

What is Applied Behavior Analysis?

*This article on ABA was originally found on the **Autism Speaks** website and was reprinted with permission in FEAT-Houston's newsletter. **Autism Speaks.Org** continues to be a good resource for excellent information on Applied Behavior Analysis. See:*

<https://www.autismspeaks.org/applied-behavior-analysis-aba-0>

What is Applied Behavior Analysis?

Behavior analysis is a scientific approach to understanding behavior and how it is affected by the environment. "Behavior" refers to all kinds of actions and skills (not just misbehavior), and "environment" includes all sorts of physical and social events that might change or be changed by one's behavior. The science of behavior analysis focuses on principles (that is, general laws) about how behavior works, or how learning takes place. For example, one principle of behavior analysis is positive reinforcement: When a behavior is followed by something that is valued (a "reward"), that behavior is likely to be repeated. Through decades of research, the field of behavior analysis has developed many techniques for increasing useful behaviors and reducing those that may be harmful or that interfere with learning. Applied behavior analysis (ABA) is the use of those techniques and principles to address socially important problems, and to bring about meaningful behavior change.

Who Can Benefit from ABA?

ABA methods have been used successfully with many kinds of learners of all ages, with and without disabilities, in many different settings. In the early 1960s, behavior analysts began working with young children with autism and related disorders. Those pioneers used techniques in which adults directed most of the instruction, as well as some in which children took the lead. Since that time, a wide variety of ABA techniques have been developed for building useful skills in learners with autism of all ages. Those techniques are used in both structured situations (such as formal instruction in classrooms) and in more "natural" everyday situations (such as during play or mealtime at home), and in 1-to-1 as well as group instruction. They are used to develop basic skills like looking, listening, and imitating, as well as complex skills like reading, conversing, and taking the perspective of others.

The use of ABA principles and techniques to help persons with autism live happy and productive lives has expanded rapidly in recent years. Today, ABA is widely recognized as a safe and effective treatment for autism. It has been endorsed by a number of state and federal agencies, including the U. S. Surgeon General and the New York State Department of Health.

For general information about behavior analysis and ABA, see:

www.abainternational.org [The Association for Behavior Analysis International]

www.BACB.com [Behavior Analyst Certification Board]

www.behavior.org [Cambridge Center for Behavioral Studies]

What is the Research on ABA for Autism?

Hundreds of published studies have shown that specific ABA techniques can help individuals with autism learn specific skills, such as how to communicate, develop relationships, play, care for themselves, learn in school, succeed at work, and participate fully and productively in family and community activities, regardless of their age. A number of peer-reviewed studies have examined the effects of combining multiple ABA techniques into comprehensive, individualized, intensive, early intervention programs for children with autism. "Comprehensive" refers to the fact that intervention addressed all kinds of skills: communication, social, self-care, play, motor, pre-academic, and so on. "Early" means that intervention began before the age of four for most children. "Intensive" means that ABA methods were used to arrange large numbers of learning opportunities for each child every day in both structured and unstructured situations, which amounted to 25-40 hours per week during which children actively learned and practiced skills. That was done so that young children with autism would have experiences like typical toddlers, who get thousands of chances every day to learn by interacting with their parents and others. These studies showed that many children with autism who received 1-3 years of this type of treatment had large improvements on tests of their cognitive, communication, and adaptive skills. Some who participated in early intensive ABA for at least 2 years acquired enough skills to participate in regular classrooms with little or no ongoing help. Other children in the studies learned many skills through intensive ABA, but not enough to function independently in regular classrooms full-time. Across studies, a small percentage of children improved relatively little. At this time, it is very difficult to predict in advance how far any individual child might go with this treatment. More research is needed to determine why some children with autism respond more favorably to early intensive ABA than others.

In some studies, intensive ABA was compared with less intensive ABA, typical early intervention or special education, and "eclectic," mixed-method interventions done both intensively and non-intensively. The children with autism who received intensive ABA treatment made larger improvements in most skill areas than children who participated in the other interventions. Parents whose children received intensive ABA reported less stress than parents whose children received other treatments.

Does ABA Work with Older Learners with Autism?

Yes. Research documents that many ABA techniques are effective for building skills of all kinds in children, adolescents, and adults with autism and related disorders. Additionally, ABA methods are useful for helping individuals and families manage some of the difficult behaviors that may accompany autism, without the side effects of drugs or other treatments. A number of programs have been combining many ABA techniques into comprehensive treatment programs for youths and adults with autism for many years. Many of those individuals have learned to work and live successfully in their communities thanks to ABA treatment. However, so far, there have been no studies of intensive ABA with older individuals with autism comparable to those that have been done with young children.

For more information about research supporting ABA as a treatment for autism, see:
www.behavior.org/autism [The Cambridge Center for Behavioral Studies Autism Page]
www.surgeongeneral.gov/library/mentalhealth/chapter3/sec6.html#autism [U.S. Surgeon General's Report on Mental Health]
www.health.state.ny.us/nysdoh/eip/menu.htm [Clinical Practice Guideline, New York State Department of Health Early Intervention Program]
<http://seab.envmed.rochester.edu/jaba/index.html> [Journal of Applied Behavior Analysis]

What Does ABA Intervention Involve?

Done correctly, ABA intervention for autism is not a “one size fits all” approach consisting of a “canned” set of programs or drills. On the contrary, every aspect of intervention is customized to each learner's skills, needs, interests, preferences, and family situation. For those reasons, an ABA program for one learner might look somewhat different than a program for another learner. But genuine, comprehensive ABA programs for learners with autism have certain things in common:

- Intervention designed and overseen directly by qualified, well-trained professional behavior analysts
- Detailed assessment of each learner's skills as well as learner and family preferences to determine initial treatment goals
- Selection of goals that are meaningful for the learner and the family
- Ongoing objective measurement of learner progress
- Frequent review of progress data by the behavior analyst so that goals and procedures can be “fine tuned” as needed
- Instruction on developmentally appropriate goals in all skill areas (e.g., communication, social, self-care, play and leisure, motor, and academic skills)
- Skills broken down into small parts or steps that are manageable for the learner, and taught from simple (such as imitating single sounds) to complex (e.g., carrying on conversations)
- An emphasis on skills that will enable learners to be independent and successful in both the short and the long run
- Use of multiple behavior analytic procedures -- both adult-directed and learner-initiated to promote learning in a variety of ways
- Many opportunities -- specifically planned and naturally occurring -- for each learner to acquire and practice skills every day, in structured and unstructured situations
- Intervention provided consistently for many hours each week
- Abundant positive reinforcement for useful skills and socially appropriate behaviors
- An emphasis on positive social interactions, and on making learning fun
- No reinforcement for behaviors that are harmful or prevent learning
- Use of techniques to help trained skills carry over to various places, people, and times and to enable learners to acquire new skills in a variety of settings
- Parent training so family members can teach and support skills during typical family activities
- Regular meetings between family members and program

What Kind of Improvements Can Be Expected From ABA?

Competently delivered ABA intervention can help learners with autism make meaningful changes in many areas. But most learners require a great deal of carefully planned instruction and practice on most skills, so changes do not occur quickly. As mentioned earlier, quality ABA programs address a wide range of skill areas, but the focus is always on the individual learner, so goals vary from learner to learner, depending on age, level of functioning, family needs and interests, and other factors. The rate of progress also varies from one learner to the next. Some acquire skills quickly, others more slowly. In fact, an individual learner may make rapid progress in one skill area, such as reading, and need much more instruction and practice to master another, such as interacting with peers.

Who Can Provide ABA Intervention?

Because of the huge demand for ABA intervention for autism, many individuals and programs now claim to “do ABA.” Some are private practitioners or agencies that offer to provide services by periodically coming into a family's home; others operate private schools, and still others provide consultation services to public schools. Not all of them have the education and practical experience that the field of behavior analysis considers minimum requirements for practicing ABA. Family members and concerned professionals are urged to be cautious when enlisting anyone to “do ABA” with a child, youth, or adult with autism.

Whether assembling or choosing an ABA program, keep in mind the following:

- Just as a medical treatment program should be directed by a qualified medical professional, ABA programs for learners with autism should be designed and supervised by qualified behavior analysts, preferably individuals who are Board Certified Behavior Analysts® with supervised experience providing ABA treatment for autism, or who can clearly document that they have equivalent training and experience. Always check credentials of those who claim to be qualified in behavior analysis.
- An ABA program should have the components and features listed
- Monitor the program by observing sessions and participating in training sessions and consultations

For more information on finding ABA practitioners, see:

www.BACB.com [Behavior Analyst Certification Board]

www.behavior.org/autism [Cambridge Center for Behavioral Studies Autism Page]

www.aamr.org/Groups/div/PS/flyer1.htm [American Association on Mental Retardation, Association for Behavior Analysis, and American Psychological Association Consumer Flyer on Identifying Behavioral Consultants]

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