



## **Fact Sheet: Assistive Technology**

### **Introduction**

Sometimes called assistive devices, independent living aids, and adaptive equipment, *assistive technology (AT)* can help your loved one live more independently. It may also make your job as a caregiver easier and more enjoyable.

If you're caring for someone with dementia, you may be worried about their falling, wandering or getting lost. Certain types of AT can help. A loved one with a physical or cognitive (thinking) impairment can use AT to make the activities of daily living, such as dressing, bathing, grooming, eating and toileting, a little easier.

This fact sheet describes different types of AT that may be helpful to you and your loved one. In addition, it addresses how to find AT, how to pay for devices, and how to decide what devices or home modifications you might need.

### **Definition**

Assistive technology can be as simple as a hearing aid or cane, or as sophisticated as a voice-activated computer system or mechanical hoist to lift and turn someone in bed. Assistive technology devices are basically helpful products that improve a person's ability to live and function independently. Some AT is considered "low-tech"—canes, magnifiers and pill organizers—while "high tech" assistive

devices include computer applications, sensors and smart phone systems.

AT is a rapidly growing area and is used by people with disabilities and older adults who want to stay in their communities and remain independent as long as possible. More than 15 million Americans with disabilities use some type of AT. In a 2003 AARP survey of persons over 50, one-third of people reported using AT in their daily activities. The top three most popular AT devices were:

- Walker, cane or crutches
- Aids for bathing or toileting
- Wheelchair or scooter

### **What Kind of AT Is Right for Your Loved One?**

The area of assistive technology has grown tremendously in recent years, and many manufacturers now provide a wide range of products and devices. It can be confusing, however, to determine which products might be right for your loved one. Here are a few basic tips to help you in this task:

- Focus on the actual tasks your loved one wants or needs to do when choosing devices. While this might seem obvious, it's easy to get drawn into buying a product that looks good but doesn't really address your loved one's needs.

- Generally, it is best to pick the simplest product available to meet the need. Simpler devices are often easier to use, less expensive, and easier to repair and maintain than more complex devices. For example, if someone does not have difficulty remembering to take their medications, but gets confused about which pills to take at which times, a weekly pill organizer that can be filled by a caregiver would solve the problem. Purchasing an automated pill dispenser with alarms to remind the person to take medications would be more complicated than necessary and would certainly be more expensive than the simpler pill organizer.
- Ask experts that provide care to your loved one, like rehabilitation specialists or physical and occupational therapists, about which type of technology might be best.
- Ask other people with disabilities what products they have found to be helpful.
- Ask to use the device on a trial basis to see if it is truly going to meet your loved one's needs.
- Ultimately, your loved one's opinion about a certain piece of AT is the most important. The device needs to be comfortable, attractive, and simple to use.

### **Where Can You Buy AT?**

With so many vendors and manufacturers producing AT, it can be confusing to decide which products to buy. There are a few public agencies which keep a complete list of AT products and manufacturers and can help you find the right products for your loved one. Because these agencies do not sell equipment, they are a more trustworthy source of information than contacting

manufacturers directly. The following national agencies can be contacted by phone or you can browse online for products:

- **ABLEDATA**  
[www.abledata.com](http://www.abledata.com)

In addition to the national programs above, every state and territory has a State Technology Assistance Project that has information about AT, financial assistance to buy equipment and AT loan programs. ABLEDATA (see contact information above) can connect you with someone in your state, or you can contact the following agency which oversees the State Technology Assistance projects:

- **Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)**  
[www.resna.org](http://www.resna.org)

### **Paying for Aids and Equipment**

Some government programs and other funding sources will help pay for some medical equipment, also called "durable medical equipment" such as canes, walkers, wheelchairs and scooters, if prescribed by a physician or otherwise determined to be medically necessary. However, other independent living aids like grab bars, bath mats and dressing aids are typically not covered. The following funding sources and agencies may help you purchase certain kinds of aids:

- Medicare
- Medicaid, particularly waiver programs
- Private health insurance plans
- Public service organizations like United Way and Easter Seals
- National Family Caregiver Support Program
- Department of Veterans Affairs

To find out which medical equipment and aids are covered by these programs, see the “Resources” section at the end of this fact sheet for contact information.

## **Types of AT**

In this section, the most popular categories of AT are outlined. To find out more information on these products or others not listed, refer to the agencies listed in the “Resources” section at the end of this fact sheet.

### **Independent Living Aids**

A wide variety of products and appliances help people perform “*activities of daily living*”; i.e., eating, food preparation, bathing, dressing. Many of these items are available from drug stores and large retail stores:

- *Kitchen items* include easy-to-grip silverware, high-lipped dishes and plate guards, specialized cutting boards and utensils, self-opening scissors, reaching tools and jar openers.
- *Bedroom items* include bed bars, bedside organizers, reaching tools, various orthopedic support cushions, hip pads for fall protection, bedside commode, transfer board, night-lights and large-numeral alarm clocks.
- *Bathroom items* include full-length tub mats, bathtub and shower seats, transfer benches, toilet riser or raised commode, night lights, long-handled scrub brushes, shampoo basins, lotion applicators, colored tape or mark for hot water controls and handheld showerheads.

### **Personal Care Products**

A variety of personal care products are designed to help people with physical or

cognitive limitations dress, disrobe, groom and maintain good hygiene.

- *Dressing and grooming aids* include dressing sticks, elastic or non-tie shoelaces, buttonhooks, zipper pulls, velcro, easy-to-pull sock and panty hose aids, long-handled combs and brushes, pumps for soap or toothpaste, and various reaching tools.
- *No-rinse shampoo, body bath and body wash* that does not require rinsing off with water, which can be helpful if your loved one has difficulty getting in and out of a bathtub.
- *Adaptive clothing* is designed for people who have difficulty dressing because of cognitive and/or physical disability, or who need frequent changing due to incontinence. The clothing is made to be both fashionable and convenient.

### **Medication Aids**

People with chronic illnesses often take several prescription or nonprescription medications daily for which the following devices can help:

- *Daily or weekly pill organizers* can help ensure that correct dosages of medications are taken each day.
- *Timers and specialized mini-alarms* can remind your loved one when the next dose is due.
- *Pill crushers and splitters* help when swallowing is difficult. Medication aids are available in many drug stores and hospital pharmacies.

### **Incontinence and Toileting Supplies/Aids**

Adult protective undergarments can help individuals who have problems with bladder or bowel control. Fortunately,

these are now widely available at drug stores under brand names like Depends, Attends and Dignity.

- *Mattress and floor protectors* such as a plastic fitted sheet or mattress pad repel or absorb urine before it damages the mattress, and floor runners that protect flooring.
- *Antiseptic skin lotions and wipes, catheters, portable receptacles*, and a host of related products for incontinence can make the affected person more comfortable and minimize difficulties for the caregiver.

To order the National Association for Continence resource guide of products and services for incontinence go to: [www.nafc.org](http://www.nafc.org).

- *Commodes, toilet seat modifiers and urinals* come in a variety of designs to help someone with incontinence or someone who has difficulty getting to the bathroom. Items include raised and adjustable seats, safety rails, grab bars, and portable commodes.

### **AT for Improving Mobility**

If your loved one needs assistance walking, the following AT, which is available at most medical supply stores, may help:

- *Gait belts and lift vests* help facilitate transfers and can help a caregiver balance a person's center of gravity. When moving a person from one position to another the belt can help the caregiver more safely lift or shift directions of the person being transferred.
- *Canes* are certainly simple but effective walking aids. Designs

include folding canes, adjustable canes, double-grip canes and three- and four-pronged canes.

- *Walkers* provide more stability and should be tested to make sure they are sturdy, lightweight, at a sufficient height for the individual, and can be moved or rolled easily. Foldable walkers and those that double as a seat are also convenient. Many people like to attach a basket or pouch on the front to store things.

If your loved one can no longer walk safely, he or she will most likely need a wheelchair or a scooter:

- *Wheelchairs* come in many different varieties (both manual and electric). You may want to consider getting removable footrests and/or a collapsible wheelchair for loading into a car for added convenience. Other wheelchair accessories such as rim covers, gloves, seat covers, cushions, security pouches and carry packs can also be handy.
  - *Manual wheelchairs* require the person to use some arm strength or leg strength and skill to move the chair — unless there is someone to push. A lowered wheelchair, called a “hemi-height” wheelchair allows a person's heels to touch the floor and is recommended when a person uses their feet to move the chair.
  - *Electric or “power” wheelchairs* are useful for individuals who can move around on their own but lack the strength to wheel themselves. Electric wheelchairs require the ability to make decisions and maneuver the chair. They are

often not recommended for someone with impaired judgment.

- *Three-wheeled scooters are a great option for individuals who are able to get in and out of the chair. Scooters are popular among individuals with Multiple Sclerosis or those who can walk very short distances and get around by themselves.*

Ordering wheelchairs or scooters by mail or online is not recommended. Purchasing a chair or scooter through a local dealer or supplier will ensure that you have a convenient place to take your product if it needs to be replaced or repaired. Talk with your local Center for Independent Living to find out which dealers have a good reputation in your community.

## **Communication AT**

Advances in computer and telephone technology have greatly helped physically disabled and frail elders to live independently while maintaining connections to family, friends and support services.

- *Modified telephones* may use large buttons, headsets, speakerphone capabilities, or keyboard and visual displays to make telephones useable by disabled people.
- *Computer technology* can allow people to stay in contact via email, while more sophisticated technology can employ modified keyboards or voice recognition software to enable disabled individuals to use computers effectively.

For people with communication difficulties due to stroke, ALS, aphasia, quadriplegia or other disorders, assistive technology can be very helpful in allowing them to communicate with others. Rapid advances

in technology have resulted in products that dramatically increase the independence of people with very limited mobility, allowing them to “speak,” operate lights and other controls, and remain active members of their families and communities.

- *Communication boards* can be simple low-tech plastic boards with graphics and a keyboard-style letter display to convey messages. Automated boards with voice input or a computer screen are also available.
- *Voice- or eye-activated communication systems* allow people with complex physical difficulties to operate a computer or a telephone to communicate with others.
- *Speech amplification and adaptation systems* are automated speech-processing systems, which can correct garbled speech for improved communication.

## **Home Modifications**

Making a house safe and comfortable can allow an individual to remain at home as their abilities change. You may be able to make some simple modifications to your loved one’s home with relatively little cost or assistance. For larger modifications, such as widening doorways, lowering counters, remodeling hallways and installing lifts or elevators, you may need to hire an architect or a licensed contractor.

The following list of *independent living aids* may provide easy, low-cost installation solutions to a number of problems with home design:

- *Grab bars, bath seats and transfer benches*
- *Hand rails for stairways*
- *Bathmats and skid resistant rugs*

- *Glow tape for hazardous furniture*
- *Attachable grips for turning doorknobs, lamp switches and faucet handles*
- *Lever door handles*

Other useful home modifications include:

- *Wheelchair and threshold ramps*, which come in a variety of pre-designed sizes with predrilled slots for easy installation. Lightweight portable wheelchair ramps can be folded or rolled up for easy transport and storage.
- *Elevators and lifts*, which need to be installed by a contractor to assure that installations meet code and safety standards. Lifts and elevators are available for most inclined or vertical surfaces, including porches, balconies and curved or straight stairs.

Home modification and repair programs may provide elderly and low-income people with loans, grants, and free or reduced services. Programs often vary from state to state and county to county.

### **Vehicle Modifications and Accessible Vans**

Vehicle modifications can help your loved one continue to drive or to more easily be a passenger. Most adaptive equipment can be installed in a vehicle without extensive modifications.

- *Wheelchair lifts or automatic transfer seats* can be installed in minivans, station wagons and some cars.
- Accessory items such as *car door openers*, handles to assist with transferring, tie-down systems for wheelchairs and portable swivel seats require little or no vehicle modification.

- *Kneeler systems*, which lower one corner of the vehicle for boarding, and driving controls, which mount all the vehicle's control features onto the steering wheel, are examples of more extensive vehicle modifications.

For information about adaptive equipment, accessible vehicle dealers, or funding and reimbursement programs, contact:

- **The National Mobility Equipment Dealers Association**  
www.nmeda.org

Several of the major auto companies offer rebates for adaptive modifications to their vehicles. Contact auto manufacturers directly to find out if they have a rebate program.

### **AT for Monitoring Potential Crises**

Both you and your loved one can have an added degree of security by using AT which alerts you or a medical system if your loved one is in crisis. The following are examples of this type of AT:

- *Personal emergency response systems* (also called medical response systems) use a pendant, bracelet or belt that your loved one wears. If he or she has an accident, fall or other emergency when unattended, a monitor center can be alerted at the press of a button. A monitor will then call the appropriate contacts and emergency services based on the caller's medical information. This device is intended for persons who are able to activate the signal and who do not have dementia.
- *Occupancy monitors* may be helpful if your loved one is prone to falls. These monitors use pressure sensitive chair or bed pads that

activate when your loved one moves to get up.

- *Intercom system*, often called baby monitors, can be used if your loved one lives with you. The intercoms can be left on so that you can hear your loved one from another area of the house.
- *Webcams and other computerized monitoring systems* are more technologically advanced methods of monitoring a loved one. Webcams are basically video cameras that can allow you to see your loved one and monitor potential problems. Other types of computerized monitoring systems are in development by a number of companies and may use motion detection or other means to monitor your loved one and continually gather and process the information at a central monitoring site, which can then alert you if there is a problem.

### **AT for Loved Ones with Cognitive Impairment or Dementia**

If your loved one is in the earlier stages of dementia, the following devices may help them to live at home more safely:

- *Memory aids* include jumbo analog wall clocks with daily calendar, talking clocks/wrist watches, voice-activated phone dialers, automated pill dispensers with message machine and timer, and a Find-It beeping device to keep track of small items such as car keys and glasses.
- *Symbols or warning signs on doors, cabinets and dangerous appliances* can help a person with dementia maneuver more safely around the house.

If your loved one wanders or forgets where he or she is, the following can be quite helpful:

- *Mobility monitors and tracking systems* come in a variety of designs, though all usually require that your loved one wear a small ankle or wrist transmitter. The transmitter triggers an alert system, or a receiver which you can monitor, when your loved one passes beyond a set range or exits activated doorways.
- *Medical ID bracelets* have a person's diagnosis and a 24-hour hotline number inscribed on the bracelet. Such a bracelet can be helpful if your loved one is disoriented and gets lost or has an accident outside of the home. The following two programs are respected:
  - **Medic-Alert Foundation International**  
[www.medicalert.org](http://www.medicalert.org)
  - **Alzheimer's Association Safe Return**  
[www.alz.org/Services/SafeReturn.asp](http://www.alz.org/Services/SafeReturn.asp)

### **Resources**

**Southern Caregiver Resource Center**  
891 Kuhn Drive, Ste. 200  
Chula Vista, CA 91914  
(858) 268-4432 | (800) 827-1008 (in CA)  
Fax: (858) 268-7816  
E-mail: [scrc@caregivercenter.org](mailto:scrc@caregivercenter.org)  
Website: [www.caregivercenter.org](http://www.caregivercenter.org)

The Southern Caregiver Resource Center offers services to family caregivers of adults with chronic and disabling health conditions and is for residents of San Diego and Imperial counties. Services include information and referral, counseling, family consultation and case

management, legal and financial consultation, respite care, education and training, and support groups.

**Family Caregiver Alliance  
National Center on Caregiving**

(415) 434-3388 | (800) 445-8106

Website: [www.caregiver.org](http://www.caregiver.org)

E-mail: [info@caregiver.org](mailto:info@caregiver.org)

Family Caregiver Alliance (FCA) seeks to improve the quality of life for caregivers through education, services, research and advocacy. Through its National Center on Caregiving, FCA offers information on current social, public policy, and caregiving issues and provides assistance in the development of public and private programs for caregivers.

**StrokeCenter: Adapting the Home after a Stroke**

[www.strokecenter.org/pat/ot/index.htm](http://www.strokecenter.org/pat/ot/index.htm)

**AARP**

[www.aarp.org](http://www.aarp.org)

**For Assistance Finding and Purchasing AT:**

**ABLEDATA**

[www.abledata.com](http://www.abledata.com)

**For Information about Programs That Might Pay for AT and Home Modifications:**

**Medicare**

[www.medicare.gov](http://www.medicare.gov)

**Medicaid**

[www.cms.gov](http://www.cms.gov)

**Eldercare Locator**

[www.eldercare.gov](http://www.eldercare.gov)

**Rehabilitation Engineering and Assistive Technology Society of North America**

[www.resna.org](http://www.resna.org)

**United Way**

[www.unitedway.org](http://www.unitedway.org)

**For Information about AT Dealers in Your Area:**

**Centers for Independent Living (CIL)**

[www.virtualcil.net/cils](http://www.virtualcil.net/cils)

**For Information on Home Modifications:**

**National Resource Center on Supportive**

[www.homemods.org](http://www.homemods.org)

**Rebuilding Together**

[www.rebuildingtogether.org](http://www.rebuildingtogether.org)

*This fact sheet was prepared by Family Caregiver Alliance in cooperation with California's Caregiver Resource Centers. Reviewed by Dory Sabata, OTD, OTR/L at the National Resource Center on Supportive Housing and Home Modification. Funding provided by the California Department of Mental Health. © 1997 Family Caregiver Alliance. Revised 2005. All rights reserved.*

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