

Applied Behavior Analysis



A Parent's Guide



These materials are the product of on-going activities of the Autism Speaks Autism Treatment Network, a funded program of Autism Speaks. It is supported by cooperative agreement UA3 MC 11054 through the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Research Program to the Massachusetts General Hospital.

This tool kit is an informational guide to Applied Behavioral Analysis (ABA). It is designed to provide you with a better **understanding of ABA**, **how your child can benefit**, and **where/how you can seek ABA services**.

WHAT IS ABA?

“ABA” stands for Applied Behavior Analysis. ABA is a set of principles that form the basis for many behavioral treatments. ABA is based on the science of learning and behavior. This science includes general “laws” about how behavior works and how learning takes place. ABA therapy applies these laws to behavior treatments in a way that helps to increase useful or desired behaviors. ABA also applies these laws to help reduce behaviors that may interfere with learning or behaviors that may be harmful. ABA therapy is used to increase language and communication skills. It is also used to improve attention, focus, social skills, memory, and academics. ABA can be used to help decrease problem behaviors.

ABA is considered an evidence-based “best” practice treatment by the US Surgeon General and by the American Psychological Association. “Evidence based” means that ABA has passed scientific tests of its usefulness, quality, and effectiveness.

ABA therapy includes many different techniques. All of these techniques focus on antecedents (what happens before a behavior occurs) and on consequences (what happens after the behavior). One technique is “positive reinforcement.” When a behavior is followed by something that is valued (a reward), that behavior is more likely to be repeated. ABA uses positive reinforcement in a way that can be measured in order to help bring about meaningful behavior change.

A few types of therapies based on ABA principles are ***discrete trial learning, incidental teaching (or natural environment training), verbal behavior, pivotal response training, and natural language paradigm (see next page for details)***. All of these ABA-based therapies:

- Are structured
- Collect data for target skills or behaviors
- Provide positive strategies for changing responses and behaviors

ABA focuses on positive reinforcement strategies. It can help children who are having difficulty learning or acquiring new skills. It can also address problem behaviors that interfere with functioning through a process called “functional behavioral assessment.”

The principles and methods of behavior analysis have been applied effectively in many circumstances to develop a wide range of skills in learners with and without disabilities.

ABA In a Nutshell

Understanding (and modifying) behavior in the context of environment is the ***basis for ABA therapies***

- **“Behavior”** refers to all kinds of actions and skills (not just misbehavior).
- **“Environment”** includes all sorts of physical and social events that might change or be changed by one’s behavior.



Discrete Trial Learning (Training) is based on the understanding that practice helps a child master a skill. It is a structured therapy that uses a one-to-one teaching method and involves intensive learning of specific behaviors. This intensive learning of a specific behavior is called a "drill." Drills help learning because they involve repetition. The child completes a task many times in the same manner (usually 5 or more). This repetition is especially important for children who may need a great deal of practice to master a skill. Repetition also helps to strengthen long-term memory. Specific behaviors (eye contact, focused attention and facial expression learning) are broken down into its simplest forms, and then systematically prompted or guided. Children receive positive reinforcement (for example: high-fives, verbal praise, and tokens that can be exchanged for toys) for producing these behaviors. For example, a therapist and a child are seated at a table and the therapist prompts the child to pay attention to her by saying "look at me." The child looks up at the therapist and the therapist rewards the child with a high-five.

Incidental Teaching (or Natural Environment Training) is based on the understanding that it is important to give real-life meaning to skills a child is learning. It includes a focus on teaching skills in settings where your child will naturally use them. Using a child's natural everyday environment in therapy can help increase the transfer of skills to everyday situations and helps generalization. In Incidental Teaching, the teacher or therapist utilizes naturally occurring opportunities in order to help the child learn language. The activity or situation is chosen by the child, and the caregiver or teacher follows the child's lead or interest. These teaching strategies were developed to facilitate generalization and maximize reinforcement. Once naturally occurring situations in which a child expresses interest are identified, the instructor then uses graduated prompts to encourage responses from the child. For example, a child is playing on the swings and needs the therapist to push him so that he can swing higher. The therapist waits on the child to ask for a push. Only after the child asks does the therapist push the swing. The therapist waits for the child to ask each time before he/she pushes the child again.

Verbal Behavior is similar to discrete trial training in that it is a structured, intensive one-to-one therapy. It differs from discrete trial training in that it is designed to motivate a child to learn language by developing a connection between a word and its meaning. For some children, teaching a word or label needs to include a deliberate focus on teaching them how to use their words functionally (E.g. What is this? A cup. What do you use a cup for? Drinking. What do you drink out of? A cup.)

Pivotal Response Training is a naturalistic, loosely structured, intervention that relies on naturally occurring teaching opportunities and consequences. The focus of PRT is to increase motivation by adding components such as turn-taking, reinforcing attempts, child-choice, and interspersing maintenance (pre-learned) tasks. It takes the focus off of areas of deficits and redirects attention to certain pivotal areas that are viewed as key for a wide range of functioning in children. Four pivotal areas have been identified: (a) motivation, (b) child self-initiations, (c) self management, and (d) responsiveness to multiple cues. It is believed that when these areas are promoted, they produce improvements in many of the non-targeted behaviors. The Early Start Denver Model is an early behavioral intervention model appropriate for children as young as 18 months of age that has a strong emphasis on Pivotal Response Training.

Natural Language Paradigm (NLP) is based on the understanding that learning can be helped by deliberate arrangement of the environment in order to increase opportunities to use language. NLP emphasizes the child's initiative. It uses natural reinforcers that are consequences related directly to the behavior, and it encourages skill generalization. For example, a child who is allowed to leave after being prompted to say "goodbye" has a greater likelihood of using and generalizing this word when compared with a child who receives a tangible item for repeating this word. NLP transfers instruction from the therapy room to the child's everyday environment with the interest of the child serving as the starting point for interventions.

ABA METHODS SUPPORT PERSONS WITH AUTISM IN A VARIETY OF WAYS:

- ✓ **Teach skills to replace problem behaviors.** So your child can learn what “to do,” not just what “to stop doing.”
- ✓ **Increase positive behavior and reduce interfering behavior.** For example, reinforcement procedures increase on-task behavior or social interactions and reduce behaviors like self-injury or stereotypy.
- ✓ **Maintain behaviors.** For example: Teaching self-control and self-monitoring procedures to maintain and generalize job-related social skills
- ✓ **Change responses to your child's behavior.** These responses could unintentionally be rewarding problem behavior.
- ✓ **Increase your child's academic, social, and self-help skills.**
- ✓ **Improve ability to focus on tasks, comply with tasks, and increase motivation to perform.**
- ✓ **Aim to improve cognitive skills.** Helps your child be more available for learning.
- ✓ **Generalize or to transfer behavior from one situation or response to another** (For example, from completing assignments in the resource room to performing as well in the mainstream classroom).

Will ABA Benefit My Child?

Is your child...

- ✓ ...having difficulty learning?
- ✓ ...having problems acquiring new skills?
- ✓ ...having difficulty communicating?
- ✓ ...experiencing problem behaviors* that get in the way of functioning?

If your child has any of these or other concerning behaviors, an ABA-based approach to behavior intervention may be useful.

**Problem behaviors may include temper tantrums, aggression, or self-injury.*

WHAT DOES ABA LOOK LIKE?

ABA is such a broad approach that it is difficult to define what a typical program will look like. The amount of therapy and level of parent involvement varies, often according to the specific needs of the child. ABA skills training programs (such as discrete trial training, incidental teaching) can require several hours each day. While skills training programs are usually implemented by behavior therapists or teachers, parents are often taught critical skills to help their children transfer what they have learned in therapy to everyday life.

ABA skills training programs for young children are often based in the home and require special materials and a dedicated area for working. ABA behavior modification therapy may include 1-2 hours of parent training per week with the parents using strategies they learn in between visits. An ABA therapist may also consult with teachers to help support positive behaviors in the classroom.

A **first step in skills training** during an ABA session is usually includes an in-depth parent interview and an assessment measure such as the

Assessment of Basic Language and Learning Skills “ABLLS-R”

or

Verbal Behavior Assessment and Placement Program “VB-MAP”

COMPONENTS OF A STRONG ABA PROGRAM

- **Supervision** – The program should be designed and monitored by a Board Certified Behavior Analyst (BCBA) or someone with similar credentials. Supervisors should have extensive experience working with children with autism.
- **Training** – All participants should be fully trained, with supervisors providing support, monitoring, and ongoing training for the duration of the program.
- **Programming** – The program should be created after a detailed assessment has been conducted and tailored to the child's specific deficits and skills. Family and learner preferences should be given consideration in determining treatment goals. Generalization tasks should be built into the program to ensure performance of skills in multiple environments.
- **Functional programming** – Goals selected should be beneficial and functional to the individual and increase or enhance his/her quality of life. A mix of behavior analytic therapies should be used so that the child has an opportunity to learn in different ways.
- **Data collection** – Data on skill acquisition and behavior reduction should be recorded and analyzed regularly. This data should be reviewed by the supervisor and used to measure the progress of the individual and provide information for program planning.
- **Family training** – Family members should be trained in order to teach and reinforce skills. They should be involved in both the planning and review process.
- **Team Meetings** that involve the therapists, supervisor and involved family members are necessary to maintain consistency, identify pertinent issues and discuss progress.



WHO PROVIDES ABA SERVICES?

ABA providers may vary in training, experience, and certification:

- **Certifications in ABA:** Therapists may be certified through the Behavior Analyst Certification Board. If they are board certified and have at least a Master's degree, then they will have the letters BCBA after their name. BCBA-D means they have a doctoral degree. Other therapists may have BCABA credentials. This means education in ABA at a Bachelor's level.
- **Experience in ABA:** Some ABA therapists may have years of experience providing ABA but may not be formally "certified." Uncertified ABA therapists may have trained under and had their work supervised by a certified ABA therapist. While uncertified therapists may provide individual ABA skills instruction, they should be supervised by someone with credentials or similar experience.

When seeking ABA services, it is important that you request and receive information about the therapist's experience. Ask him or her to **provide references** from other parents or caregivers

WHERE IS ABA THERAPY PROVIDED?

ABA can be provided at school, at home, or in the community depending on the needs of the child and the services that are available in a particular area. Some school programs use ABA strategies within the classroom. They may also be used as part of a child's individual education plan (IEP). In addition, community-based therapists may provide ABA in the home to children diagnosed with autism.

Most large to medium sized cities will have certified ABA therapists. Smaller towns and rural areas may not. This is why asking about experience of the provider is important.

HOW DO I OBTAIN ABA SERVICES?

- Check with your local chapter of Autism Speaks or visit the Family Services tab on the Autism Speaks website: www.autismspeaks.org. Search for ABA services offered in your state.
- Check your local chapter of the Autism Society of the America. Go to their website www.autismsociety.org to find state-by-state resources.
- Find Board Certified Behavior Analysts at www.bacb.com.
- Talk with your child's education team about local providers.
- Talk with families living with autism at local support groups.



Insurance Coverage for ABA

Insurance companies vary in their willingness to pay for ABA therapies. Policies also differ from state to state. You will need to check your policy to determine if ABA services will be covered or reimbursed.

RESOURCES

The Autism Speaks Family Services Department offers resources, tool kits, and support to help manage the day-to-day challenges of living with autism (www.autismspeaks.org/family-services). If you are interested in speaking with a member of the Autism Speaks Family Services Team contact the Autism Response Team (ART) at 888-AUTISM2 (288-4762), or by email at familyservices@autismspeaks.org

Websites

Read about evidence-based treatments for autism at:

- The National Autism Center Website at www.nationalautismcenter.org
- The Organization for Autism Research (OAR) website at www.researchautism.org

ACKNOWLEDGEMENTS

This publication was developed by members of the Autism Speaks Autism Treatment Network / Autism Intervention Research Network on Physical Health-Behavioral Health Sciences Committee. Special thanks to Nicole Bing, PsyD (Cincinnati Children's Hospital), Erica Kovacs, Ph.D. (Columbia University), Darryn Sikora, Ph.D. (Oregon Health & Science University), Laura Silverman, Ph.D. (University of Rochester), Johanna Lantz, Ph.D. (Columbia University), Benjamin Handen, Ph.D. (University of Pittsburgh), Rebecca Rieger, BA (Columbia University), Zonya Mitchell, Psy.D., (Columbia University), and Laura Srivorakiat, M.A. (Cincinnati Children's Hospital) for their work on the publication.

It was edited, designed, and produced by Autism Speaks Autism Treatment Network / Autism Intervention Research Network on Physical Health communications department. We are grateful for review and suggestions by many, including families associated with the Autism Speaks Autism Treatment Network. This publication may be distributed as is or, at no cost, may be individualized as an electronic file for your production and dissemination, so that it includes your organization and its most frequent referrals. For revision information, please contact atn@autismspeaks.org.

These materials are the product of on-going activities of the Autism Speaks Autism Treatment Network, a funded program of Autism Speaks. It is supported by cooperative agreement UA3 MC 11054 through the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Research Program to the Massachusetts General Hospital. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the MCHB, HRSA, HHS. Images for this tool kit were purchased from istockphoto®. Written May 2012.