

# Noise Quiz



## QUESTION

What are the three steps to eliminate the negative effects of hearing loss in the workplace?

## ANSWER

1. Disclosure of hearing loss.
2. Workplace accommodations.
3. Managing hearing loss in the workplace.

## WHY IS IT RIGHT

### GENERAL

Employers are responsible to keep the workplace free from noise hazards. This includes the responsibility to determine the right hearing protection for employees.

### STEPS TO PROTECT

**Reduce** the noise reaching your ears. Nothing can totally block sound, but some hearing protection devices block out part of the noise.

**Electronic hearing protection devices** permit conversations and warnings to reach the ear, but prevent harmful sound-pressure levels. Other electronic hearing protectors pick up and amplify desirable sounds. Some earmuffs or earplugs combine with communication systems for use in noisy areas.

**Earmuffs** ' filled with liquid or foam ' come in various styles for function and comfort. Earmuffs are fitted with a headband made of metal or plastic. Some headbands can be folded or put around the front or back of the neck in various positions. Cooling pads are even available for earmuffs worn in hot work environments.

**Earplugs** can be pre-molded to fit all wearers, or custom molded to fit exactly. They can be made expandable or non- expandable, and may be either reusable or disposable. Earplugs are available on cords you can wear around your neck so you can take earplugs out and put them in easily.

**Ensure** your hearing protection is comfortable, fits properly and is compatible with other personal protective equipment (PPE) such as a hardhat.

**Check** out specially-designed hearing protectors made to wear with other PPE. They attach to slots and brackets on hardhats or helmets for combined hearing, head and face protection.

**Cooperate** with your workplace's hearing protection program. Take the regular hearing tests and wear recommended personal protective equipment. Take good care of your PPE by cleaning it according to the manufacturer's recommendations and replacing it as needed.

## **HEARING LOSS PREVENTION PROGRAM**

The formation and implementation of a Hearing Loss Prevention Program provides the vehicle for employees to have a safe noise working environment.

### **Key Components**

#### **A. The essential parts of a Hearing Loss Prevention Program are as follows:**

- Identify and assess areas and activities where employees may be exposed to:
- high noise levels that may exceed 85 decibels (dBA) averaged over an eight-hour period,
- extreme noise levels of 115 dBA at any time (greater than one second)
- extreme impact noise levels of 140 dBC (less than one second)
- Reduce or control noise using engineering and administrative controls, where feasible.
- Post signs at noisy areas and require hearing protectors.
- Identify employees who need hearing protection.
- Provide hearing protectors to employees and train them in their use.
- Provide baseline and annual audiometric hearing exams to employees.

#### **B. Responsibilities of Managers, Supervisors and Investigators**

- Identify areas of excessive noise and affected employees.
- Coordinate sound level surveys and personnel monitoring for noise exposure, conducted by EH&S, to provide a quantitative assessment of noise hazards in your workplace.
- If employees are exposed to noise above 90 dBA averaged over the work shift, implement engineering or administrative controls.
- Ensure individuals exposed to noise levels at or above 85 dBA averaged over an 8-hour work shift are enrolled in the Hearing Loss Prevention Program, receive training and medical surveillance.
- Ensure employees are provided with baseline and annual audiometric exams at the UW Speech and Hearing Clinic, or equivalent, through EH&S.
- Ensure staff has taken the Hearing Conservation training.
- Provide at least two types of hearing protectors to employees if controls cannot be implemented, and for all employees exposed to noise levels at or over 85 dBA averaged over an 8-hour work shift, greater than 115 dBA any time and 140 dBC impact noise any time.
- Ensure hearing protectors are worn properly.
- Post caution signs where noise may exceed 85 dBA averaged over an 8-hour work shift.
- Post danger signs where noise may exceed 115 dBA, even intermittently.

- Ensure that reports of high noise are investigated.
- Maintain records as required.

### **C. Responsibilities of Employees**

- Report elevated noise levels, noisy equipment and hearing protector problems to supervisor.
- Take training on Hearing Conservation.
- Choose the most comfortable, effective hearing protection devices that fit well. Remember that the BEST protector is one you'll wear. Earplugs are available in different sizes and shapes to fit different ear canals; earmuffs are easy to put on and take off for short-term loud noise exposure. A combination of earmuffs and earplugs may be needed.
- Wear hearing protectors in posted noise areas.
- Keep hearing protectors clean and replace when necessary.
- Take baseline and annual audiogram tests.

### **WHY IS EVERYTHING ELSE WRONG**

#### **RISKS FOR EMPLOYEES TO HIGH LEVELS OF NOISE**

Exposure to high levels of noise, either continuously or as a loud sudden 'bang' from equipment such as cartridge-operated tools or guns, can have a number of physiological and psychological effects on workers including stress, tinnitus and if exposed to high noise levels over long periods of time, permanent loss of hearing can occur. High noise levels can also interfere with communications in the workplace, leading to an increased risk of accidents.

#### **Workers and their representatives must be informed:**

- that the noise level is likely to exceed 85 dBA and of the potential risk of damage to hearing
- about the measurements taken of the noise levels and an explanation of the significance of the results
- about what is being done to reduce the noise levels

### **RISK ASSESSMENTS**

These are performed at the behest of employers for the protection of employees. These assessments measure the noise levels which employees are exposed, such as:

- When employees are liable to be exposed to noise at work, which is above lower exposure.
- When employees are exposed to levels of noise whose safety or health is at a particular risk,
- As far as technically possible, any effects on employees' safety and health resulting from any interactions between noise and work-related ototoxic substances, and between noise and vibrations.
- Where there is an indirect effect on employees' safety or health from interaction between noise and warning signals, or other sounds which need to be observed in order to reduce risks of accidents.
- When information on noise emission is provided by the manufactures of work equipment, in accordance with section 16 of the Safety Health and Welfare at Work Act 2005.

- If there is an extension of noise exposure beyond the normal working hours, which is under the employer's responsibility, or the action value, the employer must consult with his or her employees or their representative, and make an appropriate assessment to reduce the risks involved.
- When alternative equipment is made available to reduce noise emission.
- The routine in which work is been carried out by employees
- Variations in the type of work
- Identification of the immediate risk
- Identify what is possible to control, and how the risk can be reduced
- The exposure limit values and the exposure action values
- The availability of alternative equipment which is provided to reduce the noise emission.
- that ear protection is available and must be worn

## **EMPLOYER'S ROLE TO PREVENT/CONTROL RISKS**

**An employer can prevent or control the risks associated with noise induced hearing loss**

As with any other hazard, the control of noise has a hierarchy of control options: **elimination, substitution, PPE etc.**

Noise elimination and control can be seen as:

- **Engineering** (e.g. control of vibration by damping or tightening parts in the noise source)
- **Administrative** (e.g. by good procurement or by rescheduling work to decrease exposure time of the employees involved)
- **Personal Protection** ' As a last resort by the use of suitably selected personal ear protection

The options can be summarised as follows:

1. If possible, remove the source of noise from the workplace
2. Control the noise at source (by identifying what is actually making the noise in the noise source and dealing with the problem)
3. By collective control measures (e.g. by engineering controls such as enclosing the noise source, workplace design such as isolating the noise source or having suitable acoustics within the work area to reduce the transmission of noise)
4. By individual control measures (personal protective equipment) if the measures above are not adequate as an interim measure until suitable noise

The basic rule is to make the workplace as quiet as possible and only when you have done everything in your power (i.e. is reasonable practicable) to make it quiet, use suitable and adequate personal hearing protection.

## **THE MAIN TYPES OF PERSONAL PROTECTION**

- **Earmuffs**, which completely cover the ear;
- **Earplugs**, which are inserted in the ear canal; and
- **Semi-inserts** (also called 'canal caps'), which cover the entrance to the ear canal.

Use the results from the noise assessment and the information from hearing

protection suppliers to make the best choice of hearing protection. Aim to get below 85 dB at the ear, and ensure it is suitable for the employees' working environment and compatible with other protective equipment used by the employee (e.g. hard hats, dust mask, eye protection).

Wherever possible, provide your employees with a suitable range of effective hearing protectors so they can choose ones that suit them.

### **Employee Refusal to Wear Hearing Protection**

Ensure that employees use hearing protection when required to do so. Include the need to wear hearing protection in your safety policy and put someone in authority in overall charge of issuing it and making sure replacement hearing protection is readily available. Carry out spot checks to see that the rules are being followed and that hearing protection is being used properly.

If employees persistently fail to use protectors properly, follow normal company disciplinary procedures.

Ensure that all managers and supervisors set a good example and wear hearing protection at all times when in hearing protection zones.