This phone has easy to see buttons on the speaker phone, as well as a cordless phone with amplification. It features a talking caller ID as well as a talking phone book that speaks back a pre-recorded name and number when you are searching for a contact, a talking keypad to confirm numbers as pressed, and a hearing aid compatible headset jack. This model can be purchased at http://www.newworldtelnet.com/panasonic-2.4ghz-gigarange-cordless-phone-with-talking-caller-ID.htm .</p>

Amplified Answering machine:



An amplified digital answering machine has a high fidelity speaker to produce a clear sound, tone control to help you distinguish between callers and words and speed control. It comes with a separate mailbox for TTY messages. It can be purchased at www.haltshop.com.

Super phone ringer:



This device generates an extra loud ring and offers a choice of four ring patters to help find the one someone with hearing loss might hear. It has volume control and a bright visual ring indicator.

Low technology AAC options:



There are a variety of message boards and low-tech communication options available. It may be necessary to consult a Speech and Language pathologist to determine the best option. A few examples of possible boards are shown to the left.

High technology AAC options:



There are a large number of electronic and high technology communication devices commercially available. It is recommended to consult a Speech and Language Pathologist for a communication assessment before purchasing a device. However, a variety of devices can be borrowed from a demonstration and loan center. A trial with a communication device may provide insight into the best option.

Device features: There are options for static screen layouts that do not change as selections are made, dynamic screen layouts that change as selections are made, both with and without auditory feedback. Many devices have a variety of options for access methods as well as the ability to sync with a computer.

**SECTION F: ASSISTIVE TECHNOLOGY TO IMPROVE COMMUNITY / LEISURE
ACTIVITY INVOLVEMENT**

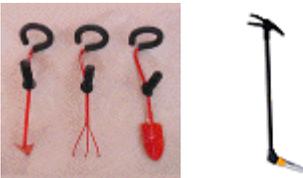
Community involvement activities can be a large part of happily living independently. Someone with a motor or mobility impairment may encounter a decrease in their ability to get out in the environment. Some of the following technologies may be beneficial in assisting users with reestablishing their community involvement and enabling their ability to participate their desired leisure activities.

In the case that an inability to provide ones own transportation is preventing community involvement and participating in leisure activities, consider the following options:

- Adaptive cars
- Public transportation
- Volunteer drivers
- Organized group trips

Some higher technology examples that may benefit people desiring to increase the community and recreational involvement are provided below.

<p><u>Car door opener:</u></p> 	<p>This tool is designed to reduce the stress on the hand and wrist when opening a car door. There are options for push button and lift-type handles.</p>
<p><u>Car padded swivel seat:</u></p> 	<p>This device is light weight and portable and makes turning in a car seat easier. The seat swivels 360 degrees and is helpful in getting in and out of a vehicle (not recommended with bucket seats). It supports up to 500 pounds. This device can reduce some of the muscle and joint strain that is caused by getting out of a vehicle.</p>
<p><u>Car caddie:</u></p> 	<p>This device attached to the frame of a car or truck door and offers additional balance and support to help a user get in and out of a vehicle. It features an adjustable strap and cushioned grip. This can be useful for someone with poor balance or muscle weakness.</p>

<p><u>Large handled key holder:</u></p> 	<p>These devices are useful for someone with muscle weakness, weak grip strength, arthritis or other fine motor impairments. The curved and heavy handles provide extra leverage and an easier grip, making turning the key easier. They can hold three keys and can be folded into the handle when not in use. They measure around 5” long and 1” wide.</p>
<p><u>Gardening tools:</u></p> 	<p>There are a variety of gardening tools that are designed to limit the amount of grip strength required to use the tools, as well as allow the tools to be used in a more comfortable posture. This form of tool may benefit someone with a fine motor impairment, limited grip strength or who is unable to sit on the ground to work in the garden. The following websites provide some example technologies: www.oxo.com and http://www.lifewithease.com/fistgrip1.html .</p>
<p><u>Board Games:</u></p> 	<p>There are a variety of board games designed with larger game pieces or larger print on the board/pieces. www.Dynamic-living.com and www.store.accesstr.com have several options.</p>
<p><u>Playing cards:</u></p> 	<p>Playing cards can be an easy and fun way to pass time. Large print playing cards provide larger numbers and icons to assist players with a vision impairment participate in their favorite card games. Card holders enable players with a motor impairment to play their favorite games without the strain of holding the playing cards. Several options can be purchased at www.store.accesstr.com or http://www.seniorstore.com/hob-0033.html . Braille playing card can be purchased at http://www.independentliving.com/prodinfo.asp?number=126777</p>

SECTION G: ASSISTIVE TECHNOLOGY RESOURCES

For the most comprehensive and current information available regarding assistive technology services, demonstration and loan programs, funding and information in Massachusetts, contact MassMATCH at:

**MassMATCH
Massachusetts Rehabilitation Commission
27 Wormwood Street
Boston, MA 02212-1616**

1-866-682-9955 (Toll Free)

617-204-3851 (Voice)

617-204-3887 (FAX)

Email: massmatch@state.ma.us

www.MassMATCH.org

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