



Hearing Loss Fact Sheet



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Prepared by Mobile Screening using information sourced from Safe Work Australia

Hearing Loss Fact Sheet

4,700

Claims per year are made on average for noise-induced hearing loss.*

Source: Safe Work Australia

Noise is common but hearing loss is preventable

Between 28–32% of the Australian workforce is likely to experience loud noise at work and this exposure is the commonest preventable cause of occupational hearing loss. Once acquired, it is irreversible and can have a significant impact on a worker's life.

Workers' compensation claims can be costly and damage the reputation of employers; 4,700 claims per year are made on average for noise-induced hearing loss (source: Safe Work Australia).

How does noise cause hearing loss?

Hazardous noise affects the functioning of the inner ear, which may cause temporary hearing loss. With further exposure to hazardous noise, the ear will gradually lose its ability to recover and the hearing loss will become permanent. It can also occur suddenly if a person is exposed to very loud impact or explosive sounds.

Permanent hearing loss results from the destruction of hair cells in the inner ear. These cells cannot be replaced or repaired by any presently known medical treatments or technology. Usually, hazardous noise first affects the ability to hear high-frequency (high-pitched) sounds. This means that even though a person can still hear some sounds, conversation will start to sound 'muffled' and a person may find it difficult to understand what is being said.

Workers exposed to hazardous noise may also experience tinnitus, which could become permanent. When severe, it may disrupt sleep, reduce concentration, make people extremely irritable and lead to depression. The degree of hearing loss that occurs is dependent on how loud the noise is, how long someone is exposed to it and, to some extent, individual susceptibility.

The frequency or pitch can also have some effect on hearing loss; high-pitched sounds are more damaging than low-pitched ones.

Health and safety obligations of employers

By law, under the *Work Health and Safety Act 2011*, employers must provide and maintain a working environment that is safe and free of risks to health, so far as is reasonably practicable.

The model Work Health and Safety Regulations (model WHS Regulations) published by the Parliamentary Counsel's Committee and released by Safe Work Australia WHS Regulations also specifies that an employer must:

- make sure the noise a worker is exposed to at the workplace doesn't exceed the exposure standard for noise.
- provide audiometric testing to a worker who is frequently required to use personal hearing protectors to protect them from hearing loss associated with noise that exceeds the exposure standard.

In many states in Australia it is mandatory that workers in noisy workplaces have their hearing tested (audiometric testing) within three months of starting work and then every two years. Safe Work Australia also recommends this approach.



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A small increase in decibels can mean a lot

The decibel scale is logarithmic so that an increase of 3 dB represents a doubling or twice as much sound energy. This means that the length of time a worker could be exposed to the noise is reduced by half for every 3 dB increase in noise level if the same noise energy is to be received.

The table below demonstrates the length of time a person without hearing protectors can be exposed before the standard of LAeq,8h of 85 dB(A) is exceeded.

Equivalent noise exposures LAeq,8h = 85 dB(A)	
Noise level dB(A)	Exposure time
80	16 hours
82	12 hours
85	8 hours
88	4 hours
91	2 hours
94	1 hour
97	30 minutes
100	15 minutes
103	7.5 minutes
106	3.8 minutes
109	1.9 minutes
112	57 seconds
115	28.8 seconds
118	14.4 seconds
121	7.2 seconds
124	3.6 seconds
127	1.8 seconds
130	0.9 seconds

What is too much noise?

There are two measures that define too much noise according to the model WHS Regulations. They are:

- LAeq, 8h of 85 dB(A)
- LC, peak of 140 dB(C).

LAeq,8h of 85 dB(A) means that over an eight-hour shift a worker cannot be exposed to more than 85 decibels averaged over an eight-hour period. Whether this is exceeded depends on the level of noise throughout the day and how long a worker is exposed to it.

LCpeak of 140 dB(C) means a worker cannot be exposed to a noise level above 140 decibels. Any exposure above this peak can create almost instant damage to hearing. Peak noise levels greater than this usually occur with impact or explosive noise.

How do I know if the workplace is too noisy?

As a general guide, noise is a problem in the workplace when employees have to raise their voice to communicate at a distance of one metre and/or employees have a temporary reduction in hearing or ringing in the ears after leaving work for the day.

The only accurate way to determine if a workplace is too noisy, however, is conduct a formal noise assessment. A workplace noise assessment will help employers:

- identify which workers are at risk of hearing loss.
- determine what noise sources and processes are causing that risk.
- identify if and what kind of noise control measures could be implemented.
- check the effectiveness of existing control measures.