AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION

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...FOR PEOPLE WITH SPECIAL COMMUNICATION NEEDS

What are Auditory Processing Problems in Children?

By Diane Paul-Brown, PhD, CCC-SLP

"Okay, class, before you open your science book to page 95 for the next lesson, get out your homework from yesterday, and put it in the right hand corner of your desk for me to review; then we'll be ready to start."

Ron takes out his social studies book and stares into space.

Why didn't Ron follow the teacher's directions? Not listening? Distracted? Not paying attention? Poor conduct? Hearing loss? Any of these explanations is possible. Or maybe Ron hears the sound, but has a problem processing or understand-



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ing what is said to him—particularly when the language used is complex, spoken rapidly, or is lengthy, and when there's a lot to look at and lots of noise around him. The inability to understand spoken language in a meaningful way in the absence of what is commonly considered a hearing loss is called an auditory processing problem. Other terms that have been used interchangeably include: auditory comprehension deficit, central deafness, central auditory processing disorder, word deafness, and auditory perceptual processing dysfunction. Frank Musiek, audiologist and researcher in this area, has described auditory processing as, "How well the ear talks to the brain, and how well the brain understands what the ear tells it."

Evaluation by both an audiologist and a speech-language pathologist provides important information about the child with auditory processing problems. An audiologist will evaluate a child's hearing acuity and identify possible auditory perception problems. This professional also will make recommendations about treatment strategies concerning improving the listening environment and monitoring any changes in hearing status. A speech-language pathologist can evaluate a child's perception of speech and his/her receptive (understanding) and expressive (production) language use. These professionals and a child's teacher and parents can work together to determine the scope of the problem and the most effective treatment techniques.

Two general treatment approaches have been used for auditory processing problems. One approach focuses on training certain auditory and listening skills such as auditory discrimination (e.g., telling the difference between *peas* and *bees*), localization of sound, sequencing



If your child is a "poor" listener, frequently misunderstands speech, and has difficulty following directions, consult an audiologist or speechlanguage pathologist to determine if auditory processing problems exist.

sounds, or identifying a target sound in a noisy background.

Training these skills in isolation, however, may not help a child to understand complex language, such as a teacher's instructions. Therefore, another approach concentrates on teaching more functional language skills (e.g., vocabulary, grammar, conversational skills) and uses strategies (e.g., visual aids and repeating directions) to facilitate the processing of language.

Changes can also be encouraged at home and in the classroom to help a child with auditory processing problems.

Seating

Select seating for the child away from auditory and visual distractions to help focus and maintain attention. A seat close to the teacher and the blackboard and away from the window and the door may be helpful.

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Setting

Reduce external visual and auditory distractions. A large display of posters or cluttered bulletin boards can be distracting. A study carrel in the room may help. Ear plugs may be useful for distracting noise from a heater or air conditioner, the pencil sharpener, or talking in the hallways. Check with an audiologist to find out if ear plugs are appropriate and which kind to use. Placing mats and cloth poster boards on classroom walls has been shown to decrease the reverberation of noise. A structured classroom setting may be more beneficial than an open classroom situation.

To improve the listening environment, an audiologist or speechlanguage pathologist may recommend the use of a device that transmits the teacher's voice directly to the student's ear while blocking out background noise. The audiologist or speech-language pathologist can provide recommendations on the potential benefit of available options based on the child's individual needs.

Speaking

- Gain the child's attention before giving directions.
- Speak slowly and clearly, but do not overexaggerate speech.
- Use simple, brief directions. Give directions in a logical, time-ordered sequence.
- Use words that make the sequence clear, such as first, next, finally.
- Use visual aids and write instructions to supplement spoken information.
- Emphasize key words when speaking or writing especially when presenting new information. Pre-instruction with emphasis on the main ideas to be presented also may be effective.
- Use gestures that will clarify information.
- Vary loudness to increase attention.

- Check comprehension by asking the child questions or asking for a brief summary after key ideas have been presented to be sure the child understands.
- Paraphrase instructions and information in shorter and simpler sentences rather than by only repeating.
- Encourage the child to ask questions for further clarification.
- Make instructional transitions clear.
- Review previously learned material.
- Recognize periods of fatigue and give breaks as necessary.
- Avoid showing frustration when the child misunderstands a message.
- Avoid asking the child to listen and write at the same time. For children with severe auditory processing problems, ask a friend to take notes, or ask the teacher to provide notes. Tape recording classes is another effective strategy.

Auditory processing problems can affect learning particularly in areas like spelling and reading. It is important to identify problems early and help the child acquire adaptive strategies to compensate. If your child is a "poor" listener, frequently misunderstands speech, and has difficulty following directions, consult an audiologist or speech-language pathologist to determine if auditory processing problems exist.

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If you have concerns about your child's speech or language development, please contact an ASHAcertified speech-language pathologist. Go to ASHA's website at www.asha.org for information and referrals or call 800-638-8255.



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