

8 questions to ask about Hearing Impairment, Hearing Aids and Hearing Protection when working in high noise environments.

The Control of Noise at Work Regulations 2005 (The 2005 Regulations) requires employers to take action to protect workers from risks associated with noise exposure. This includes ensuring workers who either use hearing aids or who have an existing hearing impairment can work safely in noisy environments while also ensuring no actions are discriminatory or unjustified. It is also important that any residual hearing of a hearing-impaired worker is protected. Employers have a duty to inform and consult with their employees where there is a risk to their health or safety. The following questions and answers highlight what should and could be done.

1 – What should I do if I employ workers with hearing impairment or who normally use a hearing aid and who have to work in noisy areas and/or hearing protection zones?

- a) Reduce the noise - It is the duty of every employer to take steps to reduce noise exposure to as low a level as is reasonably practicable. This is the best way to reduce both health and safety risks for all workers. If, without hearing protection, the noise exposures are reduced below the lower exposure action values stated within The 2005 Regulations (80dB $L_{EP,d}$ and 135 dB(C)) it is likely that the employer has met their legal duty to control noise for workers using hearing aids.
- b) Provide a choice of suitable hearing protection - If hearing protection is required you should always provide a choice of suitable hearing protection to all workers needing to wear it. Ensure this choice includes a range of protectors that can be worn with hearing aids if needed. You may need advice from an occupational health or hearing professional on suitable protectors for an individual using a hearing aid.
- c) Check essential warning sounds can be clearly heard in noisy areas by all workers, while wearing any required hearing protection, by holding simple listening tests. Check all acoustic alarms can be clearly and immediately heard. You may need to provide visual alarms, vibrating alarms or a buddy system should any individual be unable to hear acoustic alarms.

2 – What should I do if I think that wearing hearing protection with a hearing aid might be problematic?

Some hearing aid users may like to use their hearing aids in conjunction with their hearing protection. There can sometimes be difficulties finding hearing protection that is compatible with hearing aids. This can happen when;

- Ear plugs are required in combination with ear muffs (when exposures are extremely high),
- Ear plugs are the only compatible option with other head worn PPE
- No compatible ear muffs are available.

The flow chart in Figure 1 shows some possible courses of action.



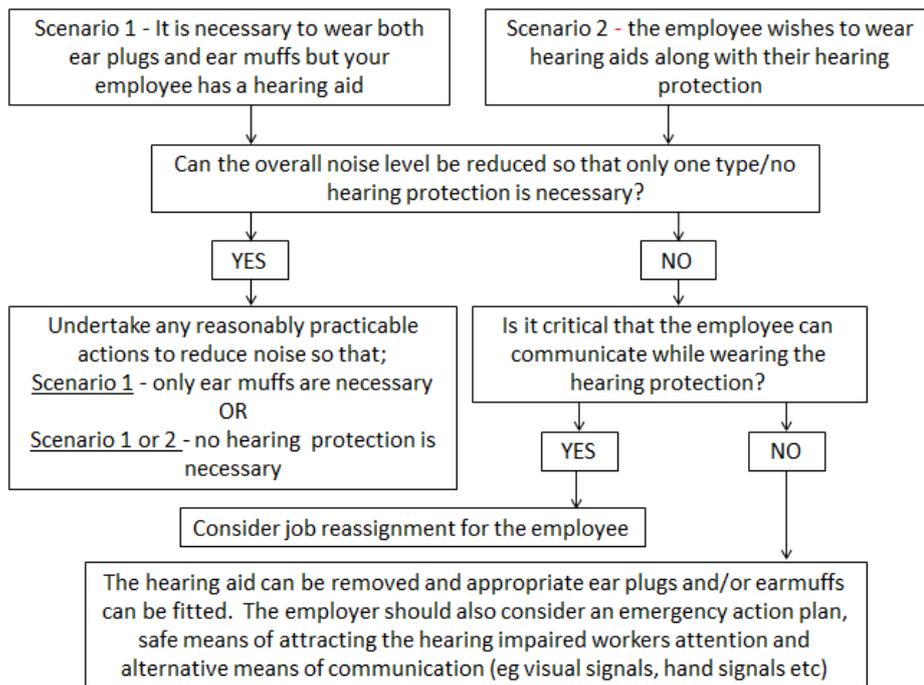


Figure 1 – Hearing protection and hearing aids flow chart

3 – I work in a noisy environment; do I have to tell my employer that I have a hearing impairment or need to use a hearing aid?

Yes - If you work in a noisy environment and use a hearing aid or have an existing hearing impairment you should tell your employer. Your employer will need to assess your health and safety and may need to provide you with hearing protection that is compatible with your hearing aid and hearing profile.

In noisy work places your employer should have assessed the risks with regard to someone with normal hearing. They will need to assess your needs for hearing protection including assessing if acoustic alarms and warning sounds can still be heard by you when wearing hearing protection. You should already be under Health Surveillance for noise if your hearing is at risk (exposure regularly above 85dB L_{EP,d}). If not, you may be asked to attend an appointment with an occupational health practitioner where you will be asked about your hearing and have your hearing tested.

If you work in a noisy environment and you do not believe the measures which need to be taken to meet the requirements of the 2005 Regulations have been properly assessed, then you could either make your employer aware of the 2005 Regulations (a short guidance document for employers can be found [here](#)) or ask a workplace representative to raise the issue with management. If, after raising concerns, you feel that the issue has not been fully considered by your employer you can contact the HSE (Guidance on raising concerns can be found [here](#)).

4 – Can I just take out my hearing aids or switch them off as a means of protection?

No – Exposure to high noise levels are likely to contribute to an existing hearing impairment even if you have difficulty in hearing that noise with your hearing aids taken out or switched off.

5 – I am hearing impaired already. Do I need to wear hearing protection?

Yes - Anyone who is exposed to high levels of noise or required to work within a hearing protection zones must wear hearing protection. Even profoundly hearing-impaired workers can have some residual hearing that could be damaged by high noise levels. In order to use a hearing aid some degree of hearing is required. If harmful noise exposure continues the degree of hearing damage can increase. An individual with hearing impairment or an existing hearing aid user must treat their remaining hearing with great care to avoid further damaging their hearing. The fact that all workers in a hearing protection zone are wearing their hearing protection encourages a safe working culture therefore even profoundly deaf workers are encouraged to wear hearing protection.

Under the 2005 Regulations your employer may also have to consider providing health surveillance for employees who are “sensitive to noise” (this includes those with existing hearing impairments). This may happen even if your overall personal noise exposure is below the point at which health surveillance is normally recommended. Guidance on your responsibilities as an employee can be found [here](#).

6 – Can hearing aids be part of my employees hearing protection at work?

Usually no. - You cannot assume that a hearing aid works as a hearing protector just by being in the ear even if switched off.

For hearing aids to be classed as a hearing protector they must have a CE marking, comply with PPE Regulation 2016/425 and be supplied with sound attenuation data in the form of octave band attenuation values between 125 Hz to 8 kHz, and H, M, L and SNR values (as per BS EN ISO 4869-2 1995).

It is illegal for an employer to charge employees for any Personal Protective Equipment. If hearing aids were hearing protection rated it is likely that some of the costs could fall to the employer. Costs would have to be considered on a case by case basis.

7 – What should I look for if I want to wear hearing protection with my hearing aid?

Hearing aid and hearing protection manufacturers generally advise that hearing aids are removed before using hearing protection. If you decide to keep your hearing aid in, then any hearing protection chosen should consider comfort, preference, and compatibility with your hearing aid and any requirements arising from medical advice. Typically, an ear muff with a large cup size (to comfortably contain the hearing aid) and a flat frequency response (to prevent sound distortion) is a good choice. Hearing protection manufacturers would be best suited to advise on this matter.

Ear muffs that selectively amplify safe sound levels may be an alternative option. You may find you can adjust the amplification setting on the ear muff. It is likely that an audiologist or hearing aid specialist can help you make best use of these devices.

Additional issues when hearing aids are worn with hearing protection may arise;

- a) Suitability of aid - If you are going to get a hearing aid, tell the audiologist if you work in a noisy environment. They should be able to help you find a suitable hearing aid.
- b) Hygiene - Hearing aids are susceptible to dirt and condensation building up in the tubing or earpiece. These problems can increase when the aid is worn under ear muffs. You may need



additional breaks to clean your hearing aids. Using ear plugs and hearing aids can also result in ear wax build up.

- c) Clarity – Hearing protection tends to reduce the clarity of speech. Hearing aids are designed to amplify speech frequencies to aid speech perception. The hearing aid may aid speech clarity when worn under the hearing protection.
- d) Feedback - High-frequency squeals are sometimes heard through hearing aids. This happens when the sound reproduced by the hearing aid leaks out and is picked up by the microphone. Ensure your hearing protection doesn't dislodge or impede the fitting of your hearing aid and cause feedback.
- e) Safety – It is important that everyone using hearing protection can still clearly hear warning sounds, such as the noise of an approaching vehicle, acoustic alarms and the voices of fellow workers. Your ability to hear essential sounds in the workplace must be checked. If hearing is compromised supplement audible warnings with visual and/or vibrating alarms (See Question 1).

8 - Can I use my hearing aids in a hazardous environment where electrical items have to be ATEX rated?

It is possible to source hearing aids which carry the EX symbol. The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) place duties on employers to eliminate or control the risks from explosive atmospheres in the workplace. Work equipment intended to be used in such zoned areas should be selected to meet the requirements of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016. Suitable equipment may be described as ATEX rated and must carry the EX symbol. A typical EX symbol and ATEX marker plate are shown in Figure 2.

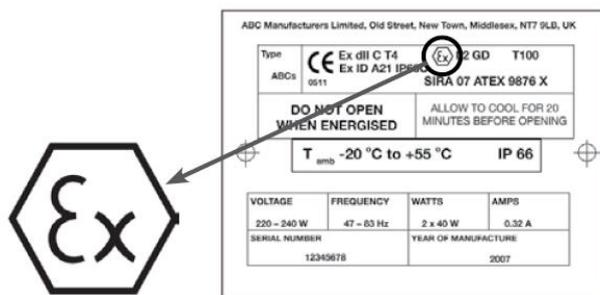


Figure 2 – Typical Ex symbol and ATEX marker plate