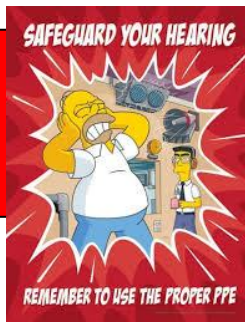


TOOLBOX TALK
NO.27
Noise



Loud noise at work can damage your hearing. This usually happens gradually and it may only be when the damage caused by noise combines with hearing loss due to ageing that people realise how impaired their hearing has become.

Sound is the transmission of air vibrations at different frequencies. Noise is sometimes defined as unwanted sound. The ear is a pressure sensitive mechanism, detecting small changes of air pressure over a wide range of frequencies of 20-20,000 cycles per second. The unit of frequency is the hertz (Hz). Those with impaired hearing due to age or other forms of hearing loss are less likely to be able to hear the higher frequency range.

Two types of noise may damage the hearing of the people who are exposed to it:

1. Continual or periodic noise – This is the common everyday noise that is experienced on many construction sites, varying over the course of time, can be measured and averaged out over an eight hour reference period
2. Sudden, short bursts of loud impulsive noise.

Why is dealing with noise important?

Noise at work can cause hearing damage that is **permanent** and **disabling**. This can be gradual, from exposure to noise over time, but damage can also be caused by sudden, extremely loud, noises. The damage is disabling in that it can stop people being able to understand speech, keep up with conversations or use the telephone.

Hearing loss is not the only problem. People may develop tinnitus (ringing, whistling, buzzing or humming in the ears), a distressing condition which can lead to disturbed sleep.

Noise at work can interfere with communications and make warnings harder to hear. It can also reduce a person's awareness of his or her surroundings. These factors can lead to safety risks – putting people at risk of injury or death.

Do I have a noise problem?

You will probably need to do something about the noise if any of the following apply:

- the noise is intrusive-like a busy street, a vacuum cleaner or a crowded restaurant, or worse than intrusive, for most of the working day
- your colleagues have to raise their voices to have a normal conversation when about 2 metres apart for at least part of the day
- your colleagues use noisy powered tools or machinery for more than half an hour a day
- there are noises due to impacts (such as hammering, drop forging, pneumatic impact tools etc.), explosive sources such as cartridge-operated tools or detonators, or guns

Situations where you will need to consider safety issues in relation to noise include where:

- you use warning sounds to avoid or alert to dangerous situations
- working practices rely on verbal communications
- there is work around mobile machinery or traffic

**SAFETY AS
STANDARD**

How can I control noise?

There are many ways of reducing noise and noise exposure. Nearly all businesses can decide on practical, cost-effective actions to control noise risks.

First, think about how to remove the source of noise altogether, for example housing a noisy machine where it cannot be heard by workers. If that is not possible, investigate:

- using quieter equipment or a different, quieter process
- engineering/technical controls to reduce at source the noise produced by a machine or process
- using screens, barriers, enclosures and absorbent materials to reduce the noise on its path to the people exposed
- designing and laying out of the workplace to create quiet workstations
- limiting the time people spend in noisy areas

Choosing quieter equipment and machinery

You should consider noise alongside other factors (e.g. general suitability, efficiency) when hiring or buying equipment. You should compare the noise data from different machines, as this will help you to buy from among the quieter ones.

When should personal hearing protection be used?

Hearing protection should be issued to employees:

- where extra protection is needed above what has been achieved using noise control
- for short-term protection, while other methods of controlling noise are being developed

You should not use hearing protection as an alternative to controlling noise by technical and organisational means. Employees to whom you provide hearing protection should receive training in how to use it.

Detecting damage to hearing

If the risk assessment indicates that there is a risk to health for employees exposed to noise, they should be placed under suitable health surveillance (regular hearing checks).

Sound Levels

There is a lot of equipment that produces high levels of noise in the building and construction industry. Sound levels are measured in decibels (dB), example: Electrical hand tool = 95dB

There are 5 stages to assessing the noise risk:

- | | |
|---------|--|
| Stage 1 | Arrangements i.e. purpose/aim, scope, information and training |
| Stage 2 | Assess the health risk |
| Stage 3 | Eliminate the risk |
| Stage 4 | Control the risk |
| Stage 5 | Manage the remaining risk |

Personal Hearing Protectors

All hearing protectors produced or imported by reputable companies are manufactured to British and European Standards. As with all PPE for use at work, ear protectors should be selected by a competent person who can ensure that it possesses all the necessary performance characteristics.

- Personal hearing protectors must be provided on an individual basis
- A competent person must be responsible for any training that may be necessary in the correct use of personal hearing protectors
- They should be stored in a clean place when not in use, unless disposable
- They should be inspected regularly for deterioration or damage and replaced when necessary

Ear protection is compulsory at over 85dB!