

OCCUPATIONAL NOISE EXPOSURE – HEARING CONSERVATION

The effects noise has on your hearing depends on how loud and how often exposure occurs. The point above which regular exposure to sounds becomes hazardous is when it reaches or exceeds an 8-hour time-weighted average (TWA) of 85 decibels (dBA). Prolonged exposure can lead to permanent hearing loss, even if it's gradual and painless.

OSHA Noise Exposure Limits

According to Table G-16 in OSHA 1910.95:

Permissible Noise Exposures									
Hours per day (constant noise)	8	6	4	3	2	1.5	1	0.5	0.25
Sound level dBA	90	92	95	97	100	102	105	110	115

Exposure to impulsive or impact noise must not exceed 140 dB peak sound pressure level.

Health Hazards of Occupational Noise

- Permanent Hearing Loss – Repeat or prolonged exposure to noise levels above 85 dBA damages the sensitive hair cells in the inner ear. Once these cells are destroyed, they do not regenerate, leading to permanent hearing loss. This type of hearing loss cannot be corrected with surgery or hearing aids.
- Tinnitus - Temporary ringing or buzzing after exposure to loud noise. Chronic tinnitus can develop with repeated exposure, becoming a permanent and distressing condition.
- Temporary Threshold Shift - Muffled hearing or a feeling of “stuffed ears” after noise exposure. Hearing may return to normal after a few hours, but repeated shifts can lead to permanent damage.
- Non-Auditory Effects - Noise doesn't just affect hearing—it can impact overall health and safety:
 - Stress and Fatigue: Constant noise can increase physical and psychological stress, leading to fatigue and irritability.
 - Reduced Concentration: Makes it harder to focus, especially in tasks requiring attention to detail.
 - Communication Barriers: Difficulty hearing instructions or warnings can lead to misunderstandings and errors.
 - Increased Accident Risk: Inability to hear alarms, machinery, or coworkers can result in serious injuries.
- Cardiovascular Effects - Emerging research suggests that chronic noise exposure may contribute to high blood pressure, increased heart rate and elevated risk of heart disease.

Hearing Conservation Program (HCP)

Required when noise exposure equals or exceeds 85 dBA TWA. The program includes:

1. Noise Monitoring – Identify areas and tasks with high noise levels.
2. Audiometric Testing – Baseline and annual hearing tests for affected employees.
3. Hearing Protection Devices (HPDs) – Provide and ensure proper use and fit of earplugs or earmuffs.
4. Training – Annual education on noise hazards and protection methods.
5. Recordkeeping – Maintain noise exposure and audiometric test records.

What You Can Do

- Use feasible engineering (e.g., barriers, dampeners) or administrative (e.g., rotate, relocate) controls to reduce occupational noise exposure.
- Wear the appropriate hearing protection correctly and consistently. Make sure hearing protection fits snugly and comfortably.
- Obey “Hearing Protection Required” signs and stay out of high noise areas unless necessary and authorized.
- Report noise hazards, such as malfunctioning equipment or ineffective protection.
- Participate in training and audiometric hearing tests annually.

Prolonged exposure to noise above 85 dBA can cause permanent hearing loss. Hearing loss is irreversible but 100% preventable. Protecting your hearing today ensures a better quality of life tomorrow.

The NIOSH Sound Level Meter (SLM) app measures workplace noise to determine if workers are exposed to hazardous noise. The free app combines the best features of professional sound levels meters and noise dosimeters into one simple tool. The app was developed to empower people to test noise levels in their workplace. This helps workers make informed decisions about their noise exposure which can prevent occupational hearing loss. Visit the Apple App Store to download the app today. More information on the app can be found on the CDC website at:

<https://www.cdc.gov/niosh/topics/noise/app.html>

GCSC Resources

Occupational Health Services: 6:00am – 2:00pm / Questions? ohs@mygcsc.com

Audiometric Testing – 08AUDIO

Safety Training: 6:00am – 3:00pm / Questions? csr@mygcsc.com

Hearing Conservation – A08HCN

Visit www.mygcsc.com to register!