

# Using Assistive Technology to Support Communication in Early Intervention & Preschool Services

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## Assistive Technology (AT) & Young Children

Beginning in infancy, children acquire skills needed to move from a developmental milestone to the next. These skills build on one another to expand a child's ability. Disability can often interfere with the acquisition of these skills. Assistive technology can help young children with disabilities obtain needed skills and enable them to learn the same things as their peers, just in a different way.

Assistive technology (AT) has been shown to help young children improve in many areas including;

- Social skills, including sharing and taking turns
- Communication skills
- Attention span
- Fine and gross motor skills
- Self-confidence and independence
- Cognition

Assistive technology is important because expectations for a child increase as he or she grows. With assistive technology, parents learn that the dreams they had for their child don't end when he or she is diagnosed with a disability. Those dreams may change a little, but they can still come true.



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## How AT Supports Communication

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. Children will almost always do what is easiest and quickest to get them what they want. For example, if a child is using an augmentative communication device to communicate they then learn if they use their voice, they will get what they want, faster and with less effort.

If assistive technology is effectively matched to the child's ability and opportunity, it will build the scaffolding of language and eventually, if possible, the use of that device will fade as more efficient communication styles emerge.

Communication skills from birth on, are crucial to development and can be supported by the use of assistive technology. It has been said that a child's language level mirrors their cognitive level. Though this is not an exact parallel, it is generally true. Supporting language acquisition with assistive technology can help parents maximize their child's potential.

Communication scaffolding includes the earliest forms of communication, like pointing, eye gaze, facial expressions and early vocalizations. Research has shown that using AT devices, especially augmentative communication devices, may encourage a child to increase communication efforts and skills. The earlier and more often a child is taught that communication in any form can provide them with what they need or want, the more power and control that child will be able to have in their life. This could include the use of an AT device.

## AT Devices Commonly Used by Infants & Toddlers

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

### *Switches*

There are many types of switches, and they can be used in a variety of ways. Cause and effect are one of those early cognitive and communication building blocks. With this skill, a child learns the concept of "making things happen" within their first year. It is a direct relationship: when they call out for you, you will come to them; or when they shake a toy, it will make noise. A cause and effect switch is generally a switch that makes something happen immediately directly on the switch, like a buzzer button. This represents a very simple communicative sentence.

The next building block is "means to an end" switches. If a child touches a switch and something happens away from the switch, it becomes a more complex communicative sentence. A toy that is connected to a switch button with a cord is an example of this. A switch might be attached directly to a stuffed pig. Then, every time an infant touches the switch, it wiggles and snorts. Another example is a

tv remote control, then even more complex is that a child asks for help and a parent offers it. Toddlers can learn to press a switch to turn on a device or to use interactive software.

Children who have significant 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. These all teach children that they can make an impact and change their environment by communicating in some way to those around them.

## **Augmentative Communication Devices**

Augmentative communication materials and devices allow young children who cannot speak to communicate with the world around them. Language is broken down into two categories, receptive, what we understand and expressive, what we say. These devices:

- Give children a different way to express what they want to say.
- Can be low-tech, such as pointing to a photo on a picture board.
- Can be mid-level tech, such as pressing message buttons on a device that activates pre-recorded messages such as "I'm hungry."
- Can be high-level, very specialized devices like an eye gaze computer that can be controlled by just eye movement to communicate or control their environment.



Your early intervention specialist, assistive technology specialist, or therapist can assist you in determining which level or combinations of levels is best for your child.

## **Obtaining AT Services for Young Children**

There are two ways families may obtain AT services for their young child– through a child's eligibility for early intervention services or in some cases, through private insurance or medical assistance.

### **Early Intervention Program For Infants And Toddlers With Disabilities Individuals with Disabilities Education Act (IDEA), (Part C)**

Early Intervention (EI) is a parent coaching program that teaches families how to support their infant or toddler's development by offering services and supports to families of eligible children (birth- age 3)

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with developmental delays or disabilities. In order to determine if a child is eligible, a comprehensive evaluation and assessment will take place in the environment where the child spends the most time, such as in-home and community settings. Find local EI programs in Utah at [babywatch.utah.gov](http://babywatch.utah.gov).

If the child meets the eligibility criteria for early intervention services, then an Individual Family Services Plan (IFSP) will be written by a multi-disciplinary team, which includes the parents. 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. Ideally, a multi-disciplinary team will do an AT evaluation to determine the needed AT services. Often this team will include an assistive technology specialist who:

- Should have knowledge about infant and toddler development.
- Should have a broad understanding of 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.
- May be a staff member as an AT specialist for early intervention or they may be a physical therapist, occupational therapist or educational speech pathologist that has had additional training as an 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.

The federally mandated IDEA law defines assistive technology 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 of 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.

Under IDEA, early intervention services, including assistive technology, must be provided in natural environments such as 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 what services are needed to meet the unique needs of the child. These services, including AT devices and services, should be included in the child's IFSP.

## ***Private Insurance or Medical Assistance***



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 technologies have become more affordable with the advent of iPads and other mass-market devices.

Some schools and communities have special lending libraries where parents can borrow toys with switches, computer software, and other devices. These libraries, such as [Utah Center for Assistive Technology](#) (UCAT), give parents an opportunity to try various devices before deciding whether to purchase them.

To help you determine if your child would benefit from using an AT device even if he or she is not eligible for early intervention services under IDEA, consider the following questions:

- 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 him or herself?

If you answer “no” to any of 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.

## **Need More Support?**

Contact the Utah Parent Center at 801-272-1051 or (toll free) 800-468-1160 to access:

- Free individual in-person or individual consultations and advocacy support
- Free Utah Parent Center workshops
- Additional information and resources can be found on the web at [utahparentcenter.org](http://utahparentcenter.org).