

Ben*

Mother reports that Ben looks up to his father immediately when his name is called but does not quite respond to his Mother in the same way.

Mother reports that it takes Ben a couple of seconds, sometimes minutes, to respond to her instructions. Mother reports she does not feel like Ben is ignoring her, just a little slow in taking in her instructions. When Ben's father attempts to help Ben by further explaining mom's instructions, Ben is noted to "lose it." Father reports that Ben had several ear infections as a child was later diagnosed as being in the Autism Spectrum Disorder.

A Listening Test between 250 to 8000 Hertz revealed that Ben:

- * had decreased auditory reception in the mid to high frequencies and an enhanced selectivity to a frequency band between, 800 HZ and 4000HZ.

- * did not seem to hear sounds delivered through the headphones (air conduction) and yet

- * reacted strongly to sounds delivered through the mastoid bone (bone conduction)

- * is left ear dominant as he responded to sounds delivered with the left ear.

The ear, made up of the Outer ear, the Middle ear and the Inner ear, is a powerful organ influencing Ben's ability to coexist in his family's world.

Assessment at The Dan Center revealed that Ben's Outer Ear influenced his listening selectivity. The listening selectivity to the low frequency band between 800 Hz and 4000Hz compromises his ears' sound reception which helps explain his differing responses to his parents.

Father's voice had more components towards the low frequencies while Mother's voice leaned towards the high frequencies. Human speech thrives in consonants as consonants are high frequency sounds. An increased reception of low-frequency sounds and decreased reception of high frequency sounds make verbal language an even greater challenge to coexist beyond the comforts of his home.

Further Assessment revealed that Ben's Middle Ear muscles, the hammer and the stirrup, which functions together to muffle the low frequencies, may have been affected by recurring ear infections. Ear infections may cause fluid build-up in the ears and prevents the muscles of the ears from optimal functioning. The muscles become out of shape through lack of functional use and exercise. Not unlike a person who presents with atrophic disuse of an arm after a stroke and subsequent edema.

At The Dan Center, part of Ben's management is a tailored program of Auditory Listening Training that delivers sounds that stimulate the ear muscles to react, to actively listen and get exercised.

Another unique management in Auditory Listening Training is to retrain Ben to listen with the right ear. As Ben's left ear dominance meant that when he listened, the sound had to travel from the left ear to the right brain, then back to the left brain where our language centers are located.

It explains one of the reasons why Ben's mother noted the delay in Ben's reaction to her directions. Listening with the left ear slowed down the process of assimilating information. By the time, the information is en route towards Ben's brain's language center destination, repeated encouraging verbal instructions, heard from the Father's voice, with low frequencies confuses Ben further evoking an aberrant behavior of 'losing it.'

At The Dan Center, one of Ben's goals is retraining the ears to listen with right ear. For Ben, achieving right ear dominance means that he will be able to pay attention, listen and follow directions correctly because the information will arrive faster in the brain's language center destination.



* Name changed for privacy