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Hearing Professionals
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Hear and Now

Focusing on Pediatrics

Hearing Protection: Noise Induced Hearing Loss in Children

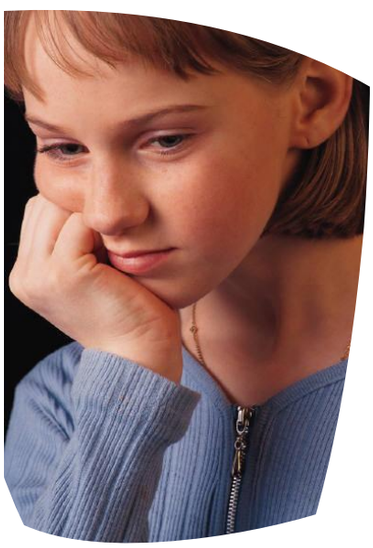
We live in an increasingly noisy world. Not only does the overall noise level seem to be going up, but we are surrounded by a growing number of tools, toys, and other gadgets that make noise—and lots of it. Just compare the noise made by a rake to that made by a leaf blower! While you may be aware of the rising noise levels, you may not know that too much noise can permanently damage hearing.

On any given day, we experience sound in our environment such as the sounds from television and radio. Normally, we hear these sounds at safe levels that do not affect our hearing. However, when we are exposed to harmful noise—sounds that are too loud or loud sounds that last a long time—sensitive structures in our inner ear can be damaged, causing noise-induced hearing loss (NIHL). These sensitive structures, called hair cells, are small sensory cells that convert sound energy into electrical signals that travel to the brain. Once damaged, our hair cells cannot grow back. NIHL can be caused by a one-time exposure to an intense "impulse" sound, such as an explosion, or by continuous exposure to loud sounds over an extended period of time, such as using an iPod or MP3 player at 85 decibels or higher.

It is extremely important to protect the hearing of our children. The reality is that even a small loss of hearing can affect a child's quality of life. The ability to hear well helps children succeed in school, in sports and other activities, and in their personal relationships. As adults, the quality of their hearing health may affect their job opportunities and workplace safety.

NIHL is 100 percent preventable. Start by educating yourself on which noises can cause damage (those at or above 85 decibels). Make sure to block the noise (wear earplugs or earmuffs) or avoid the noise (walk away or turn it down). Be an advocate for better hearing and protect the ears of children who are too young to protect their own.

"Adapted from the It's a Noisy Planet. Protect Their Hearing *campaign http://www.noisyplanet.nidcd.nih.gov), a program of the National Institute on Deafness and Other Communication Disorders (NIDCD), National Institutes of Health."*



Hearing Loss in the Classroom: Parent/Teacher Considerations

It is known, that even a mild hearing loss can adversely affect a child's ability to perform in the classroom. Here are some key pointers to help ensure that children with hearing loss are able to function optimally in the classroom:

1) Preferential seating - Children with hearing loss rely on the assistance of visual cues and decreased physical space between the speaker and themselves. Make sure they are close to the teacher and away from noisy hallways, heating/AC units, etc.
2) Be expressive – Providing expressions, hand gestures, examples and pictures will help "fill in the gaps" of missed words/phrases by providing additional contextual information.
3) Rephrase yourself – Don't just repeat, rephrase. If a child doesn't understand at first, rephrase the message with different words and intonation.
4) Speak clearly – and at a moderate pace.
5) FM systems – should your child have a diagnosed hearing loss and utilize hearing aids, an FM system (attached to their specifically programmed hearing aids) can help deliver speech from the teacher directly into their hearing aids, helping reduce the effects of background noise and distance.

For more ways to help your child in the classroom, speak with your audiologist!

Written By: Dr. Melanie King, Audiologist

Hearing Professionals
Doctors of Audiology

The Effect of Hearing Loss on Speech Development

Hearing is critical to speech and language development, which are critical components of communication and learning. The earlier hearing loss occurs in a child's life, the more serious the effects on their development; just as, the earlier the problem is identified and intervention begun, the less serious the ultimate impact.

Children with listening difficulties due to hearing loss or auditory processing problems may suffer from delayed receptive and/or expressive communication; language deficits that may result in reduced academic performance; poorer self-concept and social isolation; as well as vocational choices.

Children with hearing loss commonly have difficulties with vocabulary, sentence structure as well as with speech. Vocabulary is often slower or delayed in children with hearing loss as speech mimics what is heard. Abstract and function words are particularly difficult to learn and develop, while "naming" nouns are easier. As children get older, the gap with same-aged peers tends to widen without the assistance of intervention. The structure of sentences is often different for children with hearing loss, as they typically comprehend and produce shorter, more direct statements than children with normal hearing. Endings of words, especially those ending in –s or –ed, result in more misunderstandings or misspoken verb tense, pluralization, possessives, etc.

Often parents will bring their children in for testing due to the loudness of their speech, which is common in patients that can't hear their own voices well enough to appropriately self-monitor. In other cases, some children mumble due to poor stress, inflection, or rate of speech.

Academic achievement is notably more challenging in patients with hearing loss. These children must work harder than their normal hearing peers. The American Speech and Hearing Association (ASHA) documented that, "children with mild to moderate hearing losses, on average, achieve one to four grade levels lower than their peers with normal hearing, unless appropriate management occurs." High parental involvement and quality support services can obviously help.

Children identified with a hearing loss that begin services and treatment early, can develop language on par with their normally hearing peers. If a hearing loss is suspected, it is important to be evaluated by an audiologist to determine whether hearing loss is present and whether a family-centered treatment option for intervention is recommended to promote language and cognitive development.

Written By: Dr. Melanie King, Audiologist

Hearing Professionals is dedicated to providing the highest quality of personalized and professional diagnostic and rehabilitative balance and hearing health care services, to maximize each individual patient's quality of life.

Newborn screenings are imperative for the early identification of hearing loss in newborns. Early identification is crucial for the appropriate audiologic intervention in order to enhance hearing acuity for improved acquisition of speech and language development. Our offices are equipped to provide a full range of assessment techniques designed to evaluate infants and children of all ages. Hearing Professionals offers many diagnostic hearing testing services including but not limited to:

Tympanometry: Tympanometry evaluates the tympanic membrane (ear drum) and middle ear by measuring pressure reflected from the eardrum. The purpose is to detect middle ear effusion, ossicular discontinuities, otosclerosis, perforated tympanic membranes, Eustachian tube dysfunction and the status of pressure equalization tubes.

Otoacoustic Emissions (OAE): An otoacoustic emission test measures an acoustic response that is produced by the inner ear (cochlea), which in essence bounces back out of the ear in response to a sound stimulus.

Visual Reinforcement Audiology (VRA): VRA testing evaluates the hearing of infants from six months to two years. Sounds of varying intensity are presented to one of two speakers as the child sits on a parent's lap. If a sound is heard by the child, then he or she turns toward the appropriate speaker and is rewarded by a visual stimulus, such as an animated toy or a flashing light.

HEARING PROFESSIONALS HAS 4 CONVENIENT LOCATIONS

For more information on Hearing Professionals and the services we offer, please visit:
www.hearing-professionals.com

Laurel
14201 Laurel Park Drive - Suite 109
Laurel, MD 20707
Phone: 301-604-3177
Fax: 301-604-2919

Bowie
4000 Mitchellville Road - Suite B-124
Bowie, MD 20716
Phone: 301-464-2036
Fax: 301-464-9226

Waldorf
3460 Old Washington Road - Suite 203
Waldorf, MD 20602
Phone: 301-932-4237
Fax: 301-932-9027

California
23077 Three Notch Road - Suite 101
California, MD 20619
Phone: 301-737-4040
Fax: 301-737-2310

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Decibel, our logo, proudly served our company from 1995 – 2011. Thank you for your years of service!

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2012!