

Stop That Noise!

High noise levels can have a devastating impact on our health. It can be a causal factor in accidents, contribute to work-related stress, and may act together with other workplace hazards to cause ill health.



Noise is defined as “unwanted sound”. Its intensity or ‘loudness’ is measured in decibels (dB). The decibel scale is logarithmic, so a three decibel increase in the sound level already represents a doubling of the noise intensity. For example, a normal conversation would be about 65 dB and someone shouting typically can be around 80 dB. The difference is only 15 dB but the shouting is 32 times as intensive. It is not just the intensity that determines whether

noise is hazardous. The duration of exposure is also very important. To take this into account, time-weighted average sound levels are used. For workplace noise, this is usually based on an eight-hour working day. Therefore the main factors that contribute to hearing damage are:

- noise levels [given in decibel units dB(A)]
- how long people are exposed to the noise, daily and over a number of years

With a European directive on noise coming into force in all EU Member States by February 2006, workplaces will now have no choice but to take more decisive measures to reduce the risk. Employers at present have a legal duty under the Safety, Health & Welfare at Work Act 2005 to protect the health and safety of staff from all noise-related risks at work. They should conduct a risk assessment - this should consider all the potential risks from noise. This may involve carrying out noise measurements and implementing a programme of regular audiometry testing to include pre-employment, baseline and ongoing hearing tests. Manufacturers of machinery and other equipment also have the responsibility to reduce noise levels at design stage.



As part of the risk assessment, there is a hierarchy of control measures that employers can follow to ensure the health and safety of workers:

- Elimination of noise sources e.g. a 'no noise or low noise' procurement policy
- Control of noise at source e.g. isolation of the source, via location, enclosure, or vibration damping using metal or air springs or reduction at the source or in the path - using enclosures and barriers, mufflers or silencers on exhausts, or by reducing cutting, fan, or impact speeds

- Collective control measures: through work organisation and workplace layout; e.g. changing the workplace - sound absorption in a room (e.g. a sound absorbing ceiling) can have a significant effect on reducing workers' exposure to noise or work organisation (e.g. using working methods that require less exposure to noise)
- Personal protective equipment (PPE) such as earplugs and earmuffs, should be used as a last resort after all efforts to eliminate or reduce the source of the noise have been exhausted
- Information and Training: Consulting the workforce is a legal requirement, and helps to ensure that the workers are committed to safety and health procedures and improvements workers should receive information and training to help them understand and deal with the noise-related risks. For example, the risks faced, as well as the measures taken to eliminate or reduce them, the results of the risk assessment and any noise measurements, including an explanation of their significance, when workers are entitled to health surveillance, and its purpose.

European Safety Week on noise commences on Monday 24th October and the Health and Safety Authority will be launching a new Noise Guidance Document. The Guidance will take into account the new Control of Noise at Work Regulations which will come into effect in early 2006. The Authority will also be carrying out inspections and giving presentations as well as other noise related activities.

