



# ASSISTIVE TECHNOLOGY SERVICES

The Department of Veterans Affairs (VA) provides evaluation, intervention and training to eligible Veterans and Active Duty Service members needing Assistive Technology (AT) to offset the impact of disability. The United States Assistive Technology Act of 1998 defines assistive technology (also called adaptive technology) as any "product, device, or equipment, whether acquired commercially, modified or customized, that is used to maintain, increase, or improve the functional capabilities of individuals with disabilities." VA has developed AT Labs at the Polytrauma Rehabilitation Centers in Richmond, Tampa, Minneapolis, Palo Alto and San Antonio. The AT Labs provide services directly to Veterans, as well as providing consultation to other VA medical centers that serve Veterans across the VA health care system.

Assistive Technology devices are separated into categories including: 1) Electronic Cognitive Devices, 2) Adapted Automotive Equipment, 3) Adapted Sports and Recreation Equipment, 4) Electronic Aids for Daily Living, 5) Wheeled Mobility and Seating Devices , 6) Augmentative and Alternative Communication Equipment, and 7) Adaptive Computer Access Tools.

## ELECTRONIC COGNITIVE DEVICES

Electronic cognitive devices are hardware and software that facilitate improved function in cognition and memory, route-finding, information processing, emotional regulation, or social appropriateness. Many of these technologies are computer based and require the internet to maintain functionality. Devices are typically small, such as tablet computers and smart phones.



These devices also include learning technologies that support the needs of Veterans as they return to education or employment in a variety of tasks, including personal organization, maintaining a schedule, reading and writing, and practicing daily living skills. Software programs include text-to-speech, writing and math support, and life simulation as well as voice recording activities. AT clinics support the application of these technologies as this area is rapidly changing.

## ADAPTED AUTOMOBILE EQUIPMENT

Driving a motor vehicle is a cornerstone for independence in our daily lives. Driving is essential for employment, socialization, leisure pursuit, obtaining medical services and many other activities.



VA Driver Rehabilitation Programs provide specialized evaluation, training, and education in the safe and competent utilization of adaptive equipment, mastery of specific skills and techniques to effectively and independently drive a motor vehicle, consistent with State Department of Motor Vehicles (DMV) regulations. Driver Rehabilitation Programs also address the ability to be transported in a vehicle so as to regain independence with community transportation. VA provides Driver Rehabilitation programs in 49 facilities throughout the country.

## ADAPTED SPORTS AND RECREATION EQUIPMENT

Veterans with disability are encouraged to participate in a wide variety of recreational and leisure activities including organized team events or individualized leisure/gaming activities. Selection of adapted recreation equipment varies based upon disability and personal preferences.



Properly prescribed adapted equipment allows people with disabilities to gain increased ability to perform recreation activities, and reduce secondary medical complications such as repetitive strain injuries, pain, and/or pressure sores.





## ELECTRONIC AIDS TO DAILY LIVING

Electronic Aids to Daily Living (EADL), also referred to as environmental control units, are devices that facilitate the operation of electrical appliances for a person with a severe physical disability. Activities that can be supported by using an EADL include: 1) controlling temperature (heater, air conditioner, fan, humidifier), lighting (lamps, curtains or blinds) and positioning (bed positions); 2) information acquisition by controlling audio/video equipment, page turners and note taking devices; 3) safety/security by controlling doors, door locks, monitoring the premises, and summoning emergency assistance; and 4) communication by controlling telephones, attendant calls, alarm systems and intercoms. Using an EADL is a necessity for the Veteran with disabilities to allow the independent performance of both urgent and repetitive tasks.

## WHEELED MOBILITY AND SEATING DEVICES

Wheeled mobility and seating devices (manual wheelchairs, power wheelchairs, scooters and associated seating components) are important AT devices.



Appropriate selection of a device is complex due to disability specific issues, varied preferences, different approaches and abundant technology options to address users' needs, skills, environment and resources. Properly prescribed devices

enable people with disabilities to gain increased ability to perform activities of daily living, participate in community activities, and reduce secondary medical complications. Prescription strategies for wheeled mobility are centered on the individual's priorities and consider their preferences, physical and functional needs, home and social environments, transportation situation, and related issues.

## AUGMENTATIVE AND ALTERNATIVE COMMUNICATION EQUIPMENT

Augmentative and Alternative Communication (AAC) Devices are necessary to compensate for temporary or permanent communication impairments, including disorders of speech-language production and comprehension of both spoken and written modes of communication.



Use of AAC involves four primary areas: symbol system, device, access, and strategies. Symbols (graphic, auditory, and/or tactile) can be unaided (sign language, gestures) or aided (objects, pictures, orthography) and serve to represent language or speech. Use of digitized and synthesized speech output devices are featured on basic picture-message fixed display aids, text-to-speech keyboard spelling, and sophisticated symbolic coding-based devices. Access systems include touch switches, pointing (i.e., mouse, trackball, head or eye gaze control) and mounting systems. AAC strategies serve to enhance rate of communication,

message formulation, and prediction techniques.

## ADAPTIVE COMPUTER ACCESS TOOLS

Computer access addresses the needs of individuals who cannot use a standard keyboard to input data, or use a standard pointing device to perform basic functions such as pointing, clicking and dragging. Computer access includes modifications to the way information is presented by increasing the size, contrast and color of the display, changing the display method from visual to auditory or tactile, or by facilitating information processing that is hindered by cognitive deficits. Effective computer access is important to support learning, working, information acquisition, facilitate social interests, and to improve self-esteem for persons with limited physical and cognitive capabilities.

## POINTS OF CONTACT FOR ASSISTIVE TECHNOLOGY LABS AT THE POLYTRAUMA REHABILITATION CENTERS

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