

GUIDANCE FOR THE USE OF HEARING PROTECTION

Checkpoint: When to provide hearing protection

Suitable hearing protection should be provided:

- When all other means of controlling noise exposure have been exhausted, ie engineering controls and safe systems of work.
- When a noise assessment, including noise measurements have been carried out and still shows that workers are exposed to noise levels above those set in the Regulations, despite trying to reduce noise by the use of engineering control measures.
- When noise measurements show that workers are currently exposed to noise levels above those set in the Regulations. In this case, workers must be provided with suitable hearing protection immediately until such time that noise levels are reduced at source to acceptable levels.

Checkpoint: How to select suitable hearing protection

A noise assessment should be performed and noise measurements taken by a 'competent' person. Suitable hearing protectors can then be provided to those workers exposed to hazardous noise levels. The hearing protectors must adequately attenuate noise levels when the worker is wearing them.

The following points should be considered when deciding whether a hearing protector is suitable.

- It must be adequately attenuate noise levels to below those set in the *Noise at Work Regulations* but not 'over-protect' an individual. Over protection can lead to other health and safety hazards, such as a worker not hearing safety warnings within the workplace.
- The attenuation values of different types of hearing protectors should be obtained by contacting the appropriate manufacturers of this type of PPE.
- A calculation of the acoustic attenuation by using 'octave band analysis' or by using the 'HML Method' (both methods are accepted by the HSE) should be performed to determine if a hearing protector will adequately attenuate noise levels when worn by a worker. The HSE and some noise equipment manufacturers can provide information to help make these calculations.
- After undertaking the above steps, it will be possible to provide hearing protectors that will adequately attenuate noise levels to below the 'action levels' set in the *Noise at Work Regulations*, when worn by an individual for his or her entire working shift.

Other factors to take into account when selecting suitable hearing protection.

- Hearing protectors should be marked with the 'CE' symbol. This demonstrates that they meet the minimum legal standards, usually by conforming to a European Standard. They must be a HSE-approved type and standard.

- It should be determined whether the individual needs to communicate verbally during the course of their work, a hearing protector should be provided that does not over-attenuate the speech frequencies where possible.
- The individual worker should be involved in the selection of their hearing protection to ascertain if they find it comfortable or not and if it fits them properly.
- The length of time the person will have to wear a hearing protector should be determined as if it is not comfortable the person may not want to wear it for the entire working shift.

Checkpoint: Different types of hearing protection

There are various types of hearing protectors that are appropriate for a given situation, which include:

- **Disposable earplugs** – These are often made of soft and pliable material such as foam enclosed in a soft polyethylene foil.
- **Corded earplugs** – These are usually made from the same material as those above but are connected together by cord. The cord is useful to stop them falling out of the ears and into a production process.
- **Reusable earplugs** – These are either corded together or separate. As the name suggests they can be reused and are often supplied with their own storage case.
- **Banded earplugs** – These types of earplugs still fit in the ear canal but are connected together with a headband. They are useful when there is a need for temporary hearing protection, eg when a visitor enters a noisy area within a workplace and requires hearing protection.
- **Earmuffs** – These types of hearing protectors go over the entire ear and have a headband that goes over the head. There are various types of earmuffs offering low, medium and high acoustic attenuation. Other types of earmuffs have built-in transmitters to allow for interference-free communication in noisy environments. Other earmuffs have built-in FM radios combined with hearing protection.

Checkpoint: Compatibility with other PPE

- The person conducting a noise assessment should ensure that a hearing protector that adequately attenuates noise levels will also be compatible with other PPE that is worn by an individual worker.
- Employees should be aware that some safety helmets might adversely affect the efficiency of hearing protectors by breaking the ear and the protector.
- Employees should ensure that prescription or safety spectacles are also compatible with hearing protectors so that it maintains its effectiveness. For example, if a worker wears spectacles, earplugs should be considered instead of earmuffs, as the latter type of protector has a headband that may become distorted by wearing spectacles.

Checkpoint: Face fit tests

Hearing protection that does not fit properly may significantly reduce the protection afforded to the wearer. Therefore, the following points should be considered:

- The initial selection of earmuff-type hearing protector should include fit testing.
- It should fit the employee's face and head well to be fully effective.
- There must be good contact between the wearer's skin and the ear seal of the hearing protector.
- Repeat testing may be required if an individual changes to a different type of hearing protector.
- It is recommended that hearing protectors be issued on an individual basis to ensure that they always fit correctly.

Checkpoint: Looking after hearing protectors

- Hearing protectors should be clean and in good working order before issuing them to a potentially exposed employee.
- A stock of new hearing protectors of the same models that are in use should be kept so that comparisons can be made between those in use to ensure that they remain in optimum condition.
- Spare parts and cleaning materials should be available to follow for effective cleaning and repair of hearing protectors.
- There should always be an adequate supply of disposable earplugs. A system for re-ordering them should be set up before supplies run out.
- Hearing protectors should be stored in a suitable place within the workplace and only used within this setting.
- The condition of the headband of earmuffs and the seal over the ear should be checked each time before use.

Checkpoint: Training and supervising employees in using hearing protectors

Employees should be trained so that they understand:

- How to fit and use hearing protectors correctly.
- Why they must wear hearing protectors correctly and throughout their working shift.
- Why they should never take off their hearing protectors in designated 'hearing protection zones'.
- Why the hearing protectors have been selected and what they can and cannot do in a given situation.
- The manufacturer's instructions on the use and maintenance of the hearing protector.
- When not in use, where and how to store their hearing protectors.

Other points to consider:

- Employees should receive refresher training at least once per year to ensure they continue to use their hearing protectors properly.

- Employees should be supervised to ensure they are wearing their hearing protectors properly and for their entire working shift. Therefore, competent supervisors must ensure that wearers never remove their hearing protectors in a 'hearing protection zone'.
- Supervisors should ensure that wearers check their hearing protectors before they wear them to ensure that they are in good working order and that they can be worn properly.

Checkpoint: Hearing protectors wearers' duties

- Hearing protectors must be used in line with the information, instruction and training by the employer.
- Hearing protection wearers must not deliberately endanger themselves or others by not complying with the information, instruction and training provided.
- Wearers should ensure that their hearing protectors stay in optimum condition and return them to their accommodation provided after use.
- Wearers should report any loss or defect in their hearing protectors to their line manager/employee.
- Wearers have a duty under health and safety legislation to co-operate and comply with their employer in matters relating to their health and safety.

Further Information

- *Reducing Noise at Work* – Guidance on the Noise at Work Regulations 1989, published in 2000 is available from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA, Tel: 01787 881165, Fax: 01787 313995, Website: www.hsebooks.co.uk
- For more information on the progress of the proposed *Noise at Work Regulations* contact Tara Patel at the HSE on 0207 717 6976; e-mail: tara.patel@hse.gov.uk
- For information about the methods available for calculating noise levels, go to: www.hse.gov.uk and select the occupational hearing loss links.
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