

Central Auditory Processing Disorder in School-Age Children

What is CAPD?

Listening is a complicated process. Sound travels from the ear to the brain through the central auditory nervous system. This system analyzes sound so that it is understood. A central auditory processing disorder (CAPD) happens when the system has trouble interpreting the message from the sound. Even though there may be no hearing loss, the listener has difficulty understanding what is being said.

What problems do children with CAPD have?

- Understanding what is being said in noisy places or when more than one person is talking
- Following complex or multistep auditory directions or commands
- Understanding fast speech
- Learning songs or nursery rhymes
- Knowing where sound is coming from—this is called *localizing*
- Paying attention or being easily distracted by sounds
- Remembering what is said
- Reading, spelling, and learning

What Causes CAPD?

Some causes can include chronic ear infections, head trauma, medical conditions that occur before or after birth (e.g., prematurity, low birthweight, cytomegalovirus), lead poisoning, heredity, or an immature nervous system. Often, there is no known cause.

How is CAPD diagnosed?

A number of professionals may work with your child. The evaluation team typically includes the audiologist, speech-language pathologist, psychologist, classroom teacher, physician, and parent. A CAPD is not the result of cognitive, language, or related disorders, including

- attention deficit hyperactivity disorder (ADHD);
- language impairment;
- learning disabilities;
- social and emotional delays; or
- cognitive deficits.

The audiologist will complete a battery of specialized tests to target the central auditory nervous system. These tests look into the central auditory processes. They will consider the child's age, language skills, cognitive abilities, and identified listening difficulties. These specialized tests are the only way to diagnose a specific CAPD.

How is CAPD treated?

The audiologist, along with members of the school team, will use results from testing to develop a plan. There is no one way to treat CAPD. However, the plan should include

- therapy to improve specific skills, such as auditory or phonologic awareness training and strengthening of language skills;
- suggestions for changes to the environment like improving classroom acoustics, the use of assistive listening devices, preferential seating, and using very clear, distinct, and slightly slower rate speech when talking with the child; and
- tips to help your child with problem solving and self-help skills and with active listening strategies, such as asking questions and repeating what they heard.

NOTES:

For more information and to view the entire Audiology Information Series library, visit www.asha.org/aud/pei/.

For more information about hearing loss, hearing aids, or referral to an ASHA-certified audiologist, contact:



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