
	<h1>Frequently Asked Question</h1>				
Ref: FAQ:010:02	RE: Occupational Noise Exposure				
Issue date:	July 2015	Revised Date:	December 2019	Review date:	December 2021
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Note:	<i>This information/advice has been issued in response to frequently asked questions around a specific topic and may not cover all issues arising, should you require more specific advice please contact the Health & Safety Help Desk. The management of any occupational safety and health issue(s) remains the responsibility of local management.</i>				

What are the risks for employees exposed to high levels of noise?

Exposure to high levels of noise, either continuously or as a loud sudden ‘bang’ can have a number of physiological and psychological effects on workers. This can include permanent loss of hearing or conditions such as tinnitus (ringing in the ears).

Once ears have been damaged by excessive noise exposure there is no cure. High noise levels can also interfere with communications in the workplace, leading to an increased risk of accidents and can be a source of stress.

Is the noise in my workplace a problem?

This will depend on how loud the noise is and how long you are exposed to it. As a simple guide, noise maybe an issue if any of the following apply:

- The noise is intrusive – like a busy street, a vacuum cleaner or a crowded restaurant – for most of the working day
- Employees have to raise their voices to carry out normal conversation when about 2 metres apart for at least part of the working day
- Noisy powered tools or machinery are used for more than half an hour each day
- There are high noise levels due to impacts (such as hammering, wash-up areas in kitchens, pneumatic impact tools etc), or explosive sources such as cartridge-operated tools

What should I do about Noise?

Chapter 1 of Part 5 of the General Application Regulations, 2007 requires employers to reduce the noise level when it presents a health and safety risk.

The Regulations do not apply to:

- Members of the public exposed to noise from their non-work activities, or making an informed choice to go to noisy places

- Low-level noise that is a nuisance but causes no risk of hearing damage

What should a Manager do?

- Consider the simple guide above and, if necessary, undertake a risk assessment. Your assessment should include the measurement of the noise levels to which your staff are exposed. It should be ensured that measurements taken are representative of each employee's daily personal exposure and are undertaken by a competent person
- Take measures to eliminate or reduce exposure e.g.
 - Methods of work
 - Work equipment
 - Design /layout of workplace/ work station
 - Information and training
 - Technical means
 - Maintenance programmes
 - Work organisation
 - Quiet areas for breaks etc
- Consult staff and provide information and training
- Consult the Occupational Health Department in relation to health surveillance for those staff who may be at risk

Further information on noise measurement/assessment can be obtained from the National Health & Safety Function helpdesk.

What is an exposure action value?

Noise is measured in decibels (dB) and the results of any measurements will be supplied with an A-weighting (dB(A)) and/or a c weighting (db(C)) in the case of peak impact and explosive noises. There is good evidence that a risk to hearing from prolonged exposure to noise exists at levels down to 85 dB (A) and a residual risk down to 80 dB (A). Therefore the legislation requires different actions to be taken depending on the results of the measurements. Please see diagram 1 below for values of typical noise exposure levels.

Diagram 1: average noise values.



An action value is a noise exposure value (either daily or peak value) at which Managers are required to take certain steps to reduce the harmful effects of noise on hearing. There are two main exposure actions values for noise exposure:

- The lower exposure action value is a daily or weekly average noise exposure level of 80 dB or a peak exposure value of 135 db, at which the Manager has to provide information and training and make hearing protection available
- The upper exposure action value is set at a daily or weekly average noise exposure of 85 dB, or a peak exposure value of 137 db above which the Manager is required to take reasonably practicable measures to reduce noise exposure, such as engineering controls or other technical measures. The use of hearing protection is also mandatory if the noise cannot be controlled by these measures, or while these measures are being planned or carried out
- Finally there is an exposure limit value of 87 dB, above which no worker shall be exposed (taking hearing protection into account)

The Manager must ensure as far as is reasonably practicable that the risk from noise is either eliminated at source or reduced by general action. The Manager must also ensure that each potentially affected worker and their representatives are informed of the following:

- The results of the measurements taken of the noise and the possible risk to their hearing results of preventative audiometric testing
- What measures are being introduced to reduce the noise levels in the workplace
- When advisability of wearing hearing protection that's individually fitted and where and how to obtain it
- Hearing checks that are available
- Provide any necessary information and where relevant training

Regulations 126 and 127 specify, in addition to the previous requirements, when the level is above 85dB (A) the Manager must:

- Identify the reasons for the excess noise and put in place a programme to reduce it. This could be either of a technical nature or of organisation of work or both
- Provide the services of a registered medical practitioner to carry out hearing checks and audiometric testing
- Put up clearly visible and legible signs indicating that the noise level in the area is likely to exceed 85dB (A), in accordance with the Safety, Health and Welfare at Work General Application Regulations 2007 (regulations 158 to 162 inclusive). This is known as a Hearing Protection Zone.

As noise is measured on a logarithmic scale, a reduction in noise of 3 dB, which seems small, is in fact the equivalent of halving the intensity of the noise. This would mean that the person could work for twice as long at the reduced level and have the same daily personal noise exposure as before.

When does a Manager need to provide hearing protection?

A Manager must provide employees with hearing protection where the noise is likely to exceed the upper exposure value and ensure they use them properly when their noise exposure values exceeds the upper exposure action values.

It may also be necessary to make hearing protection available at lower values e.g. between the 80 dB and 85 dB and where the risks cannot be prevented by other means.

The main types of hearing protection are:

- 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

The results from noise assessments and the information from hearing protection suppliers should be used to make the best choice of hearing protection. The aim is to reduce the value below 85 dB at the ear. It should be ensured that any Personal Protective Equipment (PPE) provided is suitable for your employees' working environment and compatible with other protective equipment (e.g. hard hats, dust mask, eye protection).

Ideally staff should be provided with a suitable range of effective hearing protection so they can choose ones that suit them best, some employees may prefer a particular type.

Can employees refuse to wear hearing protection?

No, once a requirement has been identified and the mandatory signage has been erected in the appropriate areas of concern (hearing protection zones) then you, as an employee, are required to wear hearing protection. Managers must ensure that employees use hearing protection when required to do so e.g. hearing protection zones these will be identified with appropriate signage as per Diagram 2. A Manager may also want to carry out spot checks to see that the rules are being followed and that hearing protection is being used properly.

Diagram 2: Hearing Protection Zone Signage.



If employees persistently fail to use hearing protection properly then it may be appropriate to invoke the HSE's disciplinary procedures.

Why do Managers have to reduce noise at source when workers can wear hearing protection?

Personal hearing protection (earmuffs, ear plugs, semi-inserts) is not the best form of protection because it relies on employees using the equipment correctly. They can also fail or be inefficient without this being visibly obvious. The effectiveness of hearing protection is reliant on its condition and whether it fits correctly.

If you have difficulty wearing any hearing protection provided then you should consult with your line manager.

If the hearing protection becomes worn or damaged then you should invoke the replace procedure applicable to your department.

What is health surveillance?

The aim of health surveillance is to protect employees hearing. A Manager must provide health surveillance (hearing checks) for all employees who are likely to be regularly exposed above the upper exposure action values, or are at risk for any reason, e.g. they already suffer from hearing loss or are particularly sensitive to damage. Preventative audiometric testing should be made available above the lower exposure action value.

The purpose of health surveillance is to:

- Indicate if an employee is suffering from early signs of hearing damage
- Provide an opportunity to do something to prevent any damage worsening
- Check that control measures are working

Ideally, health surveillance should be completed prior to an employees' exposure to noise (i.e. for new starters or those changing jobs), to give a baseline. It can, however, be introduced at any time for employees already exposed to noise. This would be followed by a regular series of checks, usually annually for the first two years of employment and then at three-yearly intervals (although this may need to be more frequent if any problem with hearing is detected or where the risk of hearing damage is high). The hearing checks must be carried out by a competent person as set out in the Regulations. The whole health surveillance programme needs to be under the control of an

occupational health professional (for example a doctor or a nurse with appropriate training and experience). A Manager has the responsibility for making sure the health surveillance is carried out properly.

How can I arrange health surveillance?

As a Manager, once you have identified the requirement for same, health surveillance can be organised through your local Occupational Health Department.

What should I expect from an occupational health service provider?

The occupational health service provider should be able to advise Managers on a suitable programme for your employees.

A Manager should use the results to make sure your employees' hearing is being protected. A Manager will need to:

- Act upon any recommendations made by the occupational health service provider about employees' continued exposure to noise
- Use the results to review and, if necessary, revise your risk assessment and your plans to control risks. Analysing the results of your health surveillance for groups of workers can give you an insight into how well your programme to control noise risks is working. The results can also be used to target your noise reduction, education and compliance practices more accurately
- This information can be made available to employee or safety representatives

Remember:

By law, as a Manager, you must assess and identify measures to eliminate or reduce risks from exposure to noise so that you can protect the hearing of your employees.

Where the risks are low, the actions you take may be simple and inexpensive, but where the risks are high, you should manage them using a prioritised noise-control action plan.

Where required, ensure that:

- Hearing protection is provided and used
- Any other controls are properly used and
- Information, training and health surveillance is provided for staff

Remember, should work practices change it may have a negative effect on the noise exposure levels and therefore this must be assessed, to protect employees' hearing.

Additional Resource Information

[Risk Assessment Form](#)

[SAGN on Occupational Hygiene Monitoring in the Workplace](#)

Legislation:

Chapter 1 of Part 5 of the Safety Health and Welfare (General Application) Regulations, 2007.