

Now Hear This . . .



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New AAA Position Statement on Preventing Noise-Induced Hearing Loss

The American Academy of Audiology (AAA) has drafted a new position statement on preventing noise-induced hearing loss. The statement is available on line at www.audiology.org/professional/positions/niohlprevention.pdf

The statement is well referenced. The eight task force members who developed the statement are well recognized for their expertise. Excerpts from the statement follow.

“PURPOSE AND SCOPE

This position statement addresses the issues relevant to audiologists engaged in preventing occupational noise-induced hearing loss. Audiologists' roles and responsibilities as overseers for hearing loss prevention programs (American Academy of Audiology, 1997) and essential qualities of best practices for preventing noise-induced occupational hearing loss are outlined. This document is not intended to address community or recreational noise, nor is it designed to be a how-to guide that specifies the details inherent to a hearing loss prevention program.

STATEMENT OF BELIEFS

No one needs to lose his or her hearing in order to earn a living. Noise-induced hearing loss is preventable.

BACKGROUND (not included)

ROLE OF THE AUDIOLOGIST

Although an appropriately certified technician may perform air conduction threshold tests in support of an occupational hearing loss prevention program, OSHA (CFR 29, 1910.95, 1993) specifies that only audiologists or physicians may be responsible for the audiometric monitoring program. This includes responsibility for the quality and appropriate performance of audiometric monitoring tests, as well as reviewing problem audiograms to determine whether there is a need for further evaluation.

The American Academy of Audiology promotes the audiologist as the principal advocate for and supervisor of programs that manage the hearing health of people exposed to hazardous noise.

The audiologist designs, implements, and coordinates occupational and community hearing loss prevention programs. This includes identification and amelioration of noise-hazardous conditions, identification of hearing loss, recommendation and counseling for use of hearing protection, employee education, and the training and supervision of non-audiologists performing monitoring audiometry in the occupational setting (American Academy of Audiology Scope of Practice Statement, 1997).

There are numerous regulations that attempt to address the problem of hazardous noise exposure and noise-induced hearing loss in the United States. A factory worker in the manufacturing sector is covered by a different regulation than a carpenter in the construction sector; a coal miner is covered by a different regulation than a truck driver; an Army soldier is covered by a different regulation than a Navy sailor. However, hazardous noise exposure transcends standards and regulations. A 95 dBA exposure to a logger in Oregon is equally harmful to hearing as a 95 dBA exposure to an agricultural worker in Florida. The fact that hearing damage risk may vary somewhat as a function of race or gender (ANSI S3.44-1996) does not negate the fact that noise can and does harm the hearing of workers regardless of their age, race or gender.

Audiologists must know what particular regulation is relevant to a given individual or group and must be capable of implementing a program that complies with the appropriate regulation. The American Academy of Audiology promotes the proper care of the noise-exposed patient which incorporates best practices for preventing noise-induced hearing loss.

BEST PRACTICES FOR PREVENTING NOISE-INDUCED OCCUPATIONAL HEARING LOSS

Audiologists must play a leading role in helping workers keep the hearing they had when they entered the workforce. Best practice would call for audiologists to be pro-active about the problem and think in terms of hearing loss prevention rather than hearing conservation. Preventing noise-induced hearing loss requires that every facet of the problem be addressed. An effective hearing loss prevention program (HLPP) involves a comprehensive effort consisting of the following elements: (1) performing initial and annual audits of the work environment, labor and management needs, and HLPP procedures; (2) assessment of noise exposures; (3) engineering and administrative control of noise exposures; (4) audiometric evaluation and monitoring of hearing; (5) appropriate use of personal hearing protection devices; (6) education and motivation; (7) record keeping; and (8) program evaluation for effectiveness (NIOSH, 1996). But even when a comprehensive program is in place, noise-induced hearing loss can and does occur (Ohlin, 2000). Unless best practices have been adopted, people exposed to hazardous noise are at risk of unnecessary hearing loss.

The best way to prevent noise-induced hearing loss is to eliminate the hazard. Audiologists need to have a sufficient understanding of acoustics to know when to engage the services of an acoustical engineer. When engineering and administrative controls have not eliminated the hazard, best practices mandate six components for hearing loss prevention. Each component is described below.

- 1. The noise hazard must be realistically defined. The American Academy of Audiology promotes the use of a 3-dB exchange rate (Suter, 1992) in conjunction with an 85 dBA permissible exposure limit (PEL) (NIOSH, 1998). ...*
- 2. Annual monitoring air conduction audiometry must be performed with methodology appropriate to the goal of accurately measuring hearing threshold levels. ...*
- 3. Protocols capable of identifying meaningful changes in hearing should be employed. The purpose for monitoring a audiometry is to provide timely detection of significant changes from baseline hearing threshold levels. The American Academy of Audiology finds that the current OSHA method for identifying Standard Threshold Shifts (STS) does not constitute the best practice for identifying meaningful changes in hearing. ...*
- 4. Educational methods and materials should be tailored to the specific audience. The goal of education and training is not just to inform, but also to motivate. The success or failure of a hearing loss prevention program, including employee buy-in, depends upon effective education and training (Berger, 2001). ...*
- 5. The attenuation ratings for hearing protectors must be based on methods that yield realistic estimates of the amount of protection provided as a device would be worn. The American Academy of Audiology endorses the use of the subject fit procedure, ...*

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6. *Hearing protector devices (HPDs) should be individually fit, or, at a minimum, fit in small groups. Failure to fit hearing protectors properly and to wear them consistently is probably the leading cause of occupational noise-induced hearing loss (Sweeney, et al., 2000). Studies show that hearing protectors use/non-use is determined by removing barriers to their use and by imparting users with skills needed to select and wear the right hearing protector for his/her needs (Lusk, et al., 1994; Lusk, et al., 1995). ...*

CLOSING STATEMENT

Occupational hearing loss impacts everyone in our society. It is so commonplace that it often is viewed as a normal part of aging (Suter, 2000). The prevalence of occupational hearing loss does not diminish its impact on those who suffer its effects, on their family members, or on society. In fact, "preventing noise-induced hearing loss would probably do more to reduce the societal burden of hearing loss than medical and surgical treatment of all other ear diseases combined" (Dobie, 1993, p. 1). The American Academy of Audiology supports audiologists leading the efforts to prevent occupational hearing loss through comprehensive hearing loss prevention programs."

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Now Hear This...

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In this issue:

*New AAA Position Statement on
Preventing Noise-Induced Hearing Loss*

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**Michigan Law Requires the
Reporting of Known or Suspected
Occupational NIHL**
Reporting can be done by:
FAX 517-432-3606
Telephone 1-800-446-7805
E-Mail ODRREPORT@ht.msu.edu
Web www.chm.msu.edu/ocm
Mail MIOSHA-MTS Division
P.O. Box 30649
Lansing, MI 48909-8149
**Suggested Criteria for Reporting
Occupational NIHL**
1. A history of significant exposure to noise
at work; AND
2. A STS of 10 dB or more in either ear at an
average of 2000, 3000 & 4000 Hz. OR
3. A fixed loss.*
*Suggested definitions: a 25 dB or greater loss in
either ear at an average of: 500, 1000 & 2000
Hz; or 1000, 2000 & 3000 Hz; or 3000, 4000 &
6000 Hz; or a 15 dB or greater loss in either ear
at an average of 3000 & 4000 Hz.

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