

Results: American Academy of Audiology Online Survey on Noise-Induced Hearing Loss in Children Ages Eight to 12

In March 2007, the American Academy of Audiology (AAA) conducted an online survey to determine how audiologists view the prevalence of noise-induced hearing loss (NIHL) among children ages eight to 12 and to learn about opportunities to educate children and their parents about the causes and prevention of NIHL. Of the 7,891 members and nonmember audiologists who received an e-mail request to participate, 841 completed the survey.

Respondent Profile

The number of respondents by years of experience follows:¹

<i>Years of practice</i>	<i>Number of respondents</i>
More than 25 years	263
21–25 years	124
16 –20 years	106
11–15 years	125
6–10 years	99
1–5 years	113

The number of respondents by location of patients served is:

<i>Location of patients</i>	<i>Number of respondents</i>
Rural	170
Suburban	460
Urban	200

Perception of Trend

Based on their clinical experience, the following percentages of respondents believe that NIHL among children ages eight to 12 is:

<i>Trend</i>	<i>Percent</i>
Increasing	44.0
Decreasing	0.2
Unchanged	29.7
Haven't found NIHL in a child in this age range	25.9

¹ Not all respondents answered all questions, so total number of respondents will differ by question.

Analysis of the total number of respondents suggests that audiologists with more years of practice are more likely to perceive an increase in NIHL. Of the total number of audiologists who responded to the survey, the following percentages believe NIHL among children ages eight to 12 is increasing:

<i>Years of practice</i>	<i>Number of respondents</i>	<i>Number who perceive an increase</i>	<i>Percent who perceive an increase</i>
More than 25	212	122	46.7
21–25 years	94	53	42.7
16–20 years	80	53	50.5
11–15 years	88	56	43.8
6–10 years	71	39	39.8
Less than 5 years	69	43	38.1

Audiologists who practice in rural areas were more likely to perceive an increase in NIHL among children than those who practice in suburban or urban areas.

<i>Location of patients served</i>	<i>Number of respondents</i>	<i>Number who perceive an increase</i>	<i>Percent who perceive an increase</i>
Rural	169	88	52.1
Suburban	457	191	41.8
Urban	197	83	44.0

Perception of Risks for NIHL

Survey respondents indicate that the risk for NIHL among children ages eight to 12 appears most related to:

<i>Risk factor</i>	<i>Percent</i>
Entertainment (e.g., video games, personal music players, concerts)	74.2
Sports recreation (e.g., hunting/shooting, boating, snowmobiling)	48.9
One time exposure to acoustic trauma	36.6
Machinery (e.g., farm or lawncare equipment, woodworking tools)	14.9
Other	5.3

Survey respondents also could check “other” and add additional risk factors. The most commonly cited source for “other risk” was “playing a musical instrument.”

What Parents and Children Know about NIHL and Key Messages They Need to Hear

Parents' Knowledge

Most respondents (80.6 percent) believe parents have limited knowledge about the causes of NIHL.

Most respondents (75.2 percent) believe parents have limited knowledge about steps they can take to prevent NIHL in their children.

Children's Knowledge

Most respondents (65.9 percent) believe children's knowledge about the causes of NIHL is nonexistent.

Most respondents (67.3 percent) believe children's knowledge about steps they can take to prevent NIHL is nonexistent.

A higher percentage of audiologists with fewer years in practice feel that children lack information about the steps they can take to prevent NIHL. Specifically, 78 percent of those practicing for one to five years believe children's knowledge was nonexistent compared to only about 65 percent of those practicing for more than 25 years.

Key Messages for Parents and Children

Respondents indicate that the three most important messages for both parents and children to hear about NIHL are the same. These messages are:

- NIHL can be permanent
- NIHL is 100 percent preventable
- Steps to prevent NIHL include turning down the volume, walking away, and wearing hearing protectors in noisy situations

Opportunities to Educate Parents and Children about NIHL

More than 370 respondents answered the open-ended question about ways to educate parents and children about NIHL. Highlights of responses include:

- Schools present the greatest opportunity to educate children about the causes and prevention of NIHL.

“It should be part of their school-based health education curriculum and reinforced through school-based health services.”

“NIHL should be addressed as a health issue early on in grade school...and reiterated regularly.... NIHL should be addressed to parents as well, perhaps in the form of handouts sent home with children after school-based hearing screenings.”

- Make greater use of the media, particularly television, to air public service announcements (PSAs). PSAs were the second most identified method after school-based education to convey information to children. The majority of respondents who encouraged the use of PSAs also recommended that celebrity spokespersons take part in the PSAs.

“Children need short, concise facts, pertinent to them (iPods, music in general) in a format they are open to (again music, TV) with personalities they can relate to (Ally & AJ, Hannah Montana, etc.)”

[Note: Respondents were as likely to recommend that audiologists should help to educate school children (or to mention that they already were) as they were to suggest celebrity spokespersons. This response points to a clear partnering opportunity with audiologists to getting the message out.]

- Make greater use of multi-media and interactive materials. Videos and interactive computer games were mentioned most often.

“Get Apple involved and put the message out on iTunes.”

“A computer program where they can listen to their favorite songs modified to sound as they would with a hearing loss.”

- Make it more real to children by tying information to specific interests (e.g., music) and by finding concrete ways to illustrate the consequences.

“Teach children about tinnitus as the body’s ‘internal alarm’ that they’ve over-stimulated their ear. Another relevant example: sunburn. It will go away, but repeated exposure to noise can result in permanent tinnitus AND hearing loss — just like over-exposure to the sun on a regular basis can cause skin cancer. Hearing protection and sunscreen — I’m sure they will relate to this.”

“Teach them rules of thumb, such as if someone is only an arm’s length away (or 3 feet) and they must raise their voice for you to hear, it’s possibly too noisy and harmful.”

- Begin to educate children at a young age and repeat the information over time.

“I do a hearing conservation program for second grade and by that time they are already participating in some risky behaviors. Get the word out, a little each year, just like they do with smoking.”

“Constant education beginning in first grade [and continuing] all the way through high school. Recite, repeat, and review.”
- Create warning labels or protection messages for high-risk items, such as iPods.

“Include this information, boldly displayed, in all advertisements and in the instructions.”

“Partner with manufacturers and distributors of iPods and such to include info on NIHL and safe listening levels.”
- Educate parents and educators to be powerful role models.

“Wearing hearing protection is no different from wearing sunscreen, sunglasses, insect repellent, or a bicycle helmet. If you do these things, so will your children.”

“How many school activities are associated with NIHL? Marching band [and] sporting events.... If we don’t educate the educators, how do we expect to educate the children and parents?”