

Trouble making sense of what you hear?

In this edition we are presenting a case about a nine year old boy called James. James' mother recalled that he was born at term with no complications. James walked early and has always been a very active child. The paediatrician has said James has some symptoms of Attention Deficit Disorder. James received help from a Physiotherapist and an Occupational Therapist for difficulties with gross and fine motor skills. James has had significant difficulties with reading and spelling since he started school.

Assessment:

Assessment revealed that James had essentially average language abilities but had marked difficulties with phonological awareness skills. **Children's performance on phonological awareness tests have been highly correlated to their acquisition of literacy skills. Research has shown that children who do poorly on phonological awareness tasks struggle with acquiring literacy.** James recently also had his Central Auditory Processing skills tested and results revealed that he has a severe auditory processing disorder affecting comprehension, auditory short-term memory and listening in the presence of background noise. The auditory processing and phonological awareness difficulties combined, will make acquiring literacy, a challenge.

Central Auditory Processing refers to a breakdown somewhere along the nerve pathways that take spoken information from the inner ear to the brain. Sounds enter our ear through the ear canal (outer ear). These sounds are made louder in the middle ear and then in the inner ear are changed into electrical impulses which are sent along the nerve pathways up to the brain. By the time the nerve impulses reach the brain, we have been able to put meaning onto the sounds we have heard.

Central Auditory Processing allows us to make sense of spoken instructions. It allows us to "screen" the important auditory information (eg., teacher giving instructions in the classroom) from the irrelevant information (eg., traffic noise).

Central Auditory Processing also allows us to understand how spoken words can be broken up into individual sounds and the order in which the sounds are organised. These are necessary skills for developing reading and spelling. **Children with poor auditory processing skills often find learning to read and spell very difficult.**

Intact Central Auditory Processing also allows us to have an intact auditory short-term memory. That is, the ability to keep spoken words in our memory long enough to analyse them, compare them and manipulate them.

Children who have Central Auditory Processing difficulties typically find it difficult to understand long and complex sentences, particularly when there is some background noise present. This is seen very clearly in the classroom. They can be expected to miss or misunderstand parts of conversation or instructions.

Remember - children who have Central Auditory Processing difficulties will often



have normal hearing. That is, they can hear sounds, words etc. What they have difficulty with, is making sense of these sounds, words and sentences.

An audiologist is the professional who tests for Central Auditory Processing difficulties.

Speech Pathologists usually see children with Central Auditory Processing difficulties due to the significant negative effects this disorder can have on a child's listening, comprehension and reading and spelling.

If your child is diagnosed with Central Auditory Processing difficulties, then these suggestions should help your child in the classroom :

- * sitting the child towards the front,
- * reducing or eliminating background noise and avoiding open plan classrooms,
- * providing extra visual cues (eg. drawing a plan on the board or writing the information down)
- * checking to see whether the child has understood your instruction

Therapy strategy:

Therapy commenced weekly concentrating on improving James' phonological awareness skills and auditory memory. James has made great improvements in therapy but will need to continue with therapy and consistent work at home and at school if he is to maintain those improvements.