

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

The following questions and answers highlight what can and should be done about working safely in noisy environments with existing hearing impairment and when using hearing aids.

The Control of Noise at Work Regulations 2005 (The 2005 Regulations) places a duty on employers to protect workers from risks associated with noise exposure and to inform and consult with their employees where there is a risk to their health or safety. Any employee with a hearing-impaired should be protected and the action taken should not be discriminatory or unjustified.

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 Every employer has a duty to take steps to reduce noise exposure to as low a level as is reasonably practicable 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. Simple listening tests can check all warning sounds can be clearly and immediately heard. If not, you may need to provide visual alarms, vibrating alarms or a buddy system.

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

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.

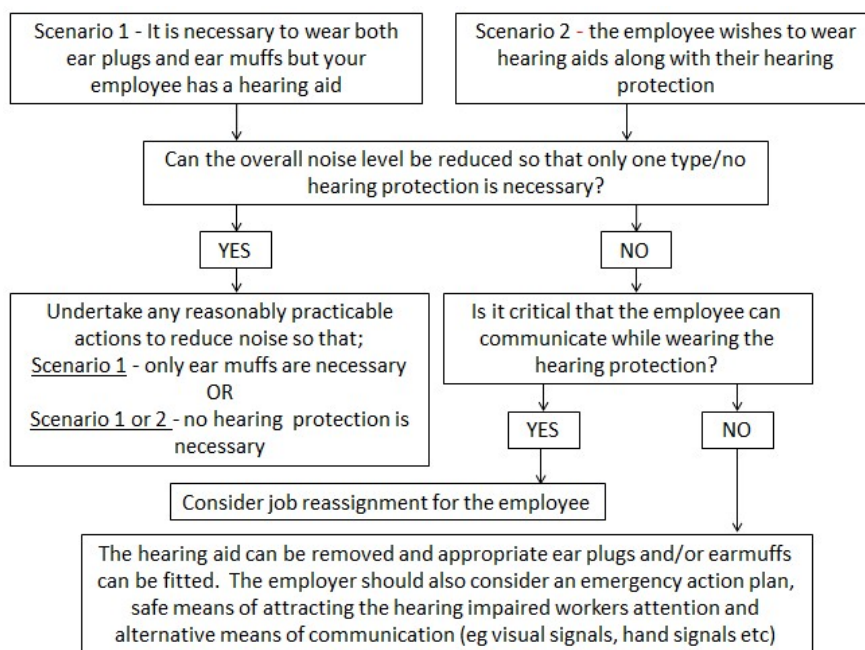


Figure 1 – Hearing protection and hearing aids flow chart

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 needs for hearing protection and whether warning sounds can still be heard by you when wearing hearing protection. Health surveillance for noise should be carried out where exposures regularly exceed 85 dB(A) $L_{EP,d}$, and may also be necessary for those who have a hearing impairment and are regularly exposed to levels which exceed 80dB(A) $L_{EP,d}$. 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 believe your needs have not been properly assessed, then you could either raise this issue with your employer or ask a workplace representative to speak for you. (a short guidance document for employers can be found [here](#)). If the issue is not 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 to protect my remaining hearing?

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 is required to work within a hearing protection zone must wear hearing protection. Even profoundly hearing-impaired workers can have some residual hearing that could be damaged by high noise levels. If harmful noise exposure continues hearing loss can get worse. An individual with hearing impairment must treat their remaining hearing with great care to avoid further damage. Requiring all workers in a hearing protection zone to wear their hearing protection also encourages a safe working culture.

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).

Employers cannot charge employees for any personal protective equipment and some of the costs of hearing aids rated as hearing protection could fall to the employer.

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 or an alarm, and the voices of fellow workers. Your ability to hear essential sounds in the workplace must be checked. If you cannot hear warnings, then visual and/or vibrating alarms may be necessary (See Question 1).

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

Suitable equipment must carry the EX symbol (see figure 2) and it is possible to source ATEX rated hearing aids. 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. Equipment intended to be used in these areas should be selected to meet the requirements of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016.

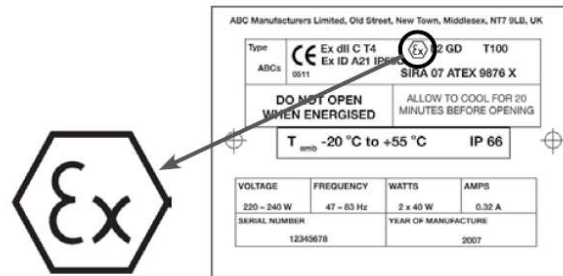


Figure 2 – Typical Ex symbol and ATEX marker plate