

## FACT SHEET:

# Audiometry Screening

The vibration of air molecules makes up a sound wave. Gentle vibrations make a soft sound, while large vibrations create a loud sound. The loudness of sound is measured in decibels (dB). A sound's pitch or frequency is its number of vibrations per second. This is measured in hertz (Hz).

Slow vibrations make a low frequency sound (such as a foghorn), while rapid vibrations make a high frequency sound (such as a whistle). Hearing tests check a person's ability to hear sounds of different loudness and pitch.

Too much noise at work can lead to temporary or permanent hearing loss, or tinnitus – ringing in the ears. The damage can occur gradually, from extended exposure to noise or immediately, from exposure to a sudden explosive sound. Noise-induced hearing loss (NIHL) is the single greatest cause of permanent hearing loss in Australia - and it's also the most preventable.

The workplace isn't the only environment where you can sustain hearing damage. You can sustain damage through wearing personal earphones, attending concerts, shouting in someone's ear, working with certain chemicals, certain medical drugs, disease and injury.

Hearing loss can be described as:

- **Congenital** – hearing loss that occurs before or just after birth. Exposure to certain diseases in utero or soon after birth can harm the hearing mechanism of the baby.
- **Acquired** – hearing loss that happens through a lifetime (for example, due to disease or trauma).

## AUDIOMETRY SCREENING

---

A hearing check tests a person's ability to hear sounds of different pitch and volume.

Some signs that you may need to have your hearing checked include:

- Ringing sensation in the ears (tinnitus)
- People complain that you talk too loudly
- You often have to ask people to repeat what they say
- You find it hard to hear conversations, especially if there is background noise
- Others complain that you watch television with the volume turned too high.

Assessors use an audiometer to perform a hearing test called "pure tone audiometry". This audiometer produces a range of beeps and whistles that can be heard through specially designed noise reducing headphones. The candidate is required to press a button or otherwise indicate when a sound is heard.

## RESULTS

---

The results are charted on an audiogram (chart or table) showing the relationship between a person's hearing threshold levels for pure tones and frequency.

Frequency KHz	Left Ear	Right Ear
0.5		
1		
1.5		
2		
3		
4		
6		
8		

Decibels	Result
-10dB – 20dB	Normal
21 – 39 dB	Mild hearing loss
40 – 69 dB	Moderate hearing loss
70 – 89 dB	Severe hearing loss
90 – 120 dB	Profound hearing loss

## RESOURCES

---

- GP
- Audiologist
- Ear, Nose and Throat specialist
- National Hearing Care, [www.nhc.com.au](http://www.nhc.com.au)
- Better Hearing Australia, [www.betterhearingaustralia.org.au](http://www.betterhearingaustralia.org.au)
- Australian Hearing, [www.hearing.com.au](http://www.hearing.com.au)