

## Case Study – The Listening Program®

### “John”, Age 6, Autistic Spectrum Disorder

Note: This Case Study uses British English rather than American spelling and grammar.

Submitted by: Lynne Pardoe, Cert Ed. RSA (Dip) SPLD. NDT (INPP) DPA (Founder Member)  
Droitwich, United Kingdom  
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Name: “John”  
Gender: Male  
Chronological Age: 6 years  
Clinical Diagnoses: Mild autistic spectrum disorder, verbal dyspraxia, coordination problems

Reason for Referral John was seen on May 30, 2003 for an initial consultation and audiometric assessment. He had been diagnosed as having mild autistic spectrum disorder, has word-finding difficulties, and mild dyspraxia.

### BACKGROUND INFORMATION

Mother did not have any medical problems with this pregnancy but she did have excessive tiredness until approximately 16-20 weeks; she was unable to do anything and had to rest. John was born 10 days early. Due to his head and neck being arched back, he was delivered by emergency Caesarean section. It took 30 minutes to dislodge him from the birth canal. This resulted in a flat forehead and severe compression around the ears and he was blue at birth. His birth weight was 8 lb 6 ½ oz. Mother had pethadine and therefore John had an anti-pethadine injection. After this, Mother was not aware of anything for two days.

In the early weeks, John had difficulty sucking and keeping his food down, although he was not projectile vomiting. For the first 12 weeks of his life he would only sleep on his mother's chest and he had to have the light on. As a baby, he was very active and demanding, requiring minimal sleep and he was a fractious baby. He was treated by an osteopath at 18 months, who would have worked on the birth trauma. After this treatment he was able to sleep better. However, at 18 months he was very pale and was not eating well. He had a blood test and, as a result, was put onto a gluten-free diet.

John has tried taking fatty acids, cranial osteopathy, and the Johansen Sound Therapy, but didn't like to listen to it.

He has suffered with tummy pains, colic, unusual bowel patterns, diarrhoea within twenty minutes of eating, and although out of nappies (diapers) at 3 ¾ years, has only just gained bowel control. John had tonsillitis once, several occasions of earache, and had hay fever last year. He had infant eczema and an eczema-type reaction to chlorine in water at the swimming pool. He also reacts to plasters (adhesive bandages) on the skin.

John experienced recurring ear infections and a delay in language development. He had a short attention span, distractibility, sometimes misinterpreting questions, and confusing similar-sounding words that required repetition. He was over-sensitive to sound. He used to be frightened of jets and would not go outside on his own.

As to motor development, John had fidgety behaviour, poor organizational skills, and clumsy, uncoordinated movements although he was improving. He showed mixed dominance, preferring his right hand but his left foot. He had variable energy levels, sometimes having difficulty getting up, and tiredness at the end of the day. John had a habit of procrastinating and although not categorically hyperactive, he was a very lively child. He had a tendency towards depression.

When reading, John's voice was flat and monotonous. His speech was hesitant and he showed word-finding difficulties along with poor reading comprehension.

John had poor self confidence, poor self image, a negative attitude toward school work, and a low frustration tolerance. He was irritable, sometimes shy, and had difficulty making friends.

## CONCURRENT TREATMENT

John is at present following the Sally Goddard Developmental Exercise Programme and is supervised by his cranial osteopath, Mr. Peter Jones. He began the program April 24, 2003.

## THE LISTENING PROGRAM IMPLEMENTATION

On June 14, 2003 John began CD #1 of The Listening Program, Original Kit on the Extended schedule, listening with headphones for fifteen minutes per day, five days per week, for sixteen weeks. He had no problem adjusting to headphones. He adapted well to his listening sessions as this was his time with Mummy. Towards the end of the sixteen weeks, it became a bit more difficult and Mum would find something he liked to do during listening, like playing with Legos.

Two weeks after starting The Listening Program, John told his mother that you could use your ears to hear where a vehicle was and to know which way it was going.

An audio review on August 30, halfway through his first cycle, showed that John's hearing of individual words had improved. He was calmer, more flexible, and more aware of social communication and rules. His concentration had improved and he was better at personal organization. He wanted his room tidy now whereas he didn't before. John's reading had improved and he was now reading signs, etc., and asking what they meant. He was more aware that what you say isn't necessarily exactly what you mean, for example "I'll be five minutes." He used to have to say things immediately or he would forget. Now he can wait his turn in conversations and will still remember. However, whilst playing with others, John still wants to control.

The audio review after cycle one on October 20 revealed that John is calmer and happier. He is more aware of other's feelings and tries to resolve conflicts. He has managed to go on school trips. He is reading better and coped with moving to a new school where they say his writing is neat.

John's mother provided the following observations after one cycle of The Listening Program. John is more confident and now reads at home. He has also written more at home and is more willing to write birthday cards. The school has noted that "John has made steady progress, especially since Easter, particularly with his reading, writing, and self confidence."

John is physically more confident and climbs over a five-bar gate with ease. His swimming is much more coordinated and he wants to ride his bike with stabilizers. He is more mature and has asked his mother to throw away his comfort clothes. He asked for trousers with zips in them when he went back to school. He gets himself dressed, especially weekends and holidays, and is less worried about folds in socks and labels in clothing.

John has started to use a knife and fork and now eats foods with different textures at the same time. He has gained bowel control and uses the toilet confidently.

He is aware of other people's feelings and wants to do things for others. He gives and receives hugs and cuddles, even when hurt. John shares easily and finds ways of resolving conflict so everyone is happy. He has talked on the telephone confidently for the first time to his auntie and cousin. He brings messages home from school and has improved short-term memory. John obviously hears things better. He has stopped repeating back a different word to what you have said and no longer says, "You don't understand."

## AUDITORY ASSESSMENT

During the first four years of life our ears “tune in” to the sounds of the language spoken around us. This is a very precise process – the difference between sounds such as “a” and “e” or “f” and “th” is subtle. If there are interruptions in this developmental process for any reason a child/student, although able to hear, may not hear accurately, which could be reflected in difficulties acquiring literacy skills at school.

The Hearing Threshold Test is a test of hearing accuracy. Each ear is tested separately. The main points to look for are whether:

- The pattern is smooth or has peaks and troughs.
- The right ear (O) is on or above the left ear (X) in all frequencies.
- The ears register no more than 5dB apart on each frequency.
- The hearing pattern is close to the Universal Language Curve.

Testing revealed:

- The pattern revealed some peaks and troughs on the left ear and one trough on the right ear at 8,000Hz.
- The right ear was on or above the left ear for 64% of frequencies
- The ears registered up to 20dB apart.
- The hearing pattern was close to the Universal Language Curve at low and mid frequencies on the left ear and close to the Language Curve at low frequencies on the right ear.

The Dichotic Listening Test sends competing words to both ears simultaneously and it demonstrates how well the dominant ear is processing language.

Dichotic testing yielded a score of 28/50 and revealed difficulty differentiating between the low frequency sounds of “c – t”, significant difficulty screening out background sounds and significant difficulty processing what he hears.

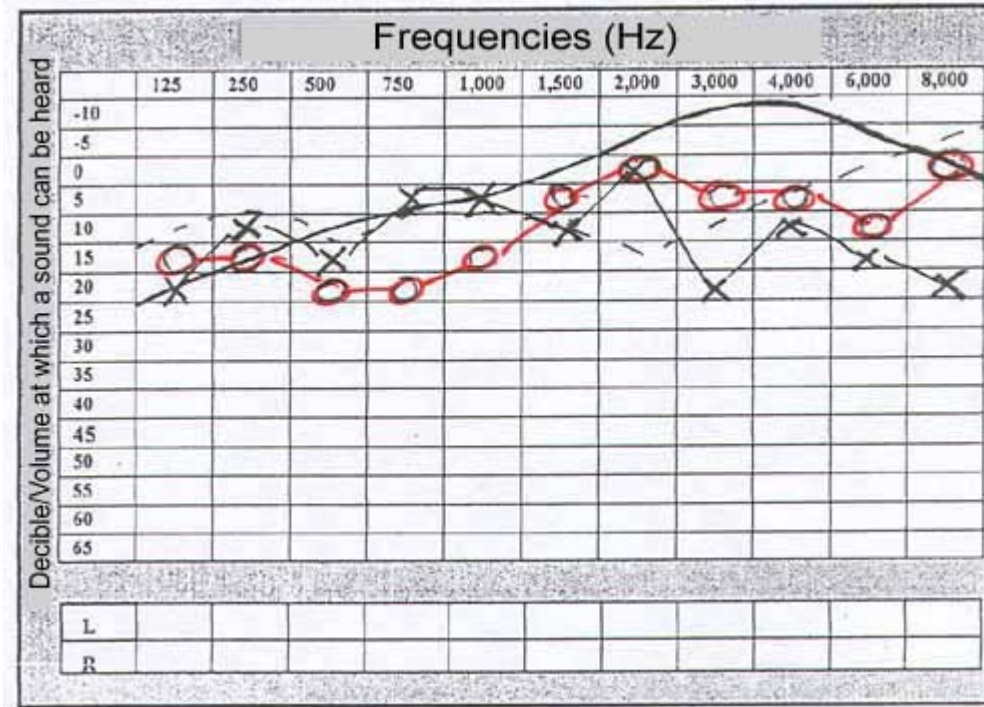
Audiogram May 30, 2003

English language curve: - - - - (Dashed line)

Universal Language curve: \_\_\_\_\_ (Solid line)

Right Ear: O

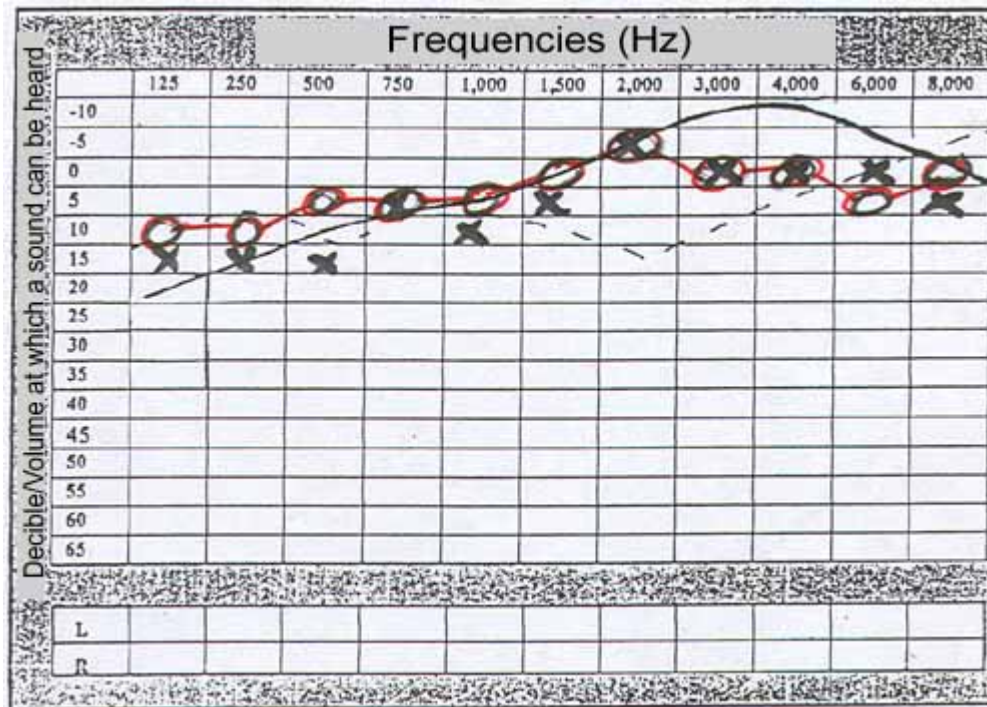
Left Ear: X



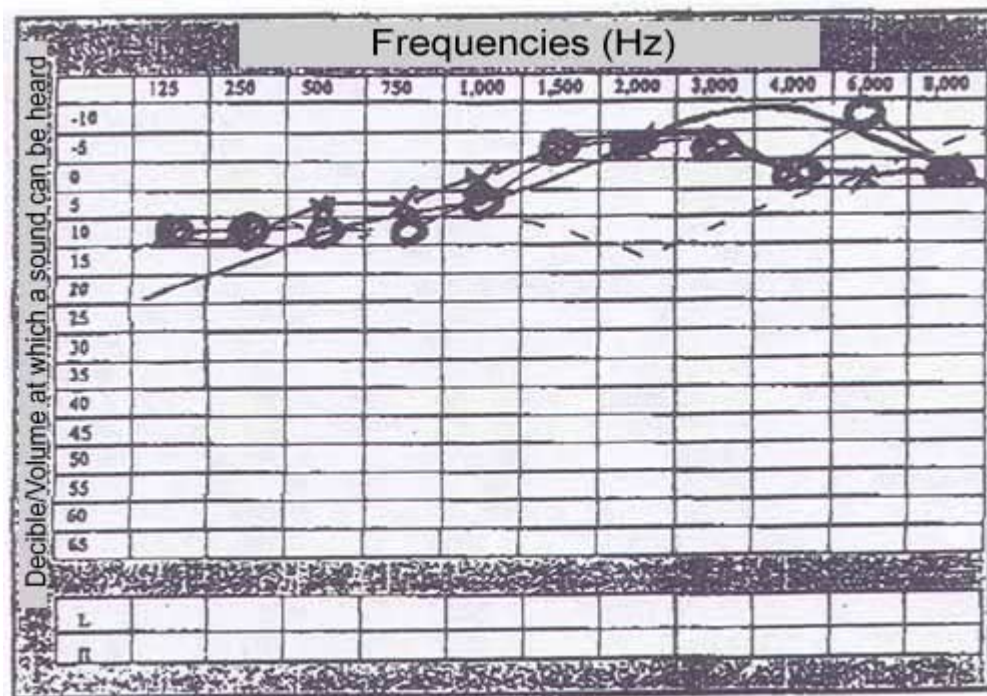
John's initial audiometric assessment revealed peaks and troughs which can cause some sounds to be masked out, so that he does not hear them clearly and consequently confuses similar-sounding words, requiring frequent repetitions.

The left and right ears require balancing out because there should only be up to 5dB between left and right and John has gaps of up to 20dB. He also requires stimulation in the high frequencies. The dichotic test revealed difficulty screening out unwanted, competing background sounds. Therefore, if he was having a conversation with someone and other people were talking in the background, his attention would be drawn to the other sounds and he would find it difficult to concentrate on his conversation partner. This would obviously have an effect on his attention when listening to his teacher in the classroom.

John also has significant difficulty processing what he does hear. He appears to catch part, but not all, of what is said when listening to large amounts of information. It was very difficult for him to cope with this testing. It took several attempts to accomplish it and we were unsure if it was 100% accurate.



John's audiometric assessment mid-cycle TLP shows fewer peaks and troughs and overall it more closely resembles the Universal Language Curve. This mid-cycle TLP testing shows only one gap of 10dB at 500Hz. The right ear is now close to or matching the left ear for all frequencies.



A third audiometric assessment at the end of cycle one showed an even smoother curve, very closely resembling the Universal Language Curve.

Dichotic testing half way through cycle one yielded a score of 38/50 compared to 28/50 pre-TLP. Dichotic testing after John completed cycle one yielded a score of 40/50 showing considerable improvement in his discrimination of competing words and sounds.

John's Speech Language Pathologist had reported that pre-TLP his word finding difficulties were at the 2nd percentile. He was retested after TLP, and she was unable to find a problem in this area.

#### FOLLOW-UP RECOMMENDATIONS

Since this report was written, John has listened to the Sensory Integration CD. His mother reported they she saw more improvement and that he was more grounded. He was less upset with little things that he would have reacted to previously.

There have been many improvements but John still has semantic, pragmatic difficulties, i.e. everything is black and white for him. His mother plans to have him go through another cycle of TLP.

#### ADDITIONAL NOTE

John's mother also went through a first cycle of The Listening Program. She reported to me that it was the first time she has ever slept properly!

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543 25th Street | Ogden, UT 84401  
801.622.5676 | fax: 801.627.4505  
info@advancedbrain.com | www.advancedbrain.com