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Noise at Work Regulations  
005  
24.10.11  
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## The Control of Noise at Work Regulations 2005

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Exposure to noise can cause permanent and incurable hearing damage; current research estimates that over two million people are exposed to noise levels at work that may be harmful. It is generally assumed that noise exposure is an issue affecting traditional heavy industry or manufacturing but in reality the scope of work related noise exposure is much greater. In the leisure and entertainment industries, high noise levels are an integral part of the overall experience but employees working in these environments are affected in exactly the same way as those employed to work in a factory. The noise levels may be equivalent but as the actual type of noise is more acceptable, the impact is often considered less detrimental. Noise induced hearing loss is incurable but completely preventable.

In most cases hearing loss is gradual and the extent does not become apparent until many years later when combined with normal ageing hearing loss. Typically, the first affects may be noticed by family members when individuals require a significantly higher volume for clear audibility of the television, radio etc. Noise induced hearing loss is characterised by a loss of clarity of the main speech frequency (4kHz) resulting in difficulty in recognition of 't' and 'c' sounds.

Noise exposure can also cause Tinnitus, a sensation of noises in the ears such as buzzing or ringing, which may be temporary or eventually become permanent. Most people can recall having experienced 'dulled hearing' or mild tinnitus following exposure to high noise levels at a concert, nightclub or large sporting event. The 'dulled hearing' is known as temporary threshold shift and is the body's way of trying to protect the delicate stereocilia nerve cells in the ear which are temporarily paralysed to reduce damage. If this occurs on a regular and prolonged basis the cells will become permanently damaged or destroyed, stereocilia are unable to be repaired or to regenerate.

Hearing damage can also occur immediately by sudden exposure to extremely loud noises such as an explosion. An excellent demonstration of the effects of hearing loss can be found on the HSE Website at <http://www.hse.gov.uk/noise/demonstration.htm>.

High noise levels have also been linked to higher stress levels among workers and they are recognised to induce physiological effects such as an increase in blood pressure and heart rate. This has been identified as being a contributing factor in errors and accidents in the workplace.

The Control of Noise at Work Regulations 2005 require workers to be protected from risks caused by noise exposure. The Regulations do not apply to members of the public exposed to noise from non-work activities or to those who make an informed choice to go to noisy places, they do apply to people working in these environments. For example the Regulations wouldn't apply to the public attending a large outdoor festival event but would apply to anyone employed at the event including stage crew, security staff, medical staff, litter collection, catering and bar staff etc.

In common with other Health and Safety Regulations the Control of Noise at Work Regulations 2005 require employers to carry out a risk assessment to determine the exposure of employees and there is a general duty to reduce exposure to as low as reasonably practicable.

The Regulations introduced exposure action values and exposure limit values which take into account both the noise levels and the duration of exposure, essentially evaluating an overall exposure or 'noise dose' an individual receives over an 8 hour shift, or during a typical week if exposure levels vary from day to day.



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### Exposure Limit Values

The levels of noise above which an employee must not be exposed

- a) Daily or weekly personal exposure of 87dB(A); and
- b) A peak sound pressure of 140dB(C)

### Exposure Action Values

Lower Action Value

- a) Daily or weekly personal exposure of 80dB(A); and
- b) A peak sound pressure of 135dB(C)

Upper Action Value

- a) Daily or weekly personal exposure of 87dB(A); and
- b) A peak sound pressure of 140dB(C)

Peak levels short duration noises that generate high levels of noise such as the intermittent use of a nail gun during the day or the use of pyrotechnics during an entertainment event. The intermittency of the noise may not be significantly identified by purely using an overall daily average exposure but due to the potential damaging nature of the event they need to be assessed.

The HSE Guidance document on the Regulations 'Control of Noise at Work' gives some rough guidance on the estimation of noise levels but in practice the most reliable way of determining levels in the workplace is to carry measurements. Initially taking levels in the various working areas would be able to determine whether employees are exposed to high levels and where action may be needed. If this is the case additional evaluation of the working pattern would be necessary and it may be appropriate to carry out monitoring of individual employees over a typical working day using a personal dosimeter to establish personal exposure, this is of particular use if the nature of the work or location varies during the working day.

Once the exposure has been established the levels can be compared to the Action Values and Limits to identify what, if any, action needs to be taken.

The general health and safety principles of control and risk reduction should be followed

- Elimination
- Substitution
- Control risk at source
- Safe working procedures
- Training, instruction & supervision
- Personal protective equipment



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The provision of personal hearing protection must always be a last resort and should not be used as an alternative to controlling noise by technical or organisational means. Where it is needed it is important to select the right type, not only ensuring that it is suitable for the working environment but also for the individual. Incorrect selection of hearing protection can, in some circumstances, lead to the introduction of additional hazards such as the inability to hear audible warnings or general communication. Hearing protection must be worn correctly and information and training of staff in the correct use, care, and maintenance is a fundamental.

In common with other Regulations there is a need to consider a strategic approach to controlling noise and to implement effective measures, both organisational and technical, to reduce the risks as far as reasonably practicable. The strategy will need to be documented and regularly reviewed to ensure it is effective and reflects up to date technical and legal advice.

Hearing is one of the key human senses and if it is impaired the effects on the individual can be very significant and devastating. Sufferers' experiences range from general frustration at mild symptoms through to feelings of social isolation and depression associated with severe cases of Tinnitus.

Under the provisions of the Health and Safety at Work Act 1974 and the Control of Noise at Work Regulations 2005, employers have a legal duty to protect employees from the damaging effects of noise as far as reasonably practicable. Noise induced hearing loss is preventable and with a focussed and effective control strategy employers can satisfy both their legal and moral obligations to employees.

End.