

Assistive technology for infants, toddlers, and young children with disabilities

Research shows that assistive technology (AT) can help young children with disabilities to learn developmental skills.¹ Its use may help infants and toddlers to improve in many areas:

- social skills including sharing and taking turns
- communication skills
- attention span
- fine and gross motor skills
- self confidence and independence

The right type of assistive technology can improve a child's ability to communicate. This in turn may help reduce some negative behaviors. Examples of common assistive technology devices include wheel chairs, computers, computer software, and communication devices.

What types of assistive technology devices can infants and toddlers use?

There are two types of AT devices most commonly used by infants and toddlers—switches and augmentative communication devices.

- There are many types of switches, and they can be used in many different ways. Switches can be used with battery-operated toys to give infants opportunities to play with them. For example, a switch might be attached directly to a stuffed pig. Then, every time an infant touches the toy, it wiggles and snorts. Switches can also be used to turn things off and on. Toddlers can learn to press a switch to turn on a device or to use interactive software.

Children who have severe disabilities can also use switches. For example, a switch could be placed next to an infant's head so that every time they moved their head to the left a musical mobile hanging overhead would play.

- Augmentative communication materials and devices allow young children who cannot speak to communicate with the world around them. These devices can be simple, such as pointing to a photo on a picture board. Or, they can be more complicated—such as pressing message buttons on a device that activate pre-recorded messages such as “I’m hungry.”

Why is assistive technology important?

Many of the skills learned in life begin in infancy: AT can help infants and toddlers with disabilities learn many of these crucial developmental skills. With assistive technology they can often learn the same things that peers without disabilities learn at the same age, only in a different way. Communication skills at this age are especially important since most of what an infant or toddler learns is through interacting with other people. This is especially true with family members and other primary caregivers.

¹ Research cited in this article is from *The Early Childhood Comprehensive Technology System (Project ECCTS) study, funded by the U.S. Department of Education's Office of Special Education Programs, under IDEA's Technology, Demonstration, and Utilization; and Media Services Program.*

Sometimes parents are reluctant to begin using an AT device. They may believe it will discourage their child from learning important skills. In truth, the opposite may be true. Research has shown that using AT devices, especially augmentative communication devices, may encourage a child to increase communication efforts and skills. The earlier a child is taught to use an AT device, the more easily the child will learn to accept and use it.

Assistive technology is also important because expectations for a child increase as they grow. Those around the child learn to say, “This is what the baby can do, with supports,” instead of, “This is what the baby can’t do.” With assistive technology, parents learn that the dreams they had for their child don’t necessarily end when they are diagnosed with a disability. The dreams may change a little, but they can still come true.

How can a family obtain AT devices for their infant or toddler?

There are two ways. First, infants and toddlers who have a disability may be eligible for early intervention services under Part C of a federal law called the Individuals with Disabilities Education Act (IDEA). If the child meets eligibility criteria for early intervention services, they may receive assistive technology devices and services as part of the services provided. The Individualized Family Services Plan (IFSP) team, including the parents, makes the decision whether those services are needed based on assessment information. If so, these services are provided to the child through a written Individualized Family Services Plan, or IFSP.

Some infants and toddlers have delays that are not severe enough for them to be eligible for early intervention services. Many of these infants and toddlers may still benefit from using an AT device. In some cases, private insurance or medical assistance will pay for a device. Or, parents may choose to purchase a device directly for their child.

Many schools and communities have special lending libraries where parents can borrow toys with switches, computer software, and other devices. These libraries, such as the Tech Tots libraries sponsored by United Cerebral Palsy chapters around the country, give parents an opportunity to try various devices before deciding whether to purchase them.

If my young child is not eligible for early intervention services under IDEA, how will I know if they could still benefit from using an AT device?

Asking certain questions may help you make that decision. Some examples:

- Compared to other children of the same age, can my child play with toys independently?
- Can my child communicate effectively?
- How does my child move from place to place?
- Can my child sit, stand, or walk independently?
- Is my child able to feed themselves?

If you answer “No” to these questions, then assistive technology may help. In some cases, children with behavior problems actually have a communication impairment. They are frustrated that they cannot tell someone how they feel, and act out instead.

What is assistive technology for children who are eligible for early intervention under IDEA?

IDEA defines an assistive technology device as “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability.” Under IDEA, assistive technology services are any services that directly assist a child with a disability to select, acquire or use a device. AT services include:

- finding and paying for an assistive technology device
- selecting and making a device work (modifying, customizing, etc.) for a child
- repairing or replacing a device
- coordinating and using other therapies or services with AT devices

- evaluating the needs of a child with a disability, including a functional evaluation in the child’s natural learning environment
- training or technical assistance for a child or that child’s family
- training or technical assistance for professionals

How does a parent request an AT evaluation under IDEA?

An AT evaluation should be included as part of an early intervention evaluation if there is reason to believe the child may need an AT device or service. However, parents may request AT evaluation at any time. Parents and family members, such as siblings or grandparents if appropriate, should be involved in the entire process. Families have important information about their infant or toddler. When parents and family members are actively involved it is more likely that the child will get the right device and that it will be used properly.

What is the most effective way to evaluate an infant or toddler for an AT device or services?

Ideally, a multi-disciplinary team will do an AT evaluation. Often this team will include an assistive technology specialist. This person should have a broad understanding about different kinds of technology, adapted toys, learning tools, communication devices and other adapted equipment. A member of the team should also understand how technology may be used in all areas of a child’s life to support developmental outcomes. This person should also have knowledge about infant and toddler development. Some early intervention programs have AT specialists on staff. Other programs may use a physical, occupational, or educational speech pathologist that has had additional training as their AT specialist. If an early intervention program does not have a technology expert, it can contract with a provider, a school district, or a community agency.

Before the evaluation takes place, team members should gather information about the child’s interests, abilities, and family routines. This will help to determine what type of AT devices might be used during the evaluation. The evaluation is usually done in the environment where the child spends the most time. For infants and toddlers, this may be the family home or a childcare setting.

When the evaluation is finished, the evaluator will recommend any devices or services that will help the child reach the expected outcomes. Any devices recommended should be easy for the family and other caregivers to use.

An important part of the evaluation is its focus on a child’s strengths and abilities. For example, if an infant with Cerebral Palsy can only wiggle their left foot, then being able to wiggle that foot is considered a strength. Any AT device should build on this strength. In this case, a switch could be positioned so that every time the infant wiggled their foot a music box would play. Creativity is a must when thinking about AT for children who have significant impairments! Parents and other primary caretakers are great resources.

Under IDEA, where can assistive technology devices and services be provided?

Early intervention services must be provided in natural environments to the extent appropriate. This would include the child’s home, childcare setting, or other community settings where children without disabilities are found. It is the responsibility of the IFSP team to determine— based on evaluations and assessments—what services will meet the child’s needs. These services, including assistive technology, will be written in the child’s IFSP.

As a part of the decision-making process around assistive technology, the team will discuss where AT devices and services will best meet the child’s needs (home, childcare, etc.). As children move from one service to another, everyone involved with the child should know what AT devices the child is using and how to obtain and use them. For example, if a two-and-a-half year old child is receiving early intervention services and will move to preschool at age three, the need for AT should be discussed at the transition planning conference. This will help to ensure that the child’s access to assistive technology does not have gaps.

Under IDEA, who pays for assistive technology devices and services?

All early intervention services, including AT devices and services, must be provided at no cost to the family unless a state has established a system of payment for early intervention services.

What types of training can be provided under IDEA?

In general, parents, service providers, childcare providers, and others who work with infants and toddlers and their families should be trained to use the AT device. Training could include:

- basic information about the device, how to set it up, and how it works
- how the device can be used in all parts of the child's life
- how to know when something is wrong and how to fix minor problems
- what to do or where to take the device if there is a major problem
- how to change or adapt the device for a child as he grows or as activities become more complex. Parents and service providers who are trained and comfortable with the device are more likely to find creative ways to use it in all areas of a child's life. The need for training, including who will provide the training, should be included in the child's IFSP.

Where can parents get more information about assistive technology or IDEA?

The portion of IDEA that deals with assistive technology for infants and toddlers is found in 34 Code of Federal Regulations (CFR), part 300 of the regulations implementing IDEA 2004. Other resources are also available:

PACER's Simon Technology Center

Tel: (952) 838-9000; (800) 537-2237

Website: pacer.org

ATA—Alliance for Technology Access

ATA is composed of networks of community-based residence centers, developers and vendors, affiliates, and associations.

Tel: (707) 455-4575

E-mail: atainfo@ataccess.org

Closing the Gap

Tel: (507) 248-3294

Website: closingthegap.com

Center on Technology and Disability

Tel: (888) 695-0845

E-mail: info@advopps.org

Website: assistivetechcenter.org