

Now Hear This . . .



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****Update on *New Rules* for Licensing Audiologists****

To keep track of the status of the adoption of the new rules regarding licensing of audiologists, check the following web site:

<http://www.state.mi.us/orr/emi/rules.asp?type=dept&id=CH>

A public hearing on the proposed rules was held on September 26, 2005. A copy of the proposed rules and the regulatory impact statement can be found at this web site.

Hearing Loss in Construction Workers

Construction work is noisy. Tables 1 and 2 show noise levels for a variety of equipment and tools used in the construction industry. It is estimated that there are at least 25,000 construction workers in Michigan exposed to significant levels of noise of at least 85 dBA

average per day. Table 3 shows the results from two studies that document the amount of hearing loss in construction workers (Hessel, 2000). Earlier studies have reported 100% hearing loss in construction workers by the time they are 50-60 year olds (Kenney and Ayer

Pneumatic chipping hammer	103-113 dBA
Jack hammer	102-111 dBA
Concrete joint cutter	99-102 dBA
Stud welder	101 dBA
Bulldozer	93-96 dBA
Earth tamper	90-96 dBA
Crane	90-96 dBA
Asphalt road roller and spreader	91-95 dBA
Vibrating road rollers and wheel roaders	91-95 dBA
Grader	94 dBA

Hammer drill	97-110 dBA
Impact wrench	102 dBA
Circular saw	88-99 dBA
Grinder	84-97 dBA
Belt sander	95 dBA
Miter saw	92-95 dBA
Reciprocating saw	89-95 dBA
Jig saw	88-92 dBA
Electric drill	83-89 dBA
Electric screw driver	84-88 dBA

Table 3. Hearing Loss Among Construction Workers in Edmonton, Canada and in Germany*

	% With Hearing Loss
Edmonton	
Electricians	19.0
Plumbers and pipefitters	37.8
Boilermakers	50.5
Telephone workers	13.0
Germany	
Plumbers	46.3
Carpenters	62.6
Painters/varnishers	39.8
Plasterers	45.3
Unskilled	60.7
Bricklayers	53.4
White-collar workers	33.9

*Sum of thresholds at 2000 Hz, 3000 Hz, and 4000 Hz greater than 105 dB in at least one ear.

1975).

OSHA adopted a hearing conservation standard for general industry in 1983. At that time OSHA announced they would develop a separate but similar program for construction. Twenty-two years later, OSHA still has not developed a comprehensive standard for hearing protection for construction workers. The hearing protection standard for construction has an exposure level and a note that employers need a hearing conservation program. This is in stark contrast to the hearing conservation program requirements for the manufacturing industry which have specific requirements that the employer conduct noise monitoring, provide audiometric testing, notify employees of overexposure to noise, train employees about the dangers of noise and keep records on how much hearing loss is occurring. The standard also includes detailed requirements for hearing protection devices and has an 85 dBA action level so that workers can get base line testing and be included in a

hearing conservation program earlier than the allowable noise level of 90 dBA.

The lack of specific requirements in the construction hearing standard is illustrated in Table 4. Unlike manufacturing where a high percentage of workers now are provided audiometric testing in comparison to the 1970's and 1980's, which was prior to the comprehensive OSHA noise standard for general industry, there has been no increase in testing provided to construction workers. Because OSHA lacks a comprehensive noise standard for construction, OSHA is hampered in assuring that construction employers institute an adequate hearing conservation program. Employers in construction are required to conduct noise monitoring, provide hearing protection, provide training and when feasible implement engineering/administration. This only occurs if noise levels are greater than 90 dBA not 85 dBA as in general industry. Employers in construction are not required to provide audiometric testing, notify employees of over-exposure, or keep records of how much hearing loss is occurring.

No changes in the OSHA standard for construction workers are likely in the near future. Individual audiologists can advise their patients on hearing protection and provide audiometric testing. The National Institute for Occupational Safety and Health has developed a web-based informational data base to look up the noise levels associated with different tools. The data base is by the type of tool and the manufacturer. One can see by the range for some of the tools (e.g., grinder) that some manufacturers make appreciably quieter tools than others (<http://www.cdc.gov/niosh/topics/noise/workplacesolutions/toolsdatabase.html>).

As always we remain interested in receiving your occupational disease reports. Reports of hearing loss in construction workers help to document the need for improvements in the OSHA hearing protection standard for the construction industry.

Table 4. All Interviewed Individuals with Hearing Loss: Decade Last Worked and Status of Regular Hearing Testing (RHT) at Most Recent Company Exposed to Noise, by Industry Type: Michigan

	Decade Last Exposed to Noise and Hearing Testing Status							
	1970s		1980s		1990s		2000s	
	No. of Pts.	% Have RHT	No. of Pts.	% Have RHT	No. of Pts.	% Have RHT	No. of Pts.	% Have RHT
Construction	3	0	10	17	16	0	39	7
Manufacturing	24	18	77	32	115	74	1173	91

References

Hessel PA. Hearing loss among construction workers in Edmonton, Alberta Canada. J Occup Environ Med 2000;42:57-63.

Kenney GD, Ayer HE. Noise exposure and hearing levels of workers in the sheet metal construction trade. Am Ind Hyg Assoc J 1975; 28:626-632.

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Now Hear This...

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In this issue:
Hearing Loss in Construction Workers

Printed on recycled paper.

**Michigan Law Requires the
Reporting of Known or Suspected
Occupational NIHL**

Reporting can be done by:

Internet

www.oem.msu.edu

E-Mail

ODREPORT@ht.msu.edu

FAX

517-432-3606

Telephone

1-800-446-7805

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. And

the employee's total hearing level is 25 dB

or more at the same three frequencies. 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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