



# **Central Auditory Processing Disorder**

## **What is Central Auditory Processing Disorder?**

Auditory Processing Disorder adversely affects how sound that travels unimpeded through the ear is processed and interpreted by the brain.

Also known as Central Auditory Processing Disorder, individuals with Auditory Processing Disorder (APD) do not recognize subtle differences between sounds in words, even when the sounds are loud and clear enough to be heard. They can also find it difficult to tell where sounds are coming from, to make sense of the order of sounds, or to block out competing background noises.

## **What are the symptoms of Central Auditory Processing Disorder?**

- Has difficulty processing and remembering language-related tasks but may have no trouble interpreting or recalling non-verbal environmental sounds, music, etc.
- May process thoughts and ideas slowly and have difficulty explaining them
- Misspells and mispronounces similar-sounding words or omits syllables; confuses similar-sounding words (celery/salary; belt/built; three/free; jab/job; bash/batch)
- May be confused by figurative language (metaphor, similes) or misunderstand puns and jokes; interprets words too literally
- Often is distracted by background sounds/noises
- Finds it difficult to stay focused on or remember a verbal presentation or lecture
- May misinterpret or have difficulty remembering oral directions; difficulty following directions in a series
- Has difficulty comprehending complex sentence structure or rapid speech
- "Ignores" people, especially if engrossed
- Says "What?" a lot, even when has heard much of what was said

## **How is Central Auditory Processing Disorder diagnosed?**

To diagnose APD, the audiologist will administer a series of tests in a sound-treated room. These tests require listeners to attend to a variety of signals and to respond to them via repetition, pushing a button, or in some other way. Other tests that measure the auditory system's physiologic responses to sound may also be administered. Most of the tests of APD require that a child be at least 7 or 8 years of age because the variability in brain function is so marked in younger children that test interpretation may not be possible.

Once a diagnosis of APD is made, the nature of the disorder is determined. There are many types of auditory processing deficits and, because each child is an individual, APD

may manifest itself in a variety of ways. Therefore, it is necessary to determine the type of auditory deficit a given child exhibits so that individualized management and treatment activities may be recommended that address his or her specific areas of difficulty.

### **Treatment options for Central Auditory Processing Disorder**

Treatment of APD generally focuses on three primary areas: changing the learning or communication environment, recruiting higher-order skills to help compensate for the disorder, and remediation of the auditory deficit itself. The primary purpose of environmental modifications is to improve access to auditory presented information. Suggestions may include use of electronic devices that assist listening, teacher-oriented suggestions to improve delivery of information, and other methods of altering the learning environment so that the child with APD can focus his or her attention on the message.

Compensatory strategies usually consist of suggestions for assisting listeners in strengthening central resources (language, problem-solving, memory, attention, other cognitive skills) so that they can be used to help overcome the auditory disorder. In addition, many compensatory strategy approaches teach children with APD to take responsibility for their own listening success or failure and to be an active participant in daily listening activities through a variety of active listening and problem-solving techniques.

Finally, direct treatment of APD seeks to remediate the disorder, itself. There exist a wide variety of treatment activities to address specific auditory deficits. Some may be computer-assisted, others may include one-on-one training with a therapist. Sometimes home-based programs are appropriate whereas others may require children to attend therapy sessions in school or at a local clinic. Once again, it should be emphasized that there is no one treatment approach that is appropriate for all children with APD. The type, frequency, and intensity of therapy, like all aspects of APD intervention, should be highly individualized and programmed for the specific type of auditory disorder that is present.

### **Long-term complications of Central Auditory Processing Disorder**

The degree to which an individual child's auditory deficits will improve with therapy cannot be determined in advance. Whereas some children with APD experience complete amelioration of their difficulties or seem to "grow out of" their disorders, others may exhibit some residual degree of deficit forever. However, with appropriate intervention, all children with APD can learn to become active participants in their own listening, learning, and communication success rather than hapless (and helpless) victims of an insidious impairment. Thus, when the journey is navigated carefully, accurately, and appropriately, there can be light at the end of the tunnel for the millions of children afflicted with APD.

## **Resources**

- **Understanding Auditory Processing Disorders in Children -**  
[www.asha.org/public/hearing/Understanding-Auditory-Processing-Disorders-in-Children](http://www.asha.org/public/hearing/Understanding-Auditory-Processing-Disorders-in-Children)
- **Auditory Processing Disorder: What You're Seeing -**  
[www.understood.org/en/learning-attention-issues/child-learning-disabilities/auditory-processing-disorder/auditory-processing-disorder-what-youre-seeing](http://www.understood.org/en/learning-attention-issues/child-learning-disabilities/auditory-processing-disorder/auditory-processing-disorder-what-youre-seeing)
- **Sounds Like Auditory Processing Disorder -**  
[www.additudemag.com/central-auditory-processing-disorder](http://www.additudemag.com/central-auditory-processing-disorder)