Handy Handouts®
Free, educational handouts for teachers and parents*
Number 315

Noise-Induced Hearing Loss (NIHL)

by Amber Hodgson, M.A., CCC-SLP

Did you know that prolonged exposure to any noise at or above 85 decibels can cause gradual hearing loss (National Institute on Deafness and Other Communication Disorders (NIDCD), 2010)? But first, what are "decibels?" *Decibels (dB)* are what we use to measure noise levels, and 85 dB is probably not as loud as you think; the noise-level gauge on the right shows that 85 dB is slightly louder than heavy city traffic!

The type of hearing loss that occurs from exposure to loud sounds is known as *noise-induced hearing loss (NIHL)*, and research suggests that NIHL is occurring much more frequently and at younger ages (American Speech-Language-Hearing Association (ASHA), 2010). NIHL usually occurs painlessly over a period of time; however, it can occur from one exposure to an extremely loud noise. Luckily, NIHL can be prevented!

How Loud is too Loud?	
Decibels	**Sound Source**
150	Firecracker
120	Ambulance siren
110	Chain saw, Rock concert
105	Personal stereo system at maximum level
100	Wood shop, Snowmobile
95	Motorcycle
90	Power mower
85	Heavy city traffic
60	Normal conversation
40	Refrigerator humming
30	Whispered voice
0	Threshold of normal hearing

(NIDCD, 2010)

Effects of NIHL

Hearing loss due to noise exposure usually occurs in the high frequencies (pitches). Speech sounds that give meaning to words, such as /ch/, /th/, /sh/, /f/, and /s/, are high-frequency sounds; therefore, NIHL can make it difficult to understand words and communicate successfully. This can lead to problems listening in different environments, including the classroom. Children with NIHL may be hesitant to answer in the classroom or have conversations with peers, and they may also demonstrate behavior problems.

How Can NIHL Be Prevented?

The best way to prevent hearing loss due to noise exposure is to eliminate or reduce the noise. When noise cannot be eliminated, people need to protect themselves from the noise by wearing hearing protection like earplugs or earmuffs. Other ways to prevent hearing loss due to noise exposure are to limit the amount

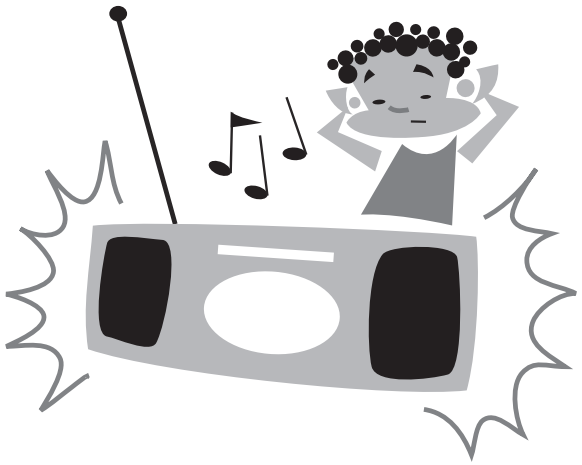
of time around the noise or to increase the distance from the source of the noise. If, after leaving a potentially noise-harmful area, you experience *tinnitus* (ringing in the ears), or if the people talking to you sound like they are mumbling, you could be experiencing temporary hearing loss due to noise exposure, which may lead to permanent hearing loss over time.

It is important to educate your children about NIHL through discussion and by example. Wear your ear protection and encourage your children to follow your example. Also, do not overlook a potential risk of hearing loss from any device that children use with headphones. Remind them to keep their headphones at a reasonable volume *and* not to listen to them for too long.

Resources

American Speech-Language-Hearing Association. (2010). *Protecting your children's hearing*. Retrieved from http://listentoyourbuds.org/Learn/Protecting/

National Institute on Deafness and Other Communication Disorders. (2010). *How loud is too loud? Bookmark*. Retrieved from http://www.nidcd.nih.gov/health/hearing/ruler.asp



For more Handy Handouts®, go to www.handyhandouts.com.

Helpful Products

The list of Super Duper® products below may be helpful when working with children who have special needs. Visit www.superduperinc.com and type in the item name or number in our search engine. Click the links below to see the product descriptions.

Auditory Discrimination and Lip Reading Skills Inventory™ (ADLR™)
Item #ADLR-26

Sign Language Bingo
Item #BGO-133

400 Webber® Sign Language Cards
Item #WSL-100

Hearing Tested Assortment Stickers
Item #STH-100