











Sound Levels of Common Noises and Legal Exposure Levels

Deci bels	Max Legal Noise / Day	<u>Common Noises</u>	
30		Leaves rustling	
60		Normal conversation	
70		Noisy restaurant, Roadside traffic	
80		Heavy traffic, ringing telephone	
90	8 Hours	Motorcycle, lawn mower	
100	4 Hours	Hand drill	
110	1 Hour	Chain saw	
120	15 Minutes	Rock Music, Ambulance	
130	4 Minutes	Gun shot Jack hammer	
140	<u>Pain level!</u> 1 minute	Jet engine at take-off	

Hearing Loss Management Information Series

Decibels

Decibels (db) are units used to indicate sound intensity or volume. Noise is measured in a logarithmic scale similar to that used for measuring earthquake intensity.

A typical conversation is about 60 db. A lawnmower sounds in at about 90 db. Exposure for more than eight hours a day to noise levels at 85 db or higher puts your hearing at risk.

The Occupational Health and Safety Administration (OHSA) requires that employees must wear hearing protection if exposed to significant periods of noise above 85 dB

Duration

Besides sound intensity, the length of time you're exposed to a noise plays a role in hearing loss. The longer you're exposed, the greater your risk of hearing loss. For every 5-decibel increase over 90 db in sound intensity, cut your time exposure in half.

Better Hearing Australia

*is a Volunteer-run Organisation
that has been assisting*

Hearing Impaired People for over 70 years.

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**BETTER
HEARING
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Sydney Branch

Noise



and

Hearing Loss

Hearing Loss Management Information Series

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Noise

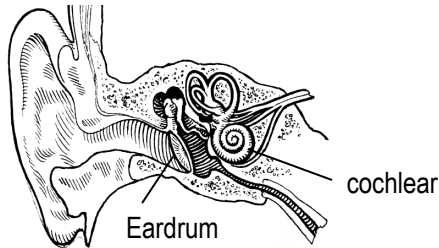
Birds singing

A car driving by

A jack-hammer disturbing our peace.

In most circumstances, our ears can cope very well with noise. It is only when we are exposed to extreme, or prolonged loud noise that problems arise.

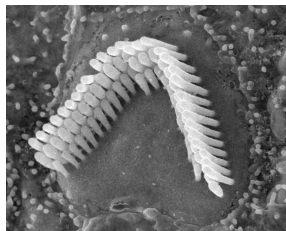
The mechanism by which our ears hear is to a certain degree robust, but also extremely delicate.



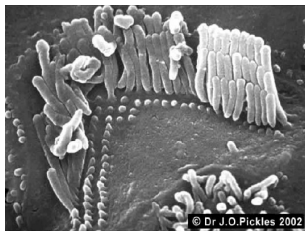
The two parts of our ear that can be damaged by loud noise are the ear drum and the cochlear. Very loud noise can burst our eardrums, but damage to the cochlear although usually slower to develop, can be even more devastating.

In the cochlear there are very tiny hair (cilia) cells that move in response to sound. It is these cells which can be damaged by prolonged or extreme sound. They can never be repaired once they are damaged. Initially, given enough quiet time, the cilia right themselves. If however the noise continues, permanent irreversible damage can occur.

Hearing will not come back!



Healthy Hair cells



Damaged Hair cells

The majority of damage sustained through noise induced hearing loss is insidious in its nature. It occurs over medium to long time periods. Once your hearing is impaired, the condition is irreversible.

Where do we find Loud Noises?

- In the workplace
- Music noise
- In the home

Workplace Noise: Manufacturing workplaces, specifically those involved in metallurgy and sawmilling are frequently noisy. Also, people working in agriculture may be exposed to dangerously high levels of noise. For example, pigs can squeal at over 110 dBA.

Keep your hearing intact by understanding when occupational noise puts your hearing at risk and take whatever steps are necessary to protect your hearing.

Music Noise: Loud music can damage your hearing. For example, both Bill Clinton and Pete Townsend of the Who have hearing damage as a result of being in close proximity to very loud music. Repeatedly attending concerts or dance venues where the music is 110 to 130 dB's will damage your hearing, as will regularly listening to MP3 players on a high volume. If you can hear the music on the MP3 player of the person next to you on the bus, or your own children, they have the volume up too high.

Sometimes this results in people suffering from tinnitus (ringing, hissing or strange sounds in the ear), sometimes a significant amount of hearing is lost.

Home Noise: Chain saws, drills, motorcycles and amplified music can all emit noise above the hazardous 85 decibel level

How can I tell if I am being exposed to too high a level of noise?

If you have to raise your voice to be heard by someone less than three feet away, then you should be wearing a protective device.

How Loud is too Loud?

Your noise exposure is too high if you are regularly exposed to noise above 85 decibels.

You should seek to have the noise level reduced, and if this is not possible, your ears should be covered by protective devices.

If your workplace has sound levels that exceed 105 db, consider wearing both earplugs and earmuffs at the same time. Worn together, they offer greater protection.

Can going to one concert really damage your hearing?

It depends on how loud the sound is and for how long you are exposed. In general, the louder the sound, the less time required before hearing damage will occur.



Typically, you may experience a temporary hearing loss after going to a concert. You may notice that your ears are ringing or that speech is muffled when you leave the concert.

This temporary hearing loss usually returns back to normal in a day or two, **but with repeated exposure, the hearing loss will become permanent.**

If you regularly attend loud music venues, you should wear hearing protectors. You can use earplugs or earmuffs. If you don't, it is highly likely that you will damage your hearing.