

# Managing Noise and Preventing Hearing Loss at Work

## Code of Practice Fact Sheet



Government  
of South Australia  
SafeWork SA

The *Code of Practice – Managing Noise and Preventing Hearing Loss at Work* is available on the SafeWork SA website at [safework.sa.gov.au](http://safework.sa.gov.au). This fact sheet provides a summary of that Code.

Noise is an unwanted or damaging sound that may damage your hearing and cause other health effects such as stress, hypersensitivity to noise, increased blood pressure and increased heart rate. It can also interfere with communication at work, which could lead to accidents.

### Hearing loss

Very loud sounds can cause the hair cells of the inner ear to collapse and flatten temporarily, resulting in deafness. This may be temporary or permanent, depending on the noise level and length of exposure. Temporary hearing loss may also be accompanied by a ringing sensation called tinnitus.

If high noise exposure is repeated over many years, the hair cells in the inner ear may also become permanently damaged resulting in permanent hearing loss.

Immediate permanent hearing loss can also occur if someone is exposed to very intense or explosive sounds e.g. a gunshot or explosion. This type of damage is known as acoustic trauma. In some cases a very intense sound can actually perforate the eardrum.

*Refer to page 6 of the Code for more information.*

The harmful effects of noise may be cumulative and not necessarily confined to the workplace. For instance, the use of personal stereo units and frequenting nightclubs may result in young people having some early damage to their hearing before they even join the workforce.

### Dangerous noise levels

As people respond differently to noise, the exact level at which noise will cause damage is not certain for each person. However, the amount of damage caused by noise depends on the total amount of energy received over time and each person's susceptibility to hearing loss.

Most people are protected from long-term damage in a working day (8 hours) by keeping exposure around the 85 decibel (dB)(A) level. But if noise exposure becomes more intense, damage may occur in a shorter time.

The acceptable noise exposure standard in the workplace is 85 dB(A) averaged over an eight-hour period. This is not to imply that a safe condition exists at below 85 dB(A). It simply means that an eight-hour exposure of 85 dB(A) is considered to represent an acceptable level of risk to hearing health in the workplace.

Impulse or sudden noise levels in excess of the peak exposure standard of 140 dB(C) are considered to be hazardous and capable of causing immediate hearing damage.

*Refer to pages 6–8 of the Code for more information.*

### Identifying noise hazards

You don't necessarily need specialist skills or equipment to make a preliminary assessment to identify sources of hazardous noise. However it should be done in consultation with those who understand the work processes, such as affected workers and their Health and Safety Representatives (HSRs). A walk-through inspection with relevant workers and HSRs will make a good start towards hazardous noise identification.

A walk-through inspection will help determine:

- sources of excessive noise
- workers likely to be exposed to excessive noise
- work practices that are noisy
- ways of reducing noise levels.

This type of preliminary assessment should assist in establishing a list of most activities in your workplace that may pose a risk to a worker's hearing. If you are unsure about the level of exposure or how to minimise the risks effectively, you should take the next step to assess the risks of hearing loss.

## Noise assessments

A noise assessment may not always need measurement. For example, if only one activity at the workplace (e.g. the use of a single machine) involves noise level above 85 dB(A) and the manufacturer has provided information about the machine's noise levels when it is operated in particular ways, then a sufficient assessment can be made without measurement. More complex situations may require measurement to accurately determine a worker's exposure.

A noise assessment should be done by a competent person in accordance with Australian Standard AS/NZS 1269.1 Measurement and assessment of noise immission and exposure.

*Refer to page 11 of the Code for more information.*

## Controlling risks of noise exposure

Implementing one or more of the following hierarchy of control measures can manage excessive noise levels, in order of effectiveness:

1. Eliminating the noise source.
2. Substituting noisy machinery with quieter machinery or 'buying quiet' – this is a cost-effective way to control workplace noise at the source.
3. Engineering controls by treating the noise at the source or in its transmission path e.g. using sound dampeners or silencers, noise barriers and isolation.
4. Introducing administrative noise control measures e.g. training and education, job rotation, job redesign or designing rosters to reduce the number of workers exposed to noise.
5. Providing Personal Protective Equipment (PPE) e.g. earmuffs, earplugs. However, if workers are frequently required to wear PPE to reduce the risk of hearing loss from a noise exposure that exceeds the exposure standard, then an audiometric testing regime must be implemented.

*Refer to pages 14–21 of the Code for more information.*

## Reviewing control measures

Any noise control measures that are implemented must be reviewed, and if necessary revised, to make sure they work as planned and to maintain a work environment that is of a minimum risk to exposure of hazardous noise.

*Refer to page 22 of the Code for more information.*

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