

Auditory Processing Disorder and WAGR Syndrome

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More than 90% of people with WAGR syndrome have some degree of Auditory Processing Disorder (APD) or Central Auditory Processing Disorder (CAPD)*

Auditory Processing Disorder can cause behavior problems, delays in speech and language, and difficulty with learning, school, and social skills.

What is Auditory Processing Disorder?

People with APD can't process what they hear in the same way others do because their ears and brain don't fully coordinate. Hearing is usually normal in people with APD, but something interferes with the way the brain recognizes and interprets sounds, especially speech.

People with APD often do not recognize slight differences between sounds in words, even when the sounds are loud and clear enough to be heard.

This can be a problem when there is background noise, such as other people talking, or a TV or music playing. So people with APD may have trouble understanding what is being said to them when they're in noisy places like a classroom, playground, restaurant, public space or event, or even at home.

What are the symptoms of Auditory Processing Disorder?

Symptoms of APD can range from mild to severe and can take many different forms. A person with APD may:

- Find noisy environments upsetting
- Have better behavior in quieter settings
- Have difficulty following directions, whether simple or complicated
- Have reading, spelling, writing, or other speech-language difficulties
- Have difficulty with verbal (word) math problems
- Be disorganized and forgetful
- Have difficulty following conversations

How is Auditory Processing Disorder Diagnosed?

Many of the symptoms noted above can accompany other problems, like learning disabilities, anxiety disorder, attention deficit hyperactivity disorder (ADHD), and even hearing impairment. If you think your child is having trouble hearing or understanding when people talk, have an audiologist (hearing specialist) examine your child. Only an audiologist can diagnose auditory processing disorder.

Most of the tests done to check for APD require a child to be at least 7 or 8 years old, so many kids are not diagnosed until that age or later. If you suspect that your young child has APD, there are still many things you can do to help them.

How is Auditory Processing Disorder Treated?

While there is no cure for APD, parents and teachers can use several strategies to help kids make sense of sounds and develop good communication skills. These strategies include the techniques listed below, as well as speech-language therapy and assistive listening devices such as Frequency Modulation (FM) systems.

Strategies:

Some of the most effective techniques to help people with APD are also the simplest.

These include:

- Becoming aware of the many different types of sounds in your home, outdoors, in public places
- Know that sounds from the TV, the radio, other people talking, or music playing may be only “background” noise to you, but they can make it very difficult for your child to process what you are saying
- When speaking to your child:
 - Get close to him
 - Have the child look at you
 - Whenever possible, turn off or decrease other sounds in the room such as the tv, music, or others speaking
 - Use simple, one step directions
 - Say "go get your cup," not "go get your cup and your shoes and bring them here"
 - Have the child repeat the directions back to you
 - Instead of "did you hear me?" ask "What did I say?" or "What are you going to do?"
- In the classroom:
 - Use preferential seating: child should be front/center of

class

- Reduce noise in the room: for example, put tennis balls on chair legs to decrease “screech” as children move their chairs, remove fish tanks/hamster wheels/fans, or seat the child well away from these

Frequency Modulation systems:

A frequency modulation (FM) system is a type of assistive listening device that reduces background noise and makes a speaker's voice louder so a child can understand it. FM systems are especially helpful in the classroom. The teacher wears a microphone and a transmitter, which sends a signal to a wireless receiver that the child wears on the ear or elsewhere on the body. A crucial part of making the FM system effective is ongoing therapy with a speech-language pathologist, who will help the child develop speaking and hearing skills.



Frequency Modulation (FM) system in the classroom

***Auditory Function in WAGR Syndrome and Isolated Aniridia.** Kokx M, Zalewski CK, King KA, Brady SM, Hanish AE, Hicks MD, Huey AE, Fuhr SR, Danley KM, Brewer CC, Han JC. 40th Annual Scientific and Technology Conference of the American Auditory Society in Scottsdale, AZ, March 2013. https://aas.memberclicks.net/assets/docs/aas_2013_poster_abstracts.pdf?mcid_token=36108aed-843a-477d-a9b9-c9469c6b1707