

**Solutions:
Assistive Technology for People with Hidden Disabilities**

This is a publication developed by the North Dakota Interagency Program for Assistive Technology (IPAT) which supports people with disabilities who require assistive technology devices and/or services.

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Fall, 1999

Dear Friend,

It is my pleasure to share with you a copy of the book, "Solutions: Assistive Technology For Individuals With Hidden Disabilities". This publication is meant to provide ideas and trigger thoughts for assistive technology solutions addressing problems people experience with hidden disabilities related to: memory, attention, confusion, safety, task completion, socialization, and others.

IPAT would like to extend a special thank you to all the people who shared their expertise. The content reflects the experiences of many individuals and agencies providing a diverse collection of examples and ideas. North Dakota service providers who participated in the creation of this document include representation from: vocational rehabilitation counselors, mental health service providers, health care providers, home extension agents, therapists, Indian Health Services, advocates, Prairie Harvest Foundation, educators, and aging services personnel.

Because assistive technology is often not considered when people are experiencing functional limitations as a result of a disability that is less obvious and familiar, the stories and examples included in this book are meant to be a springboard for creative solutions. Please use this book and share it with others who might find it useful. Copies are available in a variety of formats and may be ordered by calling 1-800-265-4728.

Assistive technology helps us do the things we want to do.

Sincerely,

Judie Lee
Project Director

Memory

- *On several occasions I've walked into a smoke filled kitchen and only then realized that I'd been in the middle of making dinner when I left the room and promptly forgot I'd left food on the stove.*
- *Margaret has stopped coming to meetings and social outings because she doesn't drive and her husband Oscar doesn't remember when and where to pick her up for the ride home.*
- *Without reminders to refill his prescriptions, Mark can go weeks without his needed medication.*
- *My mother-in-law, who lives with us, washes her hands numerous times throughout the day and often forgets to turn off the faucet. One day after work, I came home to water spilling over the bathroom sink, draining through the ceiling fixtures and soaking the living room furniture.*
- *Frank constantly misplaces his glasses, the TV remote control, or his keys and it's almost impossible to convince him that they weren't stolen.*

Assistive technology solutions are available for individuals who have memory-related problems and help by reducing memory demands and supporting people to maintain independence at home and in the community. These assistive devices include those which are specially designed and others available through local retail outlets.

Kitchen Devices

There are many ways in which problems resulting from forgetting to complete activities or tasks can be avoided. Using a microwave or toaster oven, which shuts off automatically, rather than using a standard stove or oven can reduce the risk of fires and burned foods. Discount and hardware stores carry a variety of automatic shut-off appliances such as coffee makers and irons which can function similarly. Various adaptive items are available to add this feature to standard appliances. A device called the **Stove Power Controller**, for example, is equipped with an alarm for use with conventional electric stoves and is helpful for individuals who are forgetful. The timer/alarm may be set for 15, 30, or 60-minute intervals before the automatic shut-off occurs. The **Electra Link** is another device which can adapt small appliances such as frying pans, toaster ovens and electric kettles. It works with any appliance rated up to 1200 watts to automatically switch the power off after 15 minutes.

Simple cooking timers like the **Cordon-Timer** are designed to be worn around one's neck and can be set to remind a person that the stove is on or the cake is done. It can also provide reminders to lock the door, to take medications, or to call a loved one.

Reminder Aids

Wrist watches with alarms or devices designed with timer features can serve as reminder aids by quietly alerting people at pre-set times. The **MotiVaider** is a great way to gently and quietly remind someone to perform specific functions. The tiny box vibrates at your choice of intervals as a prompt to tighten muscles, breathe deeply, or to complete a physical or mental exercise. The **Private Practice Vibration Reminder Disk** provides the same reminders, but can be attached inconspicuously on the body, under clothing, worn on the wrist or placed in a pocket.

A simple, no frills message recorder also can be a solution for those who need reminders. One could be programmed to tell a forgetful family member to meet you at the library at noon, or to remind someone of phone numbers and grocery lists, or to refill a prescription. Slightly more elaborate memo recorders, such as the **Time Pad Memo** and the **Sycom Total Recall**, have clocks and alarms which can be programmed to make specific announcements, some at the same times each day of the week. Even pager systems, some of which provide voice and text messages, can be used to remind someone on the go of appointments and next steps.

Bathroom Aids

Forgetting to turn the water faucet off can result in significant damage to homes and offices. Devices to control water in various ways can prevent problems. Electric-eye faucets, available from plumbing supply stores, turn the water on automatically when they sense a person's hands in the sink...and turn the water off when the hands exit the sink. The **Water Wand**, another option, is a stick-like attachment that hooks on a sink faucet. The water is left on all the time, but does not run until the stick is touched gently. When you stop touching the stick, the water shuts off.

Locating Devices

Specially designed devices and creative uses of others can help us locate items we have misplaced. Originally designed to be a wireless door chime, the **Remote Control Locator** can be used to locate misplaced items. Simply attach the Remote Control Locator's receiver to a frequently mislaid purse or jacket. When you need to find that item, simply push a button on the Remote Control Locator's transmitting element and the receiver will chime a "ding-dong" sound identifying where it is. Similarly, an ultrasonic chip in a small **Key Chain Alarm** will respond to your whistle by beeping. Follow the beep to your keys, TV remote, portable phone, or your glasses to which the Key Chain Alarm has been attached. This particular receiver has a range of 15 feet. The **Ultra Key Seeker** is another system for managing keys. If your keys are lost, just clap and the Key Seeker will beep and flash so that you can find them. It also comes with a push-button mini light to illuminate keyholes and a timer to remind you when to meet someone or when your parking meter expires.

Medication Devices

Many devices are easily obtained to help people take medications according to the correct dosages and on schedule. Familiar pill dispensers with dividers for daily and weekly dosages have been joined by others with additional helpful features. The **Pill Dispenser**, for example, opens like a book with 28 easy-to-load bins inside to hold enough pills for 4 dosages a day for a week or one dosage a day for a month. When needed, the correct pills are released into a cup at the push of a button.

Pill alarms, such as the **Pill Alert**, provide an alarm feature which can be set to ring at the time or times medication needs to be taken. Some automatically re-set to repeat the same countdown interval, have built-in water flasks, or have lights which identify the compartment that should be opened. Pill alarms can come pocket-sized or can even be housed in a wristwatch.

A more complex solution to help take medications at the right times and in the right dosages is the **CompuMed Pill Alert** automated medication dispenser which organizes a week's supply of pills and vitamins in a refillable plastic tray. The tray is locked into the easily programmed machine to deliver medications into a removable drawer. A buzzer sounds when you are to take the medication and continues to buzz until the pills are removed and the drawer is replaced. It dispenses dry oral medications and displays important instructions for all your medications.

Things you can do to make life easier:

- *Use pictures, charts, or symbols to help clarify directions and explanations*
- *Teach tasks in "real life" situations, i.e., teaching cooking in the person's own kitchen*
- *Place ash trays in sand-filled plates or cans to reduce the risk of fires*
- *Label photos, perhaps putting them in wallet folders, as reminders for those who do not recall familiar people and places*
- *Create lists or pictures of the contents of cupboards and drawers*
- *Install glass doors so cupboard contents can be seen at a glance*
- *Rely on recipes rather than memory*
- *Enlarge the print of existing recipes, write out family favorites, and highlight cookbook favorites*
- *Attach keys to a bungee cord hooked to a wrist or belt loop*

Attention, Planning & Task Completion

- *Since Jerry's car accident, he has trouble remembering the steps necessary to do his job, including general garage maintenance, making coffee, and stocking shelves.*
- *Amy is a capable student who, none-the-less, does not complete assignments or turn completed assignments in on time. She forgets meetings, even those she really has an interest in attending.*
- *Esther has always been known as a great cook and now gets so confused when she's making meals that she forgets ingredients and adds things that don't belong. The results are embarrassing for her.*
- *Frank is employed in a business office and is easily distracted by typical ongoing office activity. He starts work assignments enthusiastically, but because he can't stay focused on tasks, finishes them poorly....if at all.*
- *Cal is a very capable employee and is responsible for maintaining an independent work schedule, sequencing his day and week and organizing and prioritizing his tasks. Because all of these are very difficult for him to do, he doesn't accomplish what is expected of him.*
- *Everybody in our community knows Pete and also knows he visits the local businesses each day. More and more often, however, we notice him wandering around, confused about where to go. If we tell him the "next" place to visit, he goes there happily. He seems to need a "schedule" of some sort.*
- *My son's brain does not tell him when he is full at mealtime. Without supervision, he gorges himself with food during lunch.*
- *A student transitioning to a work environment at a local café continually misses her bus home because she loses track of time and starts her clean-up responsibilities too late. Phone call reminders and paraprofessional visits embarrass her, irritate her employer and take up valuable staff time.*
- *Andy is a particularly active and "busy" child and needs frequent reminders to stay seated during classroom activities.*

Assistive technology solutions are available for individuals who have problems in the areas of attention, planning and task completion and apply to areas such as: distraction, remembering multiple sequences, organization, and time management.

Aids for Distraction

Frequently, small changes can significantly reduce distractibility. Equipment with numerous controls and multiple functions may be confusing for some people. Shields and color codes placed on those controls that are not required for individual use are helpful. Creating a partially enclosed cubicle by

placing partitions around an individual's workstation can effectively eliminate visual distractions.

The distraction of office noise can be reduced by turning equipment off when it is not in use or by closing the door to those areas. Earphones providing the wearer with a masking noise can help some individuals block out auditory distractions when they need to focus on an activity. **FM Systems** or auditory feedback devices (with earphones), on the other hand, improve focus and concentration by enhancing a speaker's voice so that it is more obvious than less important background noises.

Phones

Phones which can be programmed to speed dial by activating a button reduces the need to remember sequences of numbers. Some phones, such as the **Photo Phone**, have large speed dial buttons which have spaces for symbols or photos of those whose numbers have been programmed. This feature also is useful for people who read with difficulty or who experience memory-related problems.

TeleTypewriters (TTYs) are small terminal type devices with keyboards and visual displays, and in some models, printers. Although designed for people with hearing and speech difficulties, TTYs have been used successfully by others to manage the give and take of conversations. They aid in memory and allow for delayed reaction time by providing a digital/text display of the phone conversation. Printouts provide a written copy of the information exchanged for a person to review at a later time or as often as necessary.

Task Organizers

By transmitting a beep or a vibrating alert, a wireless **Personal Pager** can be used by a supervisor or teacher to remind a person to attend to task, to move on to the next activity, or to look up at the speaker. Another option for people who have problems remembering the sequence of steps in tasks is the use of audio tapes. Tasks and instructions can be broken into steps and tape-recorded. Then, through earphones and a tape player, an individual can use the pre-recorded information to guide them through activities or for repetitions as often as necessary to accomplish the tasks. Tape recorders can be a means to repeat, reinforce, review, and remember.

Other devices can be programmed to speak and provide a visual display of the steps required to finish specific tasks. The **Pocket Coach** is such a device and also can be programmed to provide a reward at the push of a button when tasks are completed.

Hand-held microcomputers, such as the **Palm Pilot**, combine touch screen capability enabling someone to easily input, save, and retrieve notes, phone numbers, dates and daily reminders. A built-in calendar displays the

entire month at a glance while cursor controls allow scrolling from day to day or month to month.

More complex systems can serve as prompters to help individuals compensate for distractibility and short term memory issues. Components of the **Tickle Box**, for example, include computer software and a portable paging device. It creates good self management habits by prompting the person at the moment something needs to be done. The Tickle Box does this by relaying reminder messages from a computer based reminder list to a commercial paging carrier...which in turn relays the message to the individual's prompter in the school, job site or community. These devices can reduce paraprofessional supervision by providing reminders to pay attention or to go to physical therapy pull out services, and can provide direction and guidance. For example, one that has been programmed to send a "time to clean up" message to someone who has difficulty with sequencing tasks at a work site and 10 minutes later sends a message to "Go to the bus". As a result, this worker no longer misses the bus and feels more responsible.

For the purpose of task organization, outlining and semantic mapping software programs are available. **Inspiration** software, for example, is a computer-based program that allows the user to diagram tasks or ideas and then make connections between them. These 'idea maps' can then be transformed into a schedule or outline and printed out. This provides a ready reference to enable successful completion of a task by the user, as well as providing a means to actively participate in the sequencing and planning.

For individuals requiring external prompting to remind them of critical appointments or activities there are devices such as the **Neuro Page**. This device consists of a computer with preprogrammed messages and times and a beeper that signals the message. The beeper, carried by an individual, beeps and provides the reminder to go to an appointment or engage in an activity at the appropriate time. This allows individuals to cue themselves at any time in any place. Users do not have to worry about mastering complicated equipment. Prompts are transmitted to their pagers automatically and are simply read on the screen or listened to via the prompt. The times and prompts may be unique or repeating, based on the users needs. This type of device could be programmed to remind a student to attend extra-curricular activities and to organize homework materials prior to leaving the school grounds, enabling the student to actively participant in activities and to complete assignments on time with a greater degree of independence.

Time Management Aids

With training to support the use of personal calendars and daily planners, many individuals are able to sufficiently and independently manage time and complete tasks. Other simple solutions include portable timers, alarm clocks,

and wrist watches with alarm capability which can be set to ring when a task needs to begin, to finish, or to change.

Special devices have been designed to address attention training. A device called the **SEATS Training System** allows a person to simply sit on a pressure sensitive switch that is attached to a feedback box. When the individual moves off the seat, a light on the box turns “on” and an alarm sounds. This device can also be used as a bed alarm that sounds if a person leaves the bed when it is unsafe for them to do so. Another version is the **SEATSPius** which has the added ability to turn on a reward.

Computers can be effective tools to compensate for attention, planning, and task completion difficulties. Time management software such as daily planners organize daily and monthly activities and can provide printed copies for an individual. Computer tutorials are effective in presenting training in short increments which can be repeated and reviewed as often as necessary. Carefully selected software which is multi-sensory, individualized, reinforcing, and motivating provides necessary predictability and routine for individuals with hidden disabilities.

Several more complex options that go beyond the paper notebook and computer-based day planner are available to assist in managing time and tasks. One example is an electronic calendar and address book called the **Planning & Execution Assistant & Trainer, PEAT™**. Through the use of artificial intelligence, this planner automatically adjusts schedules when tasks are delayed, interrupted or canceled. As a hand-held computer, PEAT™ cues the individual when to start, stop and alter tasks. The user, family member or support person enters the pertinent schedule information and PEAT™ takes it from there.

Things you can do to make life easier...

- *Post an outline of daily job tasks on a single sheet of paper, perhaps using symbols, pictures, or maps rather than printed words*
- *Arrange materials for a task in the order in which they will be used, such as setting out clothes for the day in the order in which they need to be put on (underclothes, shirt, pants, socks, shoes)*
- *Establish clear guidelines that vary little from day to day*
- *Simplify and reduce the number of choices, eliminating the possibility of “wrong” choices*
- *Reduce the actual number of tasks, by limiting the number of steps or by breaking them into smaller and more clearly defined steps*
- *Reduce the environmental clutter*

Confusion

- *When Cathy becomes confused, losing sense of time and place, she calls someone to get that information. This is time consuming for those she contacts and leaves her with outrageous phone bills.*
- *My daughter will not get into the bathtub. She says it is too deep and she will not be able to get out.*
- *Dad tells us amazing stories of being chased, poisoned, even meeting aliens all within the course of his day. I know he has not left the house and we are his only visitors. I finally realized he was recounting what he had seen on TV, as if it were his life.*
- *David has a terrible time entering the cafeteria. He thinks the dark colored tiles on the checker-board floor are holes he will step into.*
- *Steve could not find his way back inside when he went in the yard to work in his garden. He would just walk around and around the house until he became so tired he had to sit down and rest.*
- *Betty refused to deliver the inter-office mail to one section of the building. She insisted that every time she walked down that hallway someone was following her. We discovered, after going with her, that it was only her shadow. We increased the lighting in the hallway and the 'someone' disappeared.*
- *Stan is capable of completing his payroll responsibilities at work, but can't remember WHEN to do them. When finally reminded, it's too late for him to complete the job on time.*
- *Aunt Gertie forgets to take her medicine or takes it too often. Until she got her medication leveled out and back on track, she was unsteady on her feet and so confused that we thought she could no longer live alone safely.*
- *I've stopped getting together with friends and even family because I feel so sad and embarrassed when I can't remember the names of even those dearest to me.*

Assistive technology solutions are available for individuals who have disorientation, misinterpretation and confusion difficulties. These solutions can provide information about time and place, decrease the likelihood of mixing reality with fantasy and allow individuals to continue participating in activities they enjoy and those that are necessary for living. Some of the assistive technology devices have been designed especially for meeting these unique needs; others are typical items used differently.

Reminder Aids

We all use devices to keep us on track and on time, but reminder aids can go beyond organization to assist with judgement and reasoning. When the ability to recognize or remember the correct day of the week or time of the day is impaired and inappropriate actions result, the employment of devices and strategies can be helpful.

Posting calendars, hanging clocks, and providing wrist watches are easy first steps. Note activities to be remembered on corresponding dates, set watches and alarm clocks to trigger appropriate responses, i.e., time to watch a soap opera, take a pill, or meet a friend. If reading a clock with hands is troublesome, change to one with a digital readout. When that is not effective, consider using a **Talking Clock** or **Talking Calendar**. These devices will announce the time of day and date aloud with the push of a button and can be accessed as many times as the individual feels the need for the information. For those needing reminders across environments, **Talking Watches** with date and time features are also available.

Reminder aids of more complexity are those that use specially designed telephones and telephone services. The **Main Street Messenger** is one such telephone system allowing the user to program four daily reminder alerts. At pre-set times, a tone sounds and the reminder key flashes to nudge the user to do whatever is needed, i.e., take medication, go to an appointment, exercise, or feed the cat. As well, this telephone system features a cordless emergency response pendant, speakerphone, automatic alert dialing, and single button memory. These features assist with thinking skills while allowing the individual safety and autonomy.

Bathroom Aids

There are a variety of ways to alter the bathroom environment to decrease confusion and fears. Carpet placed on the floor, towels on bars or racks and curtains on the windows absorb troublesome splashing water sounds. If that is not enough, consider installing sink and bathtub cascading faucets that don't splash, but rather slide the water into the tub or sink (available at local plumbing supply or home improvement stores). Help define the tub by placing light colored mats in dark tubs, and dark colored mats in light tubs to identify the bottom of the tub and bring it closer. Install grab bars that allow an individual to control their rate of descent and provide something to hold when standing, sitting or climbing in and out of the tub or on and off the commode. Let the individual start in a dry tub and have the water fill while sitting, or install a bathtub seat and hand-held showerhead. This allows the individual to control the on/off and pause water features. Another option may be giving an individual a bath in bed, using an inflatable bathtub such as the **E-Z Bath**. The individual rolls on their side, allowing the inflatable tub to be placed under them. A special wet/dry vacuum cleaner (provided by the company) inflates the tub walls. Hoses run

from the inflatable tub to the bathroom for water and drainage. Ordinary garden hoses can be used to extend the lines if the bathroom is far away.

Environmental Aids

To make environments clear and friendly, check lighting. Increase lighting or use torch lamps to reduce or eliminate shadows. Leave lights on in dark areas and use nightlights and touch lamps for ready light access. Consider installing a **Light Lamp Control**. These devices fit between the plug and the outlet and make it possible to turn the light on or off by simply touching any metallic part of the lamp or cord. Some touch switches have a remote pad that you can place elsewhere to turn on the light. As well, install motion detector night lights, motion detecting wall switches, or motion detector lamp adapters which automatically turn on lights and lamps based on the movements of an individual. There is also a voice operated light switch which will turn on the light with just a vocalization.

Television can be a source of misinterpretation. Sometimes substituting a black and white picture for color is helpful. This can be done by using a black and white TV or adjusting the color control knob or color control menu item all the way down on a standard colored TV. Television and radio voices can also be confusing. Use headphones that plug into the TV or radio, and radio headphones or wireless personal listening devices for televisions to listen privately. Another solution is to use the closed captioning feature built into all TVs manufactured after 1993, which supports the auditory information with written script.

Locating Aids

There are a number of devices and strategies available to assist individuals who become disoriented and lost. A solution can be as simple as placing appropriate cues where they will serve a purpose i.e., photographs of family members on their bedroom doors. Having the individual wear a medical alert bracelet which provides the number of someone who can either relay to the caller where the individual lives or be able to meet the caller and then bring the individual to their destination. Teaching individuals to use the in-store Help Phones or mall information centers and kiosks to obtain the information they need is a ready solution.

Programming a small electronic device such as the **Voice Diary** with phone numbers, directions, reaffirming messages or next steps for individuals allows portability and independence. **Global Positioning Systems (GPS)** are also available which can track an individual's location anywhere on the planet. These hand-held devices receive signals from a navigation system that uses tracking satellites to determine location. A range of GPSs are available from those with simple tracking capabilities to those which supply specific positioning information and have wireless email capabilities. These devices help keep an individual on track and provide a means to locate them should they get off-track.

Things you can do to make life less confusing

- *Paint door trims along hallways in contrasting colors to make identification easier; bathroom trim blue, bedroom trim yellow, etc.*
- *Place a poster with a seasonal scene on the back of the front door to serve as a reminder of what type of clothing might be necessary before leaving*
- *Change alternating dark tiles with water-proof paint or contact paper which may be removed later without damaging the floor*
- *When mirrors present difficulties, remove them, place something in front of them, turn them around, or cover them with contact paper or water-based tempera paint*
- *Put a sign on the front door "Brenda's House" or use items at the doorway that attract the individual (bright red geraniums in pots, gold lions) to help signal home*
- *Keep wall paper patterns, rug patterns and color schemes conventional; avoid designs with flowers or figures that an individual may want to pick or talk to*
- *Increase lighting in shadowed areas such as closets, showers*
- *Trim outside bushes and light walkways to eliminate places where someone "could be hiding"*
- *Create maps to use in and outside the home*
- *Use clear shower curtains*
- *Place benches or chairs next to outside doorways*

Mood

- *JoAnn has a terrible time sleeping. She will complain of waking up 'wired' in the middle of the night, or not being able to sleep at all.*
- *Tom can't face getting out of bed in the morning, he doubts his ability to do anything well, feels his mind has burned out to the point of uselessness and feels hopeless.*
- *Kelly is irritable and angry. Some of her reactions to everyday things are frightening and she doesn't find humor in anything. Friends shy away from her.*
- *Dad used to love to go out to eat, now he gets sad at the thought of going out because he can't remember what is on the menu or what he likes to eat.*

Assistive technology solutions are available which can soothe, uplift, and calm. These devices fall into the following categories: comforting, light regulating, and sleep aids.

Comforting Aids

Music can be great for calming and diverting attention. There are numerous categories of music from which to select: music to calm captures sounds from nature such as rain, breezes, and waterfalls; period music brings back pleasant thoughts and memories of a person's life, maybe childhood; religious or gospel music; patriotic music or sing-a-long music. Music selections can be purchased at local retail outlets, discount stores, or through catalogs.

Portable devices which produce soothing sounds are also available. The **Sound Soothers®**, for example, is a compact, battery operated AM/FM relaxation system with full radio capabilities as well as an option to select sounds from nature - waves, streams, crickets, frogs, or masking white noise. These easily slip into a pocket for use across environments. The Sound Soother® is also available as a table-top model with the added feature of a **SuperView®** LCD screen for time, date, station identification and visual of the five restful sound environments; ocean waves, summer night sounds, tumbling waters, soft patter of rain, and neutral masking noise. When a change of pace is needed, these two soothing sound systems can provide a calming effect.

For some individuals, talking with another person provides the necessary reassurance. When face-to-face conversation is not possible, the use of an intercom system within the environment can provide that link. This can be done through the creative use of baby monitors or higher-end wireless systems available at electronics stores.

For those distracted or upset by environmental sounds there are **Noise Canceling Headphones**. These headphones significantly reduce background noise by using two built-in microphones which pick up the environmental noises and feed them to a circuit which analyzes the sound wave pattern and then creates an exact opposite sound wave, thereby canceling both sounds. The headphones feature a slide which allows the user to tailor the amount of active noise cancellation. The headphones may be used alone or with an in-line audio port which allows use with personal stereos.

Relaxation is often enhanced through the use of vibration and massage. There are a variety of massage aids available, from simple vibrators to massage chairs. For example, the **Contour Concept Massager** which falls between these two. It is a light, flexible, portable massager that can be applied against key pressure points easily. It runs on a 9-volt battery and allows both speed and intensity adjustments with a pocket-sized control unit. For those desiring a more intense massage, there is a **10 Motor Massage Mat**. It is a thick contoured piece of foam which can be unfolded on any bed or sofa and plugs into a standard wall outlet. The mat is controlled through a LCD touch pad and has nine pre-programmed massages covering five body zones. In addition to pulsation, there is also a therapeutic heat option available.

Light Regulating Aids

For those who need a gradual cue for rising in the morning, there are devices such as the **Natural Wake-up-to-Light Alarm Clock**. This clock's light slowly starts to glow a half hour before you set wake-up, gradually illuminating the room and becoming brighter and brighter until it is time to get out of bed. As well, it has a sundown mode, which gradually decreases the light's brightness from full intensity to dark.

Individuals who are sensitive to lack of light in the winter months can benefit from light accommodations. To boost sunlight hours, use devices such as the **Horizon Light**. This device simulates the sun's beneficial rays and can be placed on a table or dresser, plugged into AC using a three prong plug. An individual can receive the benefits of light while playing cards, reading, or talking to friends.

Sleep Aids

There is nothing more underrated than a good night's sleep. When falling asleep or staying asleep is difficult try some of these sleep aids. There are devices that block out annoying sounds as a result of traffic or clocks. The **Sleep Sound Generator** is one such device that can help a person relax and fall asleep by producing a gentle whooshing sound. The sound tone and volume is adjustable and the device plugs into a standard wall outlet.

The **Customized Environmental Sound Machine** is an example of more elaborate systems that take blocking out sounds to a new level. This table-top

sized device uses digitized and synthesized sound patterns which are programmable. The users can design their own sleep environments by mixing the 10 base sound selections. Tone and volume are adjustable and a 60 minute timer can be set to automatically turn the device off.

Other options include visual features. The **Dream Light™**, for example, is a sound activated light show within a solid glass sphere. The sound sensitive circuitry in the base of the device activates color LEDs in response to music, voices or room sounds. The colors fade in and out to the rhythm of the relaxing music selected. There is also a night-light setting which just allows the colors to fade in and out, softly lulling an individual to sleep.

Things you can do to make life easier

- *Create bright and cheerful environments, use pleasant colors, paintings, and pictures of happy subjects (children, puppies, kittens, humor, sports and personal favorites)*
- *Use full spectrum or incandescent light bulbs that emit warmer colors*
- *Open curtains and raise shades to bring in natural light*
- *Provide activities and choices - “an active mind is a healthy mind”*
- *Exercise, make it part of everyday. It can be as simple as creating a path in the backyard or around the house and walking it every day*
- *Purchase or adopt a pet. They make great diversions and can increase a person’s sense of worth through the responsibility of feeding and routine care giving*
- *Put away valuable and breakable objects. Replace fragile lamps with non-breakable ones. Soften sharp, hard edges of counters and tables*
- *Create a special place or room that is safe and comfortable*
- *Structure and maintain a regular schedule, which includes proper sleep, diet and exercise*

Companionship & Socialization

- *Carol misses talking with her family and friends, but doesn't like to make phone calls because she gets numbers in the wrong order and is embarrassed when she gets connected to the wrong party again and again.*
- *Michael doesn't have any real friendships and instead plays the computer alone when the other children are playing together.*
- *Sara has difficulty interacting socially with other children, particularly in face to face situations.*
- *Mr. A. finds it difficult to leave his home and to talk to people...to buy groceries or go to the doctor.*

Assistive technology solutions are available which can enhance relationships and increase a person's sense of connection to others. These devices apply to such areas as: phone use, comforting, reinforcement, and interaction.

Phones & Pagers

A variety of low tech solutions can increase a person's sense of connection to others, as well as increase safety. Simplifying the use of a phone through pre-programmed speed dial numbers or picture pads can increase a person's ease in establishing contact with others, reducing the sense of isolation.

Inexpensive, portable in-house intercoms to maintain contact can be purchased inexpensively at discount and retail stores. The **Cobra Microtalk™** is a two-way, portable radio that allows communication within a 2-mile range. This set of two walkie-talkies has a call button, 2 channel receiving and requires no license or service fee to operate. Depending upon the model selected, the **Talk About** walkie-talkies allow clear and toll-free communication from two to five miles away. These pocket-sized devices work effectively to keep a person in touch with one or more group members in shopping malls, stadiums, or amusement parks.

To connect people separated by greater distances, cellular phones and paging services are available for monthly fees through private providers. Cellular phones provide immediate contact while paging systems relay messages using a transmitter and a paging device.

Comforting Aids

Sometimes a desire for companionship can be met by providing an individual with "something" to hold onto, such as a pillow, a doll, a favorite blanket, or a personal item. The role pets can play in social well-being can be significant. They entertain, encourage, soothe, and comfort and are being

recognized as therapeutic tools in a wide range of facilities from medical and rehabilitation centers to nursing homes and employment settings.

When an actual animal is not an option, a doll or stuffed toy may provide a satisfactory substitute for some people. Special features may make the alternative even more effective. The **Spinoza Bear**, for example, is a cuddly stuffed animal that contains a cassette recorder to play pre-recorded tapes encouraging speech and interaction. This device can be ordered with tapes specifically designed for young children or for people in long-term care.

Reinforcing Aids

A person who needs frequent words of encouragement to accomplish activities could carry a portable tape recorder having a programmed message of affirmation such as, "You're doing fine", which could be activated as often as needed to feel reassured. Another option would be to carry a walkie-talkie and maintain contact with a person at home having the other walkie-talkie unit and who can provide encouragement, talk through anxious situations, or assist in problem solving.

Aids to Encourage Interaction

To be included in social activities or job training opportunities, an employee might need assistance. This may be in the form of transportation to and from the activity or even specific advice from a supervisor regarding ways in which to communicate, interact, and work together with peers to encourage successful work experiences and natural social relationships.

The use of computers and carefully selected software can be successful in increasing interaction between individuals who find it difficult to engage interpersonally by infusing communication and turn-taking into computer activities. Selecting software applications that are motivating and which can support interactions is critical for a positive result. It is important to select software that has speech and sound output and interesting graphics, to structure computer activities to stimulate interaction and communication, and to provide choices and control within each activity.

Computers also provide opportunities to "surf" the Internet in search of special interest groups or individuals having similar issues. For some people the Internet is a more comfortable avenue for anonymous discussions about sensitive issues than face-to-face discussions. Email can also help people who need frequent contacts with others to maintain communication without tying up personal time and phone lines.

Things to do to make your life easier...

- *Take a class that fosters an interest or a hobby*
- *Become a fan and follower of a local sports team, high school or college*

- *Join others to play cards, bingo, or just reminisce*
- *Volunteer to work for an animal shelter*
- *Invite wildlife to your environment by putting up bird feeders and squirrel feeders*
- *Write letters to a friend, relative, or pen pal*
- *Join a club, attend meetings, or serve on committees*
- *Develop hobbies and activities to do on your own...jigsaw puzzles, crossword puzzles, card games, gardening, crafts, collecting, or bird watching*

Safety and Security

- *My son is intrigued by and gravitates toward water. We're particularly worried about risks associated with our pool.*
- *I don't move fast and, when the water gets too hot or too cold, I suffer the consequences.*
- *I think my neighbor could stay in her own home if she just had a way to call someone in case of an emergency.*
- *Our Jo eats just about anything she can get hold of...soap, lotions, and bathroom products that look and smell pretty are particularly inviting!*
- *Dad's balance is poor and, when walking, he supports himself on random chairs, tables and other unstable things.*
- *I shake like everything and using some of my tools is downright dangerous.*
- *I don't live in the best area, but leave my door unlocked because it's too tough to finagle with keys*
- *I constantly leave cigarettes burning all over the house...I'm afraid I'll burn the house down one of these days.*

Safety and security are critical issues for each and every person, regardless of age or the presence of a disability. Technology solutions are important for people with hidden disabilities to decrease the impact of poor equilibrium, dizziness, involuntary muscle movements, shuffling, drowsiness, and blurred vision. Numerous devices are available to create environments which limit the potential for accidents and reduce the consequences when accidents do occur.

Fire & Smoke Alarms

General alarms, helpful for all populations, are reasonable precautionary devices to install in every home. Of particular interest are carbon monoxide detectors and smoke alarms that have special features such as flashing lights and bed shaker alerting mechanisms as well as the standard audible alarms. Lightweight, easy-to-use fire extinguishers should be located in critical areas of the home, such as the kitchen or garage, for easy access in case of fires. Some fire alarm systems are available which dial an emergency telephone number to summon help when the alarm is activated. Sprinkler systems, on the other hand, can be installed in homes to actually extinguish fires rather than simply alert someone to the danger. Contact local fire protection or security alarm companies to discuss these systems.

Water Safety

Accidents involving water frequently challenge personal safety and cause damage to property. A number of devices may be helpful on their own or in combination with others to decrease this likelihood. Tub mats that change color when the water is too hot can be a helpful low tech tool to alert people to dangerous water temperatures. Anti-scalding valves are available for showers

which replace the hot/cold mixing valves with temperature-limiting ones, preventing the water from getting too hot. Other anti-scalding devices shut off the water when it reaches a specific temperature and can be installed inexpensively in faucets and showerheads.

The **Fluid Alert** is an example of a simple and inexpensive water level measurement device that has a safety alarm which beeps when the tub or sink is about to overflow. Another type, the **Water Leak Alarm**, rings when the pad attached to it by a cord comes in contact with water on the floor after a sink or tub has overflowed.

Phones and Pagers

Cordless phones, cellular phones, walkie-talkies and personal paging systems are portable devices which enable people to call for assistance in cases of emergency. A variety of personal pagers, such as the **Wireless Personal Pager/Locator**, allow individuals to easily and instantly summon help or attention simply by pushing a transmitter button. A receiver unit then beeps or vibrates notifying the wearer of "help needed". Sometimes simply highlighting speed dial buttons programmed with emergency phone numbers can sufficiently improve access to emergency services.

Specially designed telephones and telephone services can be of assistance. One example is the **Elcombe 501** which consists of a base station speakerphone and a miniature 2-ounce transmitter. The base station plugs into a power outlet and telephone receptacle and the transmitter can be clipped to a shirt pocket or belt buckle. Whenever the transmitter button is pressed, a signal is sent to the base station signifying that help is needed. The base station then takes over, calling the previously identified and pre-programmed respondents. These can be family members, friends, community resources or 911 operators. The base station will continue calling until it gets an answer.

Aids to Limit Access

Limiting access to high-risk areas can reduce numerous safety concerns in homes and neighborhoods. The potential for accidents in pools, jacuzzis or other bodies of water can be reduced by installing protective fencing and locked gates, possibly with alarms, thereby eliminating unsupervised access to those areas. Pool guard alarms are another device option which sound an alarm if the water in a pool is disturbed, notifying someone in the immediate or even remote alarm area of a possible accident.

Wall-mounted soap and shampoo dispensers have been found helpful in limiting access for those who eat inappropriate materials. In many cases, cupboard and cabinet locks, electric outlet safety covers, stove or oven locks, and other child-proof devices can sufficiently limit access to potentially dangerous items. It may be necessary for some, however, to keep medicines and other harmful products in a small, lockable refrigerator.

Stabilizing Aids

Increasing stabilization and supports within environments can reduce injuries. When equilibrium problems prevent individuals from regaining balance quickly or breaking falls, grab bars and hand rails can be installed as an effective and inexpensive way to reduce serious accidents. Placing grab bars in bathrooms, hallways, work areas, and along both sides of stairs also provides stabilization for people who experience dizziness, reduced coordination, and problems walking.

Improved lighting, the addition of tread grips on stairs, or actually replacing steps with ramps can reduce the likelihood of stumbling. Another option includes the use of walkers that improve safety by providing support in all environments. Some have special features such as attached seats for those who fatigue easily or baskets to carry items for those having limited strength or need quick access to emergency items such as medications or a cordless phone.

Seat lifters, such as the **Seat Assist** and **Lifter Seat** are spring-operated cushions that reduce the strength required to rise from a seated position and help maintain balance while getting out of a chair. As you start to rise, taking some of your weight off the cushion, the lifter gently rises for safe support and helps you move up and out of the chair.

Adaptive Utensils

Holding cups, utensils and cigarettes can be difficult and frustrating for individuals who experience involuntary muscle movements such as tremors. A number of low tech devices can provide sufficient support to eliminate the likelihood of accidents and reduce frustration. Heavy coffee cups with large handles and wide bottoms are less likely to be tipped, spilling hot liquids. Over-sized ash trays which have sand or water added to them can reduce fire hazards. Utensils with enlarged handles are easier to use and can be purchased from numerous retail outlets and catalogs. Existing utensils can simply be modified with foam tubing or moldable putty. Hand-held writing aids, such as the **Steady Write Pen**, the **Weighted Universal Holders** and the **Writing Bird**, can provide stability, minimize uncontrolled movements, and correct shaky handwriting.

To avoid difficulties unlocking doors as a result of involuntary muscle movements, individuals may create security risks by leaving doors unlocked. Key grips or holders make using keys easier by allowing a person to grasp the larger handle attached to keys which provides additional leverage. Other options may eliminate the need for keys entirely. Local security companies can provide information about several key-less security locking systems that eliminate fumbling with keys by using individually coded cards or numerical keypads.

Identification

There are products and services available to decrease the potentially dangerous outcomes of wandering behaviors and disorientation. The first line of defense is to have individuals wear or carry some form of identification. Name, address and telephone labels can be sewn or ironed on clothing. Identifying information can be carried in a person's wallet or can be worn as **caregiver jewelry**. To warn of known medical conditions **medic alert bracelets** can be purchased at local pharmacies.

A **Portable Talking ID** is another form of identification which can be a lifesaver. Just record a name, address, and phone number, as well as any special needs in case of an emergency and when the button is pressed, the 20-second message plays, giving the listener all the needed critical information.

Nationwide programs like **Safe Return** are also available for a one-time registration fee. These programs register the individual and supply a bracelet or necklace with a brief statement of the need for assistance and a toll-free number. When the individual is found locally or far from home assistance is available 24 hours, every day through the number provided. When the number on the identification product is called the registrant information is accessed and listed contacts are notified.

Monitoring & Surveillance Devices

Devices that monitor and alert a caregiver to an individual's activities can be instrumental in maintaining safety. A simple **Watchdog Security Alarm** is an example of a low tech device that accomplishes this. It is a sensitive electronic alarm that can be hung on the metal door knob of any non-metal door. If anyone touches the knob, an alarm is triggered. Baby monitors, wireless doorbells on the bedroom door, or motion detectors with chimes can serve as alerts for nighttime activity when a family member is sleepwalking, or wandering. Motion-sensitive lights also can be installed indoors and outdoors to draw attention to wandering activities.

Devices such as the **Child Alert, Jr.** are another type of helpful electronic sentry system. It sounds an alarm if the wearer of the radio transmitter wanders or is taken past a preset distance of 15 or 30 feet.

Surveillance is another option to enhance security. The **Security Camera**, for example, is an integrated video camera and microphone that lets you see and hear anywhere inside or outside your home. Using a standard TV, you can monitor activity to prevent accidents and to enhance security.

Things to Make Life Safer

- *Color code frequently used items, i.e., edibles like sugar, pudding, and cream are color coded blue; cleaning supplies are color coded red; personal care products like toothpaste, shampoo, and eye drops are color coded yellow*

- *Be attentive to the alerting signals family pets provide regarding visitors and emergency situations*
- *Replace or eliminate tools that pose risks*
- *Replace metal knives with plastic or rolling blades*
- *Attach brightly colored labels to materials that are hot, poisonous, flammable, or otherwise dangerous to identify products that are “off limits”*

Funding for Assistive Technology Devices and Services

Many of the devices in this book are fairly inexpensive and are available through local retail outlets or catalogs. Other items can be costly and it is good to know where you can turn for assistance in funding these devices and the services, such as assessment and training, which may be necessary.

Funding is available from a variety of public and private sources. Following are brief descriptions of some of the entities which may provide funding for assistive technology devices and services if eligibility and coverage criterion are met.

Medicaid

Medicaid is a state and federally funded health insurance program for individuals with low income and limited assets. The primary criterion for funding assistive technology is its medical necessity.

Medicare

Medicare is a federal health insurance program designed to reduce the out-of-pocket expenses for medically necessary health services for the aged and those under the age of 65 who have disabilities. If medically necessary and a covered service, assistive technology may be funded through Medicare.

Vocational Rehabilitation

Vocational Rehabilitation is a public service financed by state and federal funds. It is designed to develop, improve, or restore the ability of individuals with disabilities to become gainfully employed or as self-sufficient as possible. Vocational Rehabilitation may fund assistive technology required by such individuals.

Schools

Schools are required to provide assistive technology for children with disabilities who need assistive technology devices and services in order to benefit from education.

Private Insurance

Private health insurance is a government-regulated business which is designed to assist covered individuals to pay for medical care. Depending upon the policy, some plans purchase assistive technology, if it is medically necessary.

Health and Disability Organizations

A number of private organizations provide information, counseling, referral and, sometimes, financial support to purchase assistive technology for people with disabilities. Some of these organizations include: National Easter Seal

Society, Mental Health Society, American Red Cross, North Dakota Association for the Disabled, March of Dimes.

Civic Groups and Service Organizations

Many national and local service organizations set aside or raise money to help people with disabilities obtain assistive technology, depending upon their specific goals or pet projects. These groups include, but are not limited to: Knights of Columbus, Veterans of Foreign Wars, Elks Club, Masons, Jaycees, Rotary.

Assistive Technology Financial Loan Programs

North Dakota's Tech Act Project, the Interagency Program of North Dakota (IPAT), has established a financial loan program that can provide individuals with disabilities a means to obtain personal loans for the purchase of assistive technology devices. Many Tech Act projects have established similar programs and loan eligibility, terms and conditions vary according to the program designs. Specific information may be obtained by contacting the Tech Act project in your state.

Products and Manufacturers

Memory

- Stove Power Controller, TASH, Inc.
- ElectraLink, Access First!
- Cordon-Timer, Independent Living Aids, Inc.
- MotivAider, Toys for Special Children/Enabling Devices
- Private Practice Vibration Reminder Disk, Toys for Special Children/Enabling Devices
- TimePad Memo, Independent Living Aids, Inc.
- Sycom Total Recall, Damark
- Water Wand, Sammons Preston
- Remote Control Locator, LS&S Group Inc.
- Key Chain Alarm, Independent Living Aids, Inc.
- Ultra Key Seeker, The Sharper Image
- Pill Dispenser, Access to Recreation
- CompuMed, CompuMed, Inc.

Attention, Planning & Task Completion

- FM Systems, LS&S Group Inc.
- Photo Phone, Independent Living Aids, Inc.
- TTYs, LS&S Group Inc.
- Personal Pager, Independent Living Aids, Inc.
- Pocket Coach, AbleLink Technologies
- Palm Pilot, Palm Pilot Gear H.Q.
- Tickle Box, Adaptive Learning Company
- Inspiration Software, Inspiration Software, Inc.
- NeuroPage, NeuroPage
- SEATS Training System, Toys for Special Children/Enabling Devices
- SEATSPPlus, Toys for Special Children/Enabling Devices
- PEAT, Attention Control Systems, Inc.

Confusion

- Talking Clocks and Calendars, LS&S Group Inc.
- Talking Watches, LS&S Group Inc.
- Main Street Messenger, Supported Living Technologies
- EZ Bath, Sammons Preston
- Lamp Light Control, Independent Living Aids, Inc.
- Voice Diary, Independent Living Aids, Inc.
- Global Positioning Systems, Outfitter Electronics

Mood

- Sound Soothers, The Sharper Image
- SuperView, The Sharper Image

- Noise Canceling Headphones, Hammacher Schlemmer
- Contour Concept Massager, The Sharper Image
- 10 Motor Massage Mat, The Sharper Image
- Natural Wake-Up-To-Light Alarm, Hammacher Schlemmer
- Horizon Light, Discovery Bay Lighting L.L.C.
- Sleep Sound Generator, Hammacher Schlemmer
- Customized Environmental Sound Machine, Hammacher Schlemmer
- Dream Light, The Sharper Image

Companionship & Socialization

- Talk About Walkie-Talkies, Cobra Electronics Corporation
- Spinoza Bear, The Spinoza Company
- Portable tape recorders, Independent Living Aids, Inc.

Safety & Security

- Elcombe 501, Supported Living Technologies
- Fire Alarms with Vibrators/Lights, LS&S Group Inc.
- Anti-Scalding Valve, Access to Recreation, Inc.
- Fluid Alert, LS&S Group Inc.
- Flood Alarm, Improvements
- Wireless Personal Pager/Locator, LS&S Group Inc.
- Wall-Mounted Soap and Shampoo Dispensers, Independent Living Aids, Inc.
- Seat Assist, Sammons Preston
- Lifter Seat, Sammons Preston
- Steady Write Pen, Sammons Preston
- Weighted Universal Holder, Sammons Preston
- Writing Bird, Access to Recreation
- Keyless Card Lock, Access to Recreation
- Caregiver Jewelry, Safe Return
- Medic Alert Bracelets, Independent Living Aids, Inc.
- Portable Talking ID, Toys for Special Children/Enabling Devices
- Safe Return, Safe Return
- Watchdog Security Alarm, Security Shopper
- Child Alert, Jr., LS&S Group Inc.
- Security Camera, Herrington

Name & Addresses of Manufacturers

AbleLink Technologies

2850 West Serendipity Circle, Suite 202
 Colorado Springs, CO 80917
 719.572.1517
 719.572.1747 (FAX)

Electronic and Battery Powered Devices

Access First!

P.O. Box 3990
 Glen Allen, VA 23058-3990
 888.606.6769
 804.935.6739 (FAX)

Adaptive Devices and Electronic Devices

Access to Recreation, Inc. – Aftertherapy Catalog

2509 E. Thousand Oaks, Blvd., Suite 430
 Thousand Oaks, CA 91362
 800.634.4351
 805.498.8186 (FAX)

Aids for Daily Living

Adaptive Learning Company

6300 Powers Ferry Road, Suite 600-305
 Atlanta, GA 30339
 404.303.7537
 404.255.2684 (FAX)

Adaptive Computer Access, Other

Arkenstone

1390 Borregas Avenue
 Sunnyvale, CA 94089
 800.444.4443
 408.745.6739 (FAX)

*Adaptive Computer Access – Vision, Blindness,
 Learning Disabilities*

Attention Control Systems, Inc.

650 Castro Suite 120-197
 Mountain View, CA 94041
 650.494.2002
 650.493.2002 (FAX)

High Tech Devices

Cobra Electronics Corporation

6500 West Cortland Street

Chicago, IL 60707

773.889.3087

773.622.2269 (FAX)

*Walkie-Talkies, Other Electronic Devices***CompuMed, Inc.**

P.O. Box 128

Meeteetse, WY 82433

800.722.4417

919.878.1105 (FAX)

*Medication Dispensing Devices***Damark International Inc.**

7101 Winnetka Ave. N.

PO Box 9437

Minneapolis, MN 55440-9437

800.729.9000

*Electronic Devices and Adaptive Computer Access***Day-Timer Technologies**

2855 Campus Drive

San Mateo, CA 94403

415.572.6260

*Electronic and Computer Based Devices***Discovery Bay Lighting, LLC**

15031-B Military Road S., Suite 300

Seattle, WA 98188-2100

206.246.2996

206.246.0848 (FAX)

*Environmental Devices***Flaghouse, Inc.**

601 Flaghouse Drive

Hasbrouck Heights, NJ 07604

800.793.7900

800.793.7922 (FAX)

*Environmental Devices***Hammacher Schlemmer**

Operations Center

9180 LeSaint Drive

Fairfield, OH 45014-5475

800.543.3366

800.440.4020 (FAX)
Electronic and Other Devices

Herrington

3 Symmes Drive
Londonderry, NY 03053
800.622.5221
603.437.3492 (FAX)
Electronic and Other Devices

HumanWare, Inc.

6245 King Road
Loomis, CA 95650
800.722.3393
916.652.7296 (FAX)
*Adaptive Computer Access – Vision, Blindness,
Learning Disabilities*

Improvements

Hanover, PA 17333-0001
800.642.2112
800.757.9997
Low Tech Devices, Adaptive Daily Living Aids

Independent Living Aids, Inc.

27 East Mall
Plainview, NY 11803
800.537.2118
516.752.3135 (FAX)
Adaptive Daily Living Aids, Electronic Devices, Alarms

Inspiration Software, Inc.

7412 SW Beaverton Hillsdale Hwy., Suite 102
Portland, OR 97225-2167
800.877.4292
503.297.4676 (FAX)
Computer Software

LS&S Group Inc.

P.O. Box 673
Northbrook, IL 60065
800.468.4789
847.498.1482 (FAX)
Environmental Controls, Alarms, Electronic Devices

Lighthouse International

111 East 59th Street, 12th Floor
New York, NY 10022-1202
800.829.0500
212.821.9727
212.821.9727 (FAX)

Adaptive Daily Living Aids, Electronic Devices

Maxi Aids

P.O. Box #3209
Farmingdale, NY 11735
800.522.6294
516.752.0689 (FAX)

Environmental Controls, Adaptive Daily Living Aids

NeuroPage

c/o Marilyn Spivack
280 Singletary Lane
Framingham, MA 01701
508.620.0916
508.820.0072 (FAX)

Electronic & Computer-Based Devices

Outfitter Electronics

4712 Ashley Way
Hermitage, TN 37076
877.436.2255
615.902.0028

High Tech Positioning Systems

Palm Pilot Gear H.Q.

2500 East Randoll Mill Road, Suite 117
Arlington, TX 76011
817.461.3480
817.461.3482

Micro-Computer Technology

Radio Shack Dealers

100 Throckmorton St., Suite 600
Fort Worth, TX 76102
800.THE.SHACK
(or local retail outlets)

Environmental Controls, Adaptive Computer Access

Safe Return

P.O. Box 9307

St. Louis, MO 63117-0307
888.572.8566
888.500.5759 TDD
Safety Systems

Sammons Preston
P.O. Box 5071
Bolingbrook, IL 60440-5071
800.323.5547
800.547.4333 (FAX)
Adaptive Daily Living Aids, Environmental Controls

Security Shopper
PO Box 240353
Apple Valley, MN 55124
612.473.2873
Alarm Systems

The Sharper Image
650 Davis Street
San Francisco, CA 94111
800.344.444
Environmental Devices, Low and High Tech Devices

The Spinoza Company
1876 Minnehaha Avenue W.
St. Paul, MN 55104-1029
800.282.2327
651.644.7252 (FAX)
Recreation & Leisure Devices

Supported Living Technologies
1607 Fourth Street
Bay City, MI 48708
517.893.6453
Emergency Response Systems

TASH, Inc.
Unit 1 – 91 Station Street
Ajax, ON L1S 3H2 CANADA
800.463.5685
905.686.6895 (FAX)
Environmental Controls, Adaptive Daily Living Devices

Toys for Special Children/Enabling Devices
385 Warburton Avenue

Hastings-on-Hudson, NY 10706

800.832.8697

914.478.7030 (FAX)

Electronic and Battery-Powered Devices

**Directory of
Interagency Program of Assistive Technology Resources
(For Current Contact Information –
www.ndipat.org or 1-800-265-4728)**

Judie Lee, IPAT Director
PO Box 743 Cavalier, ND 58220
701-265-4807 V/TT
701-265-3150 FAX
1-800-265-IPAT (4728)
lee@pioneer.state.nd.us

Mike Bishop, SE Coordinator
PO Box 665 Valley City, ND 58072-0665
701-845-8626 V
701-845-8627 Fax
bishop@pioneer.state.nd.us

Beth Duncan, NE Coordinator
PO Box 743 Cavalier, ND 58220
701-265-4807 V/TT
701-265-3150 FAX
1-800-265-IPAT (4728) V/TT
duncan@pioneer.state.nd.us

Peggy Shireley, SW Coordinator
4007 State St. #101 Bismarck, ND 58501
701-328-9544 V
701-328-9545 Fax
shireley@btigate.com

Dud Zimmerman, NW Coordinator
400 - 22nd Ave. NW Minot, ND 58703
701-857-8630 V
701-857-8555 Fax
dud@minot.com

Connie Rawls, Project Support
1-800-265-IPAT (4728) V/TT
rawls@pioneer.state.nd.us

IPAT Equipment Loan Library
1-800-421-1181

Call to borrow AT equipment/devices for trial use

AT Financial Loan Program

1-800-265-4728 V/TT or 701-775-5577

To apply for personal financial loans to purchase AT devices

Adaptive Equipment Services

1-800-252-4911 Ext. 4583

Inquire about equipment fabrication or equipment vendors

Protection & Advocacy

1-800-472-2670

Get help in resolving AT service/device barriers

AT Info-Line

1-888-214-2780 V/TT

Get answers to all types of AT questions

List and look for used AT equipment

IPAT Web Page

www.ndipat.org

Get AT information and link to other AT resources