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## Tips on Hearing Protection

Hearing loss happens slowly so an individual may not notice until there is a serious decrease in the ability to hear normal sounds. Not only does this interfere with enjoying life, but it may be hazardous on the job. Excessive noise (noise is unwanted sound) doesn't just hurt one's hearing, but can cause tinnitus, a ringing sound in the ears; fatigue and nervousness or anxiety; elevated blood pressure; and increased stress that can help lead to heart disease.

### Exposure Levels

Noise levels are measured in decibels (dBA). When we talk, the sound level is about 60 - 65 decibels. Decibels are measured on a logarithmic scale, so when the decibels go up a little, the noise goes up a lot. An increase of just three dB doubles the sound energy, which is what damages your ears. Hearing protection is needed when the noise level is elevated; this is also determined by exposure time to that noise level. Very high levels for a short period of time can be just as harmful as lower noise levels that last for longer periods of time.

### Hearing protection should be worn at these noise and exposure levels:

- 85 decibels (dBA) for more than 8 hours
- 90 decibels (dBA) for more than 4 hours
- 100 decibels (dBA) for more than 1 hour

If you have to raise your voice for someone three feet away to hear you, the area may be too noisy and hearing protection may be necessary. Another sign of excessive noise

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exposure is when noises seem muffled at the end of the day. This effect usually goes away after a while, but if it keeps happening it will become permanent.

- Here are some examples of noise levels from common sources:

Equipment	decibels	Equipment	decibels
Whisper	30	Tractor full throttle	100
Normal conversation	60	Chain saw	120
Vacuum cleaner	75	Military jet take-off	135
Inside new tractor cab	70-80	Siren at 100 ft.	140

- Noise levels change depending on how far away you are from the noise source. . A noise that measures 100 dB at 10 ft. will measure 94 dB at 20 ft., and 82 dB at 80 ft.

### Steps to Reduce Noise Exposure and Hearing Loss:

- **Make the workplace quieter** - Use quieter equipment when possible. Good maintenance, new mufflers, and other changes can make a difference too. Move noisy equipment, like compressors and generators, as far away from workers as possible. Also, setting up plywood or plastic sheeting around machinery can shield noise.
- **Cut down the time spent around loud noises** - Either rotate the work tasks or encourage rest breaks away from noisy spots.
- **Use protective equipment like earplugs or earmuffs** - Workers need to be trained to use it. Use hearing protection that is easy to put on and take off and has sufficient protection, called Noise Reduction Rating (NRR). Hearing protectors should be worn:
  - Anytime people need to yell to be heard;
  - When using power tools or working near others who are
  - When working around heavy equipment or loud machinery
- **Check to be sure your hearing loss prevention program is working** - workers who have regular noise exposures at 85 dBA or greater need to have their hearing checked annually to be sure the controls and protective equipment are working.

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