Noise and Hearing Protection Meeting Kit

NOISE INDUCED HEARING LOSS (NIHL)

Hearing loss is one of the fastest growing chronic conditions facing today's workers, affecting nearly 30 million people in the United States and Canada. While there are many causes of hearing loss, noise-induced hearing loss (NIHL) is one of the most common types and it can affect anyone who is exposed to loud sounds or noise over a long period of time, whether at work or during recreational activities. NIHL is irreversible, but it is also preventable. To protect yourself, you need to know which noises can cause damage (those at or above 85 decibels).

UNDERSTAND HEARING DAMAGE

Hearing loss can occur when exposed to 85 decibels of noise averaged over 8 hours. Normal conversations typically occur at 60 decibels, well below the hearing loss threshold. For every 3 decibel increase past 85 decibels, hearing loss can occur in half the amount of time. So it only takes 4 hours of exposure to 88 decibels for hearing loss to occur, and 2 hours of exposure to 91 decibels. Once noise levels exceed 100 decibels, a person can suffer hearing damage in as little as 15 minutes. The louder the noise, the faster hearing loss occurs.

HEARING PROTECTION IN THE WORKPLACE

The best protection you can provide is to eliminate the hazard, by eliminating the need to work with the tools or in the environments that create these noise exposures. Some tools and machines are available that are designed to operate at lower decibels, therefore reducing the risk of hearing loss. We can also implement administrative controls, such as placing a cap on the number of hours that an employee can work in a high decibel

environment or limiting the hours working with specific tools and equipment.

The final line of protection is PPE. Ear plugs and earmuffs can reduce the decibel exposures, providing protection against hearing loss. Ear plugs provide the greatest amount of protection as long as they are inserted correctly. Earmuffs can also reduce the decibel exposures, though not to the extent that ear plugs can.

THE NEED FOR HEARING PROTECTION DEVICES

The majority of the jurisdictions require that employers provide hearing protection devices when noise levels are at or above 85 dBA. The value of 85 dBA is also based on good practice guidelines set out by organizations such as the Centers for Disease Control. CSA Standards Z94.2 Hearing Protection Devices – Performance, selection, care, and use and Z1007 Hearing Loss Prevention Program Management also recommend that hearing protection devices be used when engineering controls or administrative controls are not practicable or do not reduce noise exposure to acceptable levels (i.e., below 85 dBA).

WHAT TO DO WHEN HEARING PROTECTION IS NEEDED

The employer should make sure that workers using hearing protection devices is adequately trained and instructed by a competent person in selection, fit, use, care, maintenance, and inspection.

AUDIOMETRIC TESTING

Audiometric testing is recommended when a worker is exposed to noise levels greater than 85 dBA.

Hearing Loss Prevention Program Management recommends that audiometric testing involves:

- an initial hearing test, and
- a hearing test at least once every 12 months after the initial test, or
- a hearing test more frequently should the noise level exceed 105 dBA.

RECORDKEEPING

Keeping records of your assessment and any control measures implemented is very important.

The level of documentation or record keeping depends on:

- Level of risk.
- Legislation.
- Requirements of any management systems that may be in place.

QUESTIONS TO HELP WITH PROGRAM REVIEW OR EVALUATION

- Is it necessary to re-test or monitor the noise exposures?
- Are there periodic education and training sessions?
- What are the results from the audiometric tests?
- Have changes in processes or equipment resulted in reduced hearing losses?
- Do existing noise controls appear to be in good working condition and being used?
- Have any modifications been made to controls, possibly reducing their effectiveness?
- Is hearing protection available? Is it stored and maintained properly?
- Are workers wearing their protection? Have they noted any issues?
- When new machinery or equipment is being purchased, is “buying quiet” considered in the decision process?

FINAL WORD

Noise is unwanted sound, and can harm human hearing. Noise has at least two measurable effects on humans. Hearing Loss can be temporary or permanent and can be measured. Physical Effects that

may include fatigue, tension, increased blood pressure and stomach disturbances.