

Autism & The Benefits of Listening Training

Autism, a puzzling developmental disorder appearing before the age of 3, significantly affects children's verbal and non-verbal communication and social interaction. In addition, these children have sensory integration difficulties, which show up as abnormal responses to sensations. What autistic children hear, see and touch do not seem to tie together well in their brains. This can create a bizarre environment of uncontrollable sights, sounds and body sensations.

A twenty-six year old woman, Alison Hale, has Asperger's syndrome, a form of autism. She writes about her school experiences in her autobiography, My World is not Your World as follows: "I was bewildered by 'the vast place of deafening, confusing mush of sound' where 'the multi-colored blurs [children] rushed past sometimes knocking into me'. I spent my primary school life tormented by confusion, bemused by the shapes on a page of printed text 'should I read the black bits or the white bits?' ...baffled by the way people treated me and why I was considered unintelligent."

The cause of autism is not known at this time, and there is no cure. However, listening training with modified music can improve the life of many autistic children by reducing their symptoms.

Music-based listening training **(1)** exercises muscles attached to the hammer and stirrup in the middle ear, which allows the ears to listen more accurately and attentively and tune out background noise, **(2)** stimulates the vestibular system in the inner ear, which controls body movements and balance, **(3)** teaches the brain to recognize the differences in speech sounds and to understand what is said and **(4)** causes the brain to produce more brain cell connections among the areas for hearing, sight and touch.

Some areas where improvements are often seen as a result of listening training are:

- Improved sensory integration
- Better auditory processing
- Improved language skills
- Reduced hypersensitivity to sounds
- Better eye contact & social interaction
- Reduced hypersensitivity to touch

Sensory integration, tying together sight, sound and touch at the brain level, does not work well for autistic children. They often do not feel like a whole person, because their senses do not combine to tell them how their bodies work. The vestibular system in the ears helps pass along sensory information to the brain; and controls body movements. As modified music stimulates the ears with sound energy, the vestibular system in autistic children is better able to function. They are better able control their bodies and make sense of their world, as sights, sounds, body feelings and movements become understandable to them.

Auditory processing, understanding what they hear, is often a problem for autistic children. In fact, many parents have their children's hearing tested, because their child does not respond when spoken to or doesn't understand all of what they hear. The child may hear only parts of words, hear speech sounds out of order (i.e., hearing "decks" instead of "desk") or hear speech sounds incorrectly (i.e., "Bop" instead of "Bob"). Hearing is not the problem, however. Understanding what they hear is the issue. Listening training helps the brain learn to interpret speech sounds and words more accurately.

Language skills improve, as the child's brain can understand what is heard. Pronouncing words correctly, using new words and expressing their thoughts with greater detail, is common for verbal autistic children

during listening training. Non-verbal autistic kids often begin to screech and babble, taking their first steps toward communication.

Hypersensitivity to sounds causes pain in the ears of autistic children. Upon hearing certain sounds, such as a vacuum cleaner, these children often cover their ears and sometimes scream. If the muscles attached to the hammer and stirrup in the ears have weak muscle tone, they cannot block out unwanted noise. By exercising the middle ear muscles with modified music, the muscle tone improves. Unpleasant sounds can be tuned out and tolerated.

Making eye contact, often a difficulty for autistic children, improves with listening training as better connections are created in the brain between the areas for vision and for listening. I remember a child I worked with who could not listen to someone and look at the same time. He had to shut out the sight of the person speaking by looking down in order to focus on listening. That changed after he went through music-based listening training. His **social interactions** improved after he was able to make eye contact with other kids, hear and understand what they said to him, and express his thoughts to them.

Hypersensitivity to touch is a common problem for autistic children. As a result, tags in shirts, some fabrics and certain textures of food can be a great source of irritation. These sensitive tikes often avoid cuddling and affection. Stimulating the body with music seems to reset the sensor cells in the skin, so that they can tolerate touch. One of my parents commented after her son's listening training, that "he sits on my lap now. And I can walk around with my arm around him like he's my little boyfriend."

While listening training with modified music is not a cure for autism, it does lay the foundation for communication and social interaction through greater sensory integration, improved auditory processing, broader language skills and greater tolerance of sound and touch. For autistic children, these newly developed skills can create a significant difference in the way they connect with their world.

Diane Daniels, M.A., Ed.S. , certified teacher, school counselor and school psychologist, has been providing listening training with modified music at Center for Listening & Learning in Gainesville, Florida, since 2002. For more information or a free consultation, call (352) 379-1981.