

# RISK CONTROL CONSULTING

### **Noise Exposure**

Since 2004 the Bureau of Labor Statistics has reported that nearly 125,000 workers have suffered significant, permanent hearing loss. More than 21,000 hearing loss cases were reported in 2009.

Exposure to high levels of noise can cause permanent hearing loss. Short term exposure also causes a temporary change in hearing (ringing or feeling stuffed up). Short term problems may go away, however, repeated exposure can lead to permanent tinnitus and or/or hearing loss.

Loud noise can disrupt job performance, cause stress-related problems, fatigue, irritability, tension and lead to unnecessary accidents or injuries on the job.

#### **Warning Signs**

Both the amount of noise and the duration of exposure determine the ability to damage hearing. Workers may be exposed to noise from many sources: equipment, vehicles, or tools, to name a few. Any of these things can damage hearing when exposure accumulates over extended periods of time. How can you tell if your workplace is too noisy and may be causing hearing damage?

- You have to shout to be heard by a coworker an arm's length away.
- You experience temporary hearing loss when leaving work.
- You have ringing or humming in your ears after leaving work.

Typical A-Weighted Sound Levels (dB, re: 20 µPa)		
	- 140	Threshold of Pain
	- 130	
	- 120	Jet Takeoff at 100 m
	- 110	Discotheque
	- 100	Jackhammer at 15 m
	- 90	Jacknammer at 15 m
	- 80	Heavy Truck at 15 m
	- 70	Vacuum Cleaner at 3 m
	- 60	Conversation at 1 m
	- 50	Urban Residence
	- 40	Coff Minimum at 2 m
	- 30	Soft Whisper at 2 m
	- 20	North Rim of the Grand Canyon
	- 10	
L	- 0	Threshold of Hearing (1000 Hz)

#### **How Loud is Too Loud?**

Noise is measured in units of sound pressure levels called decibels using A-weighted sound levels (dBA). OSHA sets legal limits on noise exposure in the workplace based upon a worker's time weighted average over an 8 hour day. The permissible exposure limit (PEL) is 90 dBA.



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#### What can employers do to prevent their workers from developing hearing problems?

A hearing conservation program is the first line of defense. Research indicates that workplaces with appropriate and effective hearing conservation programs have higher levels of worker productivity and a lower incidence of absenteeism.

For more information visit: www.osha.gov/SLTC/noisehearingconservation/hearingprograms.html

#### **Controls**

Good planning can prevent problems caused by excessive noise exposure. Noise reduced at its source should be the first consideration.

- Employers should invest in noise-controlled equipment. When purchasing, employers can ask vendors if there is a "quiet" model or a noise-reducing option, such as enclosed or acoustically lined vehicular cabs and equipment.
- Maintain and lubricate machinery and equipment.
- Enclose or isolate the noise source.
- Work schedules can be adjusted so that exposure to high noise levels does not occur for the entire work day. This allows a noise recovery period to be part of the work shift.
- Restrict workers from standing a suitable distance from the noise equipment.
- The use of personal protection devices, such as ear plugs and ear muffs, are an acceptable but not the most desirable option. Employers should provide training on the protection devices available and the effects of noise on hearing if workers do not use the protection. Training should include the fit, use, and care of any hearing protection device.

**Resource**: www.osha.gov/SLTC/noisehearingconservation/

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This Tribal First Risk Control Consulting fact sheet is not intended to be exhaustive. The discussion and best practices suggested herein should not be regarded as legal advice. Readers should pursue legal counsel or contact their insurance providers to gain more exhaustive advice. For more information on this topic, please contact Tribal First Risk Control Consulting at (888) 737-4752 or riskcontrol@tribalfirst.com.