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# Using Berard Auditory Integration Training to Enhance Functional Performance and Improve Quality of Life

By Sally Brockett, MS, Terrie Silverman, MS, and Ana Brushingham, MBA

In spite of a daily sensory diet and ongoing sensory therapy, seven-year-old Matthew, who was diagnosed with autism after his second birthday, continued to resist activities of daily living, including toothbrushing, bathing, and hair washing. It was especially frustrating for Matthew's parents because his language delay made it even more difficult for them to explain the importance of these personal care tasks. However, soon after participating in a ten-day program of Berard Auditory Integration Training (AIT), Matthew showed increasing tolerance for these activities, and his parents also noticed improving language comprehension, which removed a lot of stress in their lives.

### What do other parents report after their child completes Berard AIT?

Reports vary considerably since this program results in a variety of changes in many developmental areas. A mother of a preschool boy with autism in Puerto Rico was very happy to see that, on the seventh day of training, her son suddenly understood that in order to avoid getting his feet wet in puddles, he had to either step over the puddles or walk around them. His ability to solve this problem resulted in far fewer tantrums since he was now able to keep his feet dry. Many parents report other examples of



increased logical reasoning and problem solving.

Improvements in speech and language are very common, with some children saying their first words during the training period and others starting to ask questions or use pronouns and verb tenses correctly. Children who may be unintelligible because they speak at such a rapid pace with poor articulation begin to speak with clarity and put space between the words, so they become more easily understood. Since the ear controls the voice, the facets of vocal tone, volume, and voice quality may show improvement as the auditory system is rebalanced.

Family, friends, and teachers noticed the changes in Matthew and wanted to know more about the program that had triggered these improvements.

Berard AIT was developed by Dr. Guy Berard in France during the 1950s. This

## Comments from Parents:

We have noticed some great changes in Sam's speech intelligibility. His speech therapist noticed the same. He can also form words more quickly and string them together more quickly. He also tries out words with more syllables. Lastly, he is not as sensitive to helicopters any longer. Sam does seem to be more attentive to conversations. Usually we have to go through a routine of getting his attention and then asking a question. Now, it seems that he is listening more to conversations, and it is becoming less necessary to get his attention. I noticed him initiating a short conversation with one of the boys who plays with us; this really is the first time I've seen Sam start up talking with anyone like that. The ST said that Sam's speech sessions have gone so well since AIT ended.

Sheri B.

Here's an update on our twins, Mark and Mike. They have made a great deal of progress over the past six months. Mark says that his "ears are all better now!" He really has come alive socially. He has closed the social gap considerably. Mike is talking up a storm. We have learned so much about him over the past six months as he seems so much more able to express himself. He tells us what he is thinking rather than just thinking and escaping into his own world. Mark has become increasingly sociable and participates in conversations without hesitation. He appears to be more aware of his surroundings and more comfortable with the world around him. Mike's language increased significantly throughout the year following the second AIT session. He also began developing friendships with children in the community, which he avoided prior to that time. They continue to display some characteristics of autism, but their symptoms are now subtle. Both boys still talk about AIT occasionally. Mark believes that it really helped him to hear more clearly. A few weeks after AIT, Mike said, "Thanks, Mom, for helping me...my ears don't hurt anymore."

Judy L.

program was introduced in the U.S. in the early 1990s through the book titled *The Sound of a Miracle* by Annabel Stehli (Stehli, 1991) as well as the major research study done with individuals on the autism spectrum by Dr. Stephen Edelson and the late Dr. Bernard Rimland of the Autism Research Institute (Rimland, Edelson, 1994).

### What is Berard AIT?

Berard AIT is a sound-based intervention designed to reorganize or balance an auditory system that is not functioning efficiently. There may be problems with hypersensitivity, delays in timing, distortions in perception, or difficulties with sequencing that disrupt the normal flow of the auditory message. These challenges can lead to severe speech/language delays or mildly disruptive problems, but they typically do not interfere with the individual's ability to achieve optimal performance. In Matthew's case, his auditory hypersensitivity made toothbrushing and hair washing intolerable, and distortions in perception interfered with his ability to understand spoken words. As indicated by the title of Dr. Berard's book *Hearing Equals Behavior* (Berard, 1993), how we hear our world significantly affects how we behave within that world. One of the main goals of this educationally related program is to rebalance and stabilize the auditory/sensory processing system so the individual achieves greater functional performance and his/her quality of life improves.

Based on studies that have been done and clinical observations, some believe this unique form of stimulation, which is provided with intensity and repetition, creates new neural connections or pathways within the system. The ten days of training serve as the catalyst period during which new, immature connections are formed. The process continues in the following months as the connections continue to be stimulated and integrated through typical daily experiences and sound exposures. Sensory and auditory processing improves and the individual progressively shows increased attention, concentration, speech and language skills, and socialization.

**...how we hear our world significantly affects how we behave within that world.**

### How is Berard AIT provided?

Qualified professionals are trained as practitioners to provide Berard AIT by approved Berard AIT Instructors. Berard Practitioners usually offer the program at their private centers or through agencies. The music stimulation is always provided directly from the Berard AIT devices, which are currently the Earducator™ or the Audiokinotron.

The client participates in two 30-minute listening sessions per day over a 10-day period. Headphones that are compatible with the Berard AIT device are used to transmit the electronically modulated music to the listener. During Matthew's first session of training, he was quite nervous about wearing the headphones due to his hypersensitivity. However, he quickly realized that it was not painful and was actually helping him to be more comfortable. The music sounds somewhat distorted as the bass is suppressed while the treble is accentuated, and then the bass is accentuated while the treble is suppressed. The modulation occurs at a rapid pace in a random fashion so that the listener cannot anticipate the shifts. In addition, one or two narrow band filters may be used to block specific frequencies for an individual based upon the individual's listening profile.

### What preparation is recommended for Berard AIT?

Since the Berard AIT stimulation is presented through the ear, it is important to have a healthy, well-functioning ear. Ear infections, excessive wax or excessive fluid, and high negative Eustachian tube pressure can interfere with sound transmission. It is recommended that the client have these conditions evaluated prior to starting the listening program. Many children with special needs, including autism spectrum disorders, have ear health problems that sometimes go unrecognized but may be interfering with their ability to develop language and accurately process sounds in the world around them.

Since the use of headphones is required during the listening sessions, it is helpful to acquaint the child with headphones prior to the start of training. Practicing at home with headphones that cover the ear like an earmuff and using a variety of music at a soft volume helps the child become familiar with and accept headphones. Berard Practitioners typically offer suggestions on ways to help those who may be defensive about things touching their head. Matthew's mother used brushing therapy before the listening sessions to calm him. Visual cues were used to show him that he would first listen and then go to the playground or have other activities that he chose.

## Who may benefit from this program?

Individuals with auditory and sensory processing problems have difficulty interpreting daily experiences and may be potential candidates for this program. Their ability to hear and communicate is compromised, and behavioral and social skills are often affected as a result.

### Individuals with one or more of these conditions may benefit from Berard AIT:

- poor attention
- slower thinking and processing
- difficulty listening, understanding and remembering
- incorrectly understanding and following directions
- brain "traffic jams" when processing information
- hindered ability to put ideas in sequence
- sound hypersensitivity and hypo-sensitivity (tuned out)
- low tolerance for distractions
- poor ability to modulate sensory experiences
- over- or under reactive emotional responses
- sensory seeking/avoidance behaviors

Berard Practitioners are trained to look at the presenting concerns that parents, teachers, or therapists report or that are observed by the Berard Practitioner, rather than simply base a decision on the diagnosis of the individual. The Berard program may impact many developmental areas and create a variety of positive changes in functional performance. Therefore, when there is a delay or weakness in any of these areas, participation in Berard AIT may be a good option. In Matthew's case, his difficulties with sensory processing and language comprehension were good indications that he was a candidate for the program.

In addition to these considerations, there are evaluation procedures that may also be helpful. Whenever individuals are able to cooperate with the Berard listening profile, this screening may be done to determine how the individual hears across all the frequencies. The procedures for this evaluation are different from the standard audiogram and must be done by a professional familiar with the Berard listening profile. Matthew did not have the attention and ability to understand the evaluation, so he did not complete this procedure. Many young children with autism and children with limited attention are not able to cooperate with this evaluation; however, if they meet other criteria, they may be good candidates for Berard AIT.

There are also standardized tests such as the Screening for Auditory Processing Disorders (SCAN) (Keith, 2000) or the Test of Auditory Perceptual Skills (Gardner, 1996) that provide important information to use in determining the need for Berard AIT. Individuals identified on The Sensory Profile (Dunn, 1999) as "definite difference" or "probable difference" may also be considered as candidates for this training program.

Consultation with the Berard Practitioner is one of the best ways to identify whether or not the individual demonstrates the difficulties that may show a good response to Berard AIT. Though it is not possible to guarantee that a specific individual will definitely show benefit from the training, approximately 60 to 75% show notable

improvements, and some show quite significant gains. There are also a small number who may not demonstrate much response. After a consultation with the Berard Practitioner who carefully reviewed Matthew's case, Matthew's parents felt confident that this was the next step in their journey to assist him with his sensory and language difficulties.

## Is there research to support Berard AIT?

Berard AIT has been studied since the early 1990s when it was introduced in the United States. The most extensive study was completed by the Autism Research Institute and published in the *American Journal of Speech-Language Pathology* (1994). This study included 445 children and adults with autism and reported a significant reduction in sound sensitivity as well as worthwhile improvement in various aspects of comprehension and behavior. A summary of many of the studies on AIT is available at <http://www.berardaitwebsite.com/sait/aitsummary.html>.

There is also pre-AIT and post-AIT data on groups of individuals and on single cases that have completed Berard AIT posted at [www.ideatrainingcenter.com](http://www.ideatrainingcenter.com). This data includes standardized tests and behavior rating forms that were used to document the effectiveness of the training.

### Possible benefits that may occur with Berard AIT include improvements in:

- attention, concentration
- speech/language
- sensory processing
- behavior/cooperation
- social skills
- academics

**Matthew's mother used brushing therapy before the listening sessions to calm him.**

Results from Berard AIT Practitioners around the world document that when the Berard protocol is used in conjunction with Berard equipment, positive results are achieved. Berard Practitioners throughout the world obtain improvements in functional performance, such as more complex language, tolerance for self-care activities, increased cooperation, and decreased sound sensitivity. Of course, this does not mean that every individual will show the same degree of change. As with all interventions and educational approaches, there may be some who show a milder response or who are non-responders. Parents must review research and studies on sound-based programs before selecting one. There are many programs offered now – more than ever – so it is important to understand the potential results of each program.

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Stehli, A. (1991). *The Sound of a Miracle: A Child's Triumph over Autism*. New York: Doubleday.

**Resources:**

**For more information on Berard AIT and the international list of Berard AIT Practitioners, please visit:**

**www.BerardAITwebsite.com:**

The official Berard AIT website offers information about Dr. Berard's method and a worldwide listing of Berard AIT Practitioners.

**www.berardaitwebsite.com/BAITIS.htm:**

Website for the Berard AIT International Society, the professional organization.

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