

Assistive Technology Basics



What is assistive technology?

Assistive technology (sometimes called AT) is any tool or technology that helps a person complete functional tasks with ease and efficiency. Assistive technology is beneficial for people with disabilities or older adults, but most people use assistive technology every day. Do you wear glasses? Have you ever used a step stool? If you said yes, then you have used assistive technology.

Assistive technology can be low-tech or high-tech, inexpensive or expensive, something tiny or a large machine. Assistive technology can range from a rubber grip that helps you open a jar to high-tech computers that help people communicate using only their eyes. All assistive technologies can make daily tasks easier for everyone, but they will often have a special value to:

- people with disabilities,
- older adults,
- people with noncommunicable diseases such as diabetes and stroke,
- people with mental health conditions such as dementia and autism,
- people with gradual functional decline, and
- people recovering from injury, illness, or surgery.

Why is assistive technology so important?

Assistive technology is designed to promote a healthy, productive, independent, and dignified lifestyle. It helps to simplify everyday tasks and ensure safety. Using assistive technology can:

- help people be more independent and live by themselves longer,
- help people stay in the workforce longer and earn more money,
- help caregivers by making daily tasks easier and reducing caregiving needs,
- prevent future or worsening injuries and decline, and
- help people stay in their community of choice.

What kind of assistive technology is right for me?

There are thousands of assistive technology devices that can be bought or made at home. Knowing where to start can be overwhelming, but there are key questions that can help you decide what assistive technology could be right for you.

- What are the biggest challenges I face every day or multiple times a week? What tasks are particularly difficult? What do I often forget?

Did you know?

- One in four adults in the United States have a disability. That is 61 million adults – more than the entire population of Italy!
- Globally, more than 2.5 billion people need one or more assistive devices. This number will grow to 3.5 billion people by the year 2050.
- Older people are much more likely than younger people to have a disability.
- A common type of disability is mobility – such as difficulty walking or climbing stairs.
- About 6% of all adults struggle to live alone and run errands by themselves.
- Therapeutic footwear for people with diabetes reduces foot ulcers and prevents lower limb amputations.
- Wheelchairs increase access to education and employment and decrease healthcare costs.
- Using assistive technology can keep adults at home and prevent the need for long-term care facilities.
- Without assistive technology, people may feel excluded and isolated, which increases the impact and risk of disease, disability, and poor mental well-being.

- What experts could help me decide what is best? Who can I talk to for more help?
- Do I know anyone else who uses an assistive device that could be helpful to me? What products have they found to be most helpful?
- Is this the simplest product to help meet my needs? Is there a less expensive or less complicated device?
- Is the device easy to use, maintain, and repair?
- Can I try out the device before I decide to buy it? Can someone show me how to use it properly?
- Do I need this device to address my needs? Will I use it?

Talking with an expert who can assess your unique needs can be a good first step. This could be a primary health care provider, occupational therapist, physical therapist, speech-language pathologist, audiologist, ophthalmologist, or other specialized providers. Most medical supply stores have staff that can help decide what assistive technology devices would be most beneficial.

Where can I get assistive technology?

Medical supply stores, pharmacies, online retailers, and big box stores sell common assistive technology devices. Many communities have lending programs that supply free or low-cost devices. Some assistive technology devices can be made at home using easily accessible materials, such as wrapping foam pipe insulation around eating and writing utensils for improved grip.

Once someone has received their assistive technology, it is important to ensure a proper and comfortable fit. For example, wheelchairs, crutches, and canes should

be adjusted to meet an individual's height and unique stature. It is also important to know how to correctly use an assistive device. Always read the instructions, adjust for comfort, and ask for help from a professional if necessary.

How do I pay for assistive technology?

Out of pocket. Sometimes assistive technology can only be paid for out of pocket. Before paying out of pocket, explore the alternative funding options listed below. If urgency requires an immediate purchase, check to see if reimbursement or returning the item is possible (in case you find a less expensive alternative).

Medicare. Medicare Part B (medical insurance) covers medically necessary “durable medical equipment” if a doctor prescribes it. This includes canes, commode chairs, walkers, wheelchairs, scooters, and more. Rules and restrictions can be found at www.medicare.gov.

Insurance providers. Medicaid, Medicaid waiver programs, private insurance, worker's compensation, and disability insurance may cover the cost of assistive technology. In most cases, a doctor's written prescription is needed. Contact your insurance provider to learn more.

Veterans Affairs (VA). Vocational rehabilitation from the VA or state can help cover the cost of assistive technology. There are numerous VA benefits for eligible people with disabilities. Contact the VA to learn more.

HSA and FSA. Funds in a Health Savings Account (HSA) or Flexible Spending Account (FSA) may help cover the cost of assistive technology devices.

Itemized deductions for medical and dental expenses. You may be able to deduct the itemized cost of assistive technology devices on your taxes (Form 1040).

Special programs. Some programs and organizations can help with the cost of assistive technology, such as government programs, regional disability organizations, disability foundations and non-profit organizations, civic organizations, and employers. These programs serve individuals with or without health insurance.

Rent, reuse, and recycle. Search for lower-cost used items (that are in good, working order), rent-to-own programs, short-term rentals, and community free stores. If you own and no longer need your assistive device, consider donating or selling it.

Where can I learn more?

Each state has its own unique resources and programs that can help people get assistive technology. Here are some resources in Kansas to try:

Assistive Technology for Kansans (ATK) has five Assistive Technology Access Sites around the state and is coordinated by the Kansas University Center on Disabilities (KUCDD). The program's mission is to support people with disabilities and/or chronic health conditions in learning about and getting assistive technology devices and services they need for education, employment, and living in the community. As part of this mission, ATK staff provide product information, device demonstration, training, information about short-term loans, and help in finding public and private funds for equipment. The Assistive Technology Access Sites are the point of contact for the Kansas Equipment Exchange (KEE). Through KEE, Kansans can donate durable medical equipment they no longer need or request a refurbished device if they need one. Visit <http://www.atk.ku.edu/> or call 1-800-526-3648.

The **Kansas Equipment Exchange Reuse Program (KEE Reuse)** allows eligible Kansans to get quality refurbished medical equipment for free or at a low cost. This can include wheelchairs (manual and power), patient lifts, electric/semi-electric hospital beds, shower chairs, communication devices, and more. Visit <https://atk.ku.edu/get-refurbished-device>, call 620-421-8367, or email atkapps@ku.edu.

K-LOAN is a disability consumer-led loan program that helps people with disabilities access loans, financial resources, and financial education for assistive technology. This is offered through an agreement between The

University of Kansas and SKIL Resources. Visit <https://k-loan.net> or call 1-866-465-2826.

The **Kansas Chapter of the Arthritis Foundation** helps people within its service area get equipment and personal care items that will enable them to take control of their arthritis. Visit <https://www.arthritis.org/local-offices/ks> or call 913-369-4247.

The **ADAPTECH Research Network** has developed technology resources that are helpful for people with disabilities, including a large database of free and inexpensive adaptive technologies and demonstration videos. Visit <https://adaptech.org/downloads>.

The **National AgrAbility Project** assists with resources for farmers, ranchers, and other agricultural workers with a wide range of disabilities. Visit www.agrability.org or call 800-825-4264.

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Examples of Assistive Technology

In the Kitchen

- Non-skid plates and bowls
- Cutting boards that hold food in place
- Long straws and spillproof cups
- Grip foam handles for silverware
- Drinking straw holder
- Weighted silverware
- Adapted kitchen tools

Around the House

- Lever handles (instead of doorknobs)
- Grab bars and handrails
- Robot vacuums
- Grabbers
- Phones or remotes with large buttons
- Programmable or talking thermostats
- Motion-controlled lighting
- Automated humidity and ventilation systems
- Vibrating or flashing alarms and doorbells
- Wearable emergency systems (necklaces, belts, fall detection features on watches)

Dressing and Bathing

- Long-handled sponge
- One-handed belts
- Tub and shower chairs
- Large-handled toothbrushes and toothpaste squeezers
- Automatic soap dispensers
- Buttoning aid and zipper pulls
- Long shoehorns or sock devices

Mobility

- Canes, walkers, or wheelchairs
- Ramps and entryways with no step (zero entry)
- Stairlifts
- Electronic door and gate openers

Communication

- Pens or pencils with special grips
- Talk-to-text devices
- Electronic screen readers
- Refreshable braille displays
- Screen magnifiers or pocket magnifiers
- Voice amplification systems
- Picture-based instructions or menus
- Automatic page turners

- Hearing aids or cochlear implants
- Closed captioning

Prosthetics and Orthotics

- Myoelectric hands
- Prosthetic legs
- Back or knee braces
- Foot pads or shoe inserts

Cognition and Memory

- Memory aids
- Automated pill dispensers
- Notetaking systems
- Voice recorders
- Personalized reminder clocks
- Warning signs on dangerous appliances
- Identification bracelets
- Using floor tape to help with wayfinding

At Work or On the Farm

- Ergonomic workstations
- Modified tractor stairs or skid steer platforms
- Anti-fatigue mats
- Swivel seating
- Anti-vibration padding
- Mechanical lifts

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