Assistive Technology for Infants and Toddlers

By Jenna M. Weglarz-Ward

Technology and *toddlers*? Not two words we often put together. However, the use of assistive technology for infants and toddlers with developmental disabilities and delays can promote development, growth, and learning as well as family functioning.

Assistive technology (AT) devices you might think of are wheelchairs, computers, or hearing aids, but many of us use AT devices daily. I personally wear corrective glasses, and I would be lost without the spell check on my computer. I would literally be lost without my GPS! Additionally, items that began as AT devices are now commonly used with all young children, such as large grip spoons, drinking straws, and Bumbo chairs.

Assistive technology is any durable item, piece of equipment, or product system that is used to increase, maintain, or improve the functional capabilities of children with disabilities. These items may be purchased at the store, specially ordered, or made at home. Assistive technology includes devices and services.

The Individuals With Disabilities Education Act (IDEA) defines an assistive technology device as "any item, piece of equipment, or product system, whether acquired commercially off the shelf, modifies, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability."

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IDEA Part C Early Intervention (EI) programs can provide AT services and devices. AT in early intervention may include:

Type of AT	Target Developmental Area(s)	Examples
Aids for daily living	Bathing, eating, dressing	Bath chairs Grabbers
Assistive listening	Hearing, communication	Hearing aids
Assistive toys and switches	Play, social interaction	Switches Switched toys
Augmentative communication	Communication Social Interaction	Picture exchange Picture or communication boards Electronic communication devices
Computer access	Thinking skills Choice making Fine motor Visual-motor coordination Independence	Eye gaze Modified keyboards Keyboard overlays Software programs Voice activation
Mobility	Mobility Locomotion	Braces Orthotics Self-propelled walkers
Positioning	Social Interaction Physical Development Feeding	Padding and inserts Structured Chairs Standers Walkers Trays Weighted vests, pressured vests
Visual aids	Visual-motor coordination Visual perception	Light boxes

Adapted from *Early Intervention Assistive Technology Guidelines*, Illinois Department of Human Services.

TECHNOLOGY_____

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IDEA defines an assistive technology service as "any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device." Services include:

- the evaluation.
- purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices.
- selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing assistive technology devices.
- coordinating and using other therapies, interventions, or services with assistive technology devices.
- training or technical assistance for a child or a child's family.
- training or technical assistance for professionals (IDEA 2004, *Wrightslaw: Special Education Law*).

AT devices come in a wide range of technology levels. Low technology items may be things you can make at home by modifying materials you already have, such as using a rolled towel to support your child in his high chair. High technology items may be things you have

made especially for your child, such as an electronic talker.

Talk with your service coordinator and early intervention provider to see if your family would benefit from an AT evaluation. Many AT services and devices are included in early intervention services. Some may also be covered by your medical insurance. It is important to work with your early intervention professionals, medical providers, and other caregivers (e.g., child care providers) to find affordable and meaningful ways to incorporate AT into your child's program and your family's daily routines.

Early intervention services need to provide appropriate AT for children. This means they need to provide devices that assist the child and family in meeting their developmental goals but do not have to provide state-of-the-art devices. In car terms, they have to provide a Toyota, not a Lexus. If you prefer, the Lexus, your family will be responsible for funding that choice.

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Assistive Technology at Home:
Easy Adaptations for Daily Living
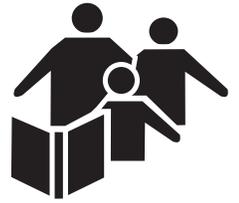
Adaptations are a way to meet the unique needs of all children, including children with disabilities and special needs. By using adaptations in your home, you can increase your child's independent participation and learning in everyday childhood routines and activities. Rather than "fixing" a child's skill deficit, the goal is to "fix" or adapt the environment (activity or routine) where something is not going as expected.

✋ **Exploring books can be frustrating for young children. The pages can stick together and be difficult to turn.**

- To make board book pages easier to turn, use a hot glue gun to put a dot of glue at the bottom corner of each page. They will then be separated just enough to allow little fingers to turn them easier. For paper pages, try creating simple tabs of folded duct tape or masking tape on each page.

✋ **Mealtime can be a big mess sometimes. Bowls can tip over easily and the food ends up everywhere.**

- To make meal times less messy, create a more steady bowl. Glue a bowl to wider lid or plastic plate. You can also try using a nonslip placemat.

✋ **Coloring and writing can be a real challenge when fingers have trouble grasping small, narrow crayons and pencils.**

- To help create a larger gripping area on writing utensils, poke a hole through the top and bottom of an empty prescription bottle or film canister, then slide the utensil through.
- To help little fingers hold writing utensils more tightly, wrap duct tape or use a soft, rubbery pencil grip on crayons and other utensils.

✋ **Bath time can be a slippery time for young children and their parents.**

- To create a smaller contained area for your toddler to explore, use a round laundry basket in the tub.
- To create a floating ring for your toddler to help your child float, use a pool noodle with the ends taped together.

✋ **Playtime is an important part of development, though some children have difficulty sitting without support.**

- To help your child sit independently, use firm pillows or cushions in a horseshoe shape around your child.

✋ For more information on assistive technology, see the Illinois Early Intervention Clearinghouse Web site at http://eiclearinghouse.org.

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Resources for Assistive Technology for Children

Books

Assistive Technology for Young Children: Creating Inclusive Learning Environments. Kathleen C. Sadao. Paul H. Brookes, 2010. (Call # LC 4019.3 .S233 2010)

This book is an unintimidating, reader-friendly guide to recommended AT practice for children birth to 5. Early childhood professionals and parents will learn about the broad spectrum of AT supports for children with disabilities—from low-cost, low-tech options such as Velcro and homemade switches to higher tech options such as speech-generating software.

EZ at 2: Simple Assistive Technology Ideas for Children Ages Birth to Three: A Guide for Increasing Young Children's Participation in Daily Activities and Routines. PACER Center, 2011. (Call # LC 4019.3 .P114 2011)

Divided into daily living categories such as "At Home," "Meal and Snack Time," etc., this guide for parents and professionals offers simple, do-it-yourself solutions for anyone who wants to help infants and toddlers with disabilities participate more fully in recreational and other daily activities.

Family Guide to Assistive Technology. Katharin A. Kelker and Roger Holt. Brookline Books, 2000. (Call # WB 320 .K29 2000)

This guide was written for both parents and professionals. It explains how to obtain, evaluate, and make the most of assistive technologies in helping young children with special needs.

Choices in Deafness: A Parent's Guide to Communication Options. Sue Schwartz, editor. Woodbine House, 2007. (Call # HV 2471 .S399 2007)

This easy-to-read guide discusses communication options for children who are hearing impaired or deaf.

Videos

Tools of Inclusion: Assistive Technology for Young Children. 30-minute DVD. Western Illinois University, 2007. (Call # HV1569.5 .T671 2007)

This *Apples Video Magazine* presentation demonstrates how children use assistive technology as a learning and inclusion tool.

Web Resources

The Early Childhood Technical Assistance Center (ECTA): Assistive Technology (AT) for Infants, Toddlers and Young Children http://www.ectacenter.org/topics/atech/atech.asp

The page on AT includes an overview, an FAQ section, information on federal and state laws on AT, information on universal design, and several extensive bibliographies of articles on AT and early intervention.

Tots-n-Tech Ideas to Share https://tnt.asu.edu/

The Tots-n-Tech website has numerous resources on assistive technology in early intervention, including research papers and lists of organizations. One such resource is the "Ideas to Share" database, which indexes downloadable handouts on activities and ideas that professionals and parents can implement in providing services and care for children.

Center on Technology and Disability http://www.ctdinstitute.org/

Funded by the U.S. Department of Education, the center offers many free, downloadable guides and fact sheets on assistive technology that are appropriate for professionals and families. Spanish language materials are also available.

Articles

Assistive Technology for Early Childhood. Brian Simms. (2003). *Exceptional Parent, 33*(8), 72–78.

This article provides a concise overview of the various types and uses of assistive technology and the benefits for young children.

Tech for Tots: Assistive Technology for Infants and Young Children: Part 1 and Part 2. Toni Solano and Sonia K. Aller. (2000). *Exceptional Parent, 30*(6), 44–47, and *Exceptional Parent, 30*(7), 64–67.

These articles are adapted from the Children's Hospital Los Angeles training for professionals and parents. Part 1 explains the importance of assistive technology in the development of young children experiencing delays. Part 2 explains the practicalities of obtaining assistive technology devices.

Spotlight on the Illinois Assistive Technology Program

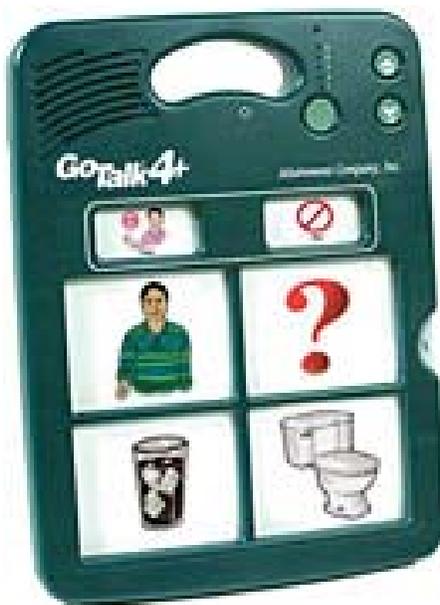### What is the Illinois Assistive Technology Program (IATP)?

IATP is a federally funded nonprofit organization that provides assistive technology (AT) for people in Illinois. Assistive technology is any device that helps a person with a disability do a task or do a task better. We can:

- Demonstrate AT for people through trainings or our demonstration center.
- Loan an item out for families to do a "test drive" or if their device is being repaired.
- Connect people with vendors and funding sources.
- Loan qualified borrowers money to purchase AT.
- Help people recycle AT to other families who can use it through our used equipment program.

What types of AT materials are available to families in EI? What are the most popular items for infants and toddlers? What if an item isn't working right or it breaks?

Any AT that we have for loan may be checked out by families. Our items range from simple daily living tools, such as pencil grips, up to complex and expensive communication systems. Adapted toys and switches used to activate toys are the most loaned items for EI. Instructions are provided with most items.

If there is a question about an item, families can call us and we will try to troubleshoot, or we may refer families to the manufacturer for assistance. We try to work with families if an item breaks. We understand that things happen, especially with children.

How do families access the IATP? Who is eligible to borrow from IATP? Is there a loan period? How do patrons return items? Is there a fee?

Please visit our website (www.iltech.org) or reach us by phone at (800) 852-5110. The only requirement is that the borrower lives in Illinois. We often loan items to families, therapists, and teachers. The loan period for devices is five weeks.

Patrons can return items either by mail or UPS, or they may drop them off at our office in Springfield. The only cost to families is the cost of returning the item; we pay for shipping to the borrower, and they pay for shipping back to us.

You can also contact the Illinois Assistive Technology Program via e-mail at iatp@iltech.org

Illinois Early Intervention Clearinghouse
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