



Workplace | Sleep | Hearing

The Human Side of Noise Induced Hearing Loss in the Workplace

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NOISE INDUCED HEARING LOSS IN THE WORKPLACE

A Human Perspective

- This presentation will give visibility on two invisible conditions
- **Hearing Loss**
- **and the Human Side** . The presentation will address what hearing loss means to the individual human being, their employer, family, parent, sibling, friends and the entire organisation.



NOISE INDUCED HEARING LOSS IN THE WORKPLACE

A Human Perspective

Why worry about your employees' hearing?

Occupational noise induced hearing loss (NIHL) is a major compensable industrial disease in Australia and entails substantial economic and social costs.

**Permanent
Measurable
Costly
But preventable**

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A Human Perspective

*"Blindness cuts us off
from things,
but deafness
cuts us off from people".*

Helen Keller

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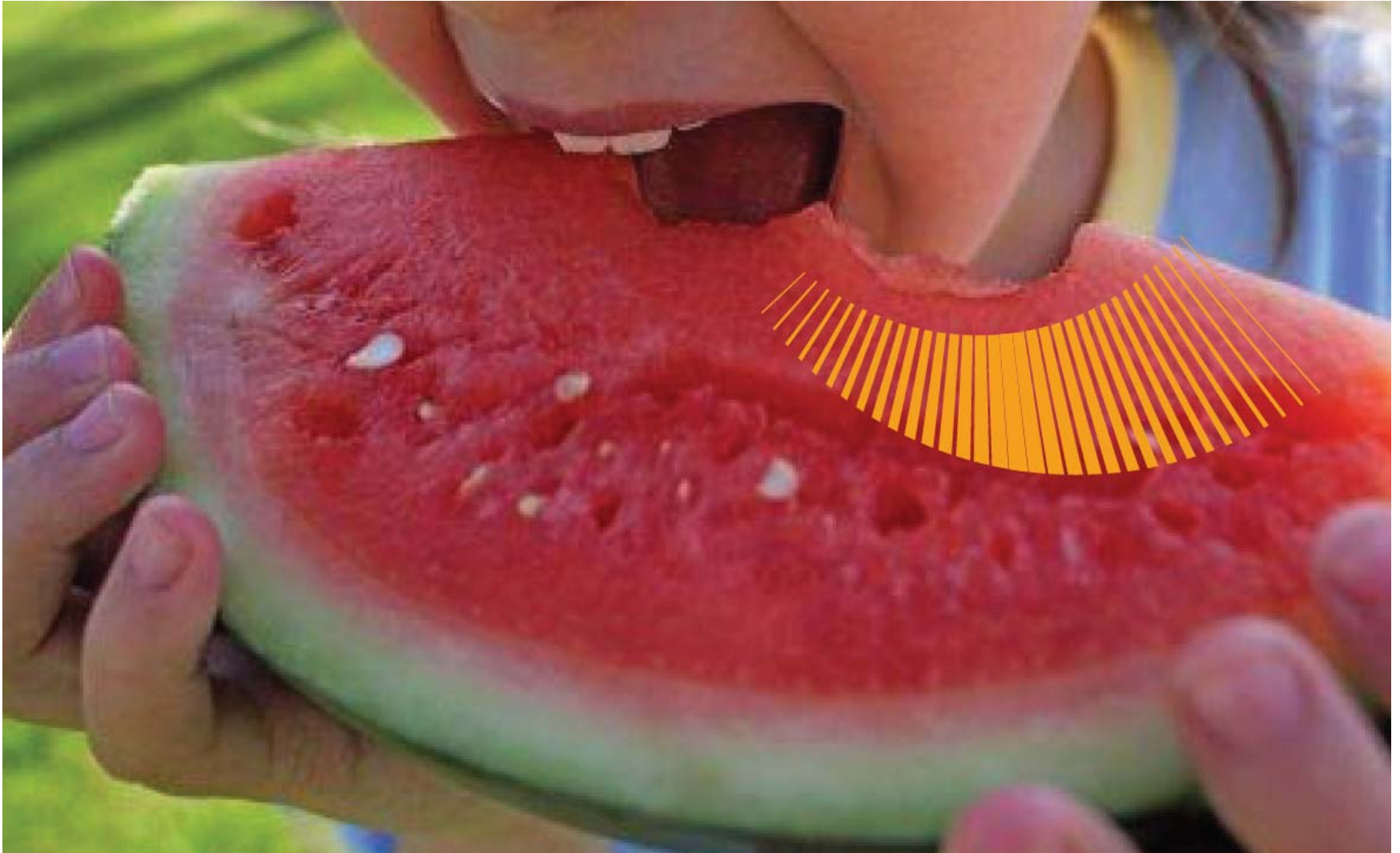
Hearing develops a sense of wonder.

Rememberdiscovering the ocean in a sea shell



Hearing makes everyday fun

Remember...the sound of that first crisp bite



Life' s a Melody – Hear it !

Imagine....the delicate ring of temple bells



NOISE INDUCED HEARING LOSS IN THE WORKPLACE

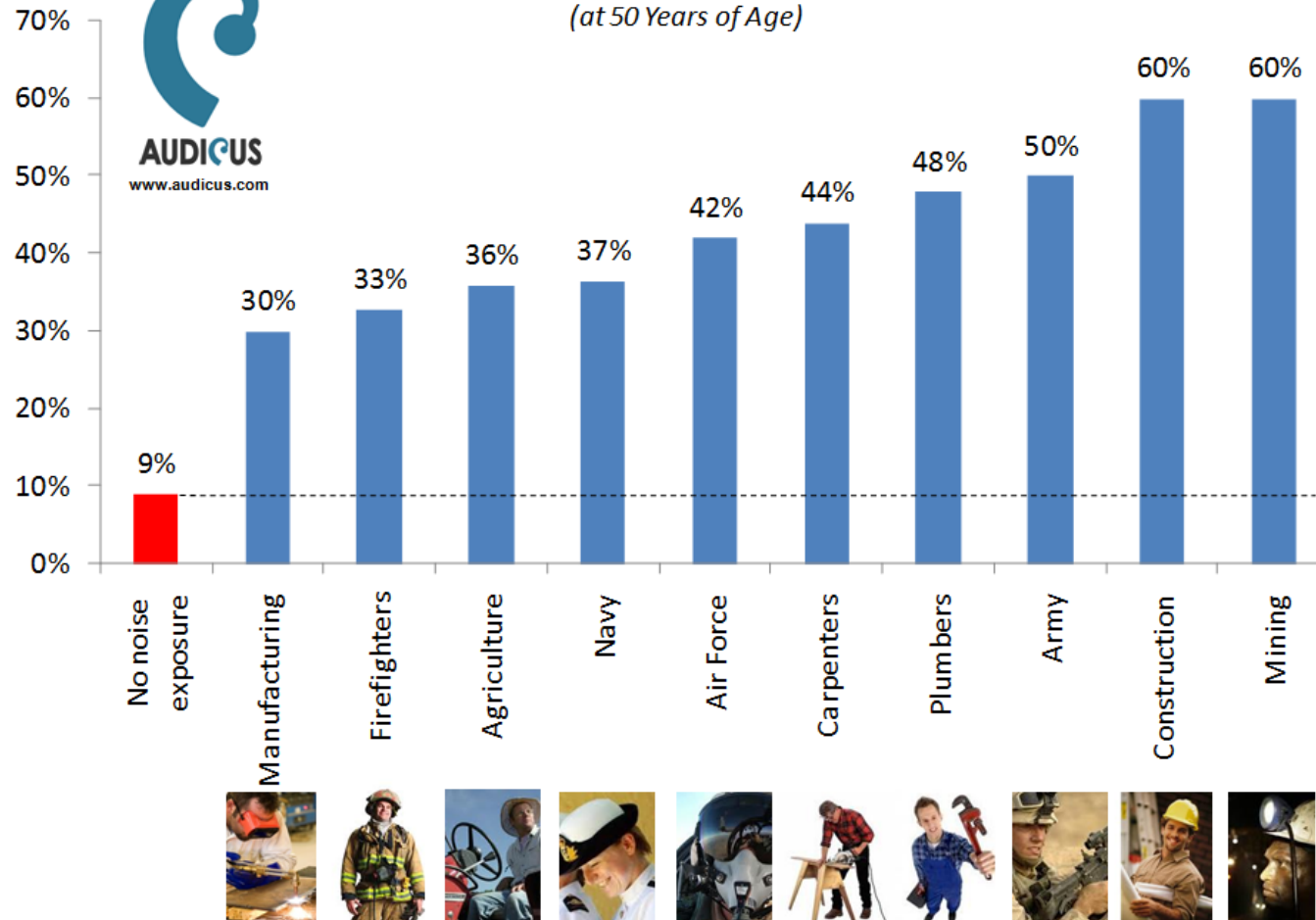
A Human Perspective

Prevalence of hearing loss

- **1:6** Australians is affected by hearing loss.
- **1:4** Australians projected to be affected by hearing loss by 2050.
- Noise exposure is one of the most common causes of hearing loss.
- **37%** of all hearing loss attributed to noise
- **60%** of Australian adults with hearing loss are **male**, gender differences attributed to workplace noise exposure.



Incidence of Hearing Loss by Profession (at 50 Years of Age)



So why worry about your employees hearing?



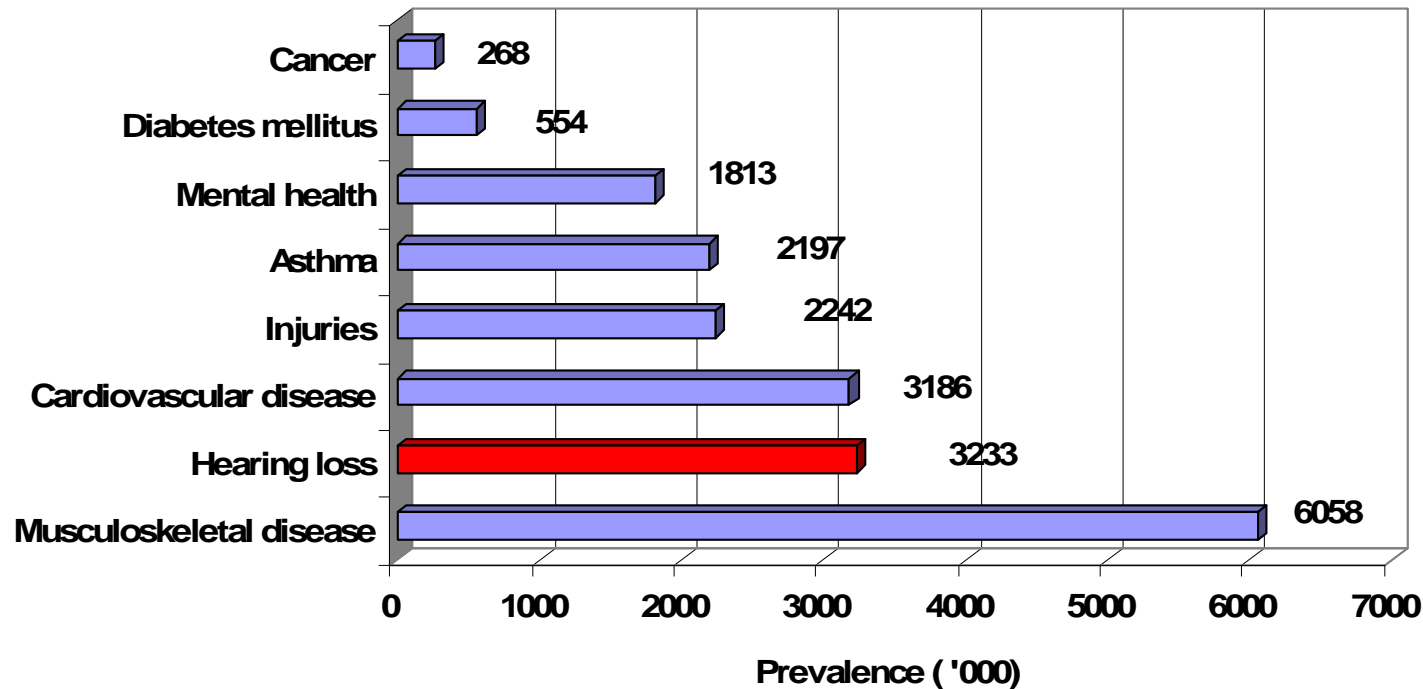
HEARING

WHAT YOU NEED TO HAVE CHECKED SO YOU CAN TELL WHEN A
2000 LB SHARK IS SWIMMING BEHIND YOU

(thecomedynet.com)

NOISE INDUCED HEARING LOSS IN THE WORKPLACE

An Audiological Perspective



Source: AIHW (2004:389). Note: Hearing loss in worse ear for 2010.

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NOISE INDUCED HEARING LOSS IN THE WORKPLACE

A Human Perspective

Adverse health effects are associated with hearing loss.

Costs associated with hearing loss :

Direct health costs

- Education and support services
- Communication aids and devices
- Carers
- The deadweight losses associated with government transfer payments
- Loss of wellbeing – depression

- **Productivity losses**

NOISE INDUCED HEARING LOSS IN THE WORKPLACE

A Human Perspective

May vary between individuals – multi-factoral level of sound, physical, psychological, stress in the workplace etc

Stress caused by hearing loss may lead to

- Loss of concentration
- Speech interference

Stress may take the form of

- fatigue, hostility, aggression
- Irritability, headaches, moodiness and insomnia



Adverse health effects are associated with hearing loss.

The body will try and cope with the situation of intrusive background noise by adapting bodily functions

- increasing heart rate
- raising blood pressure and releasing hormones like adrenaline into the body

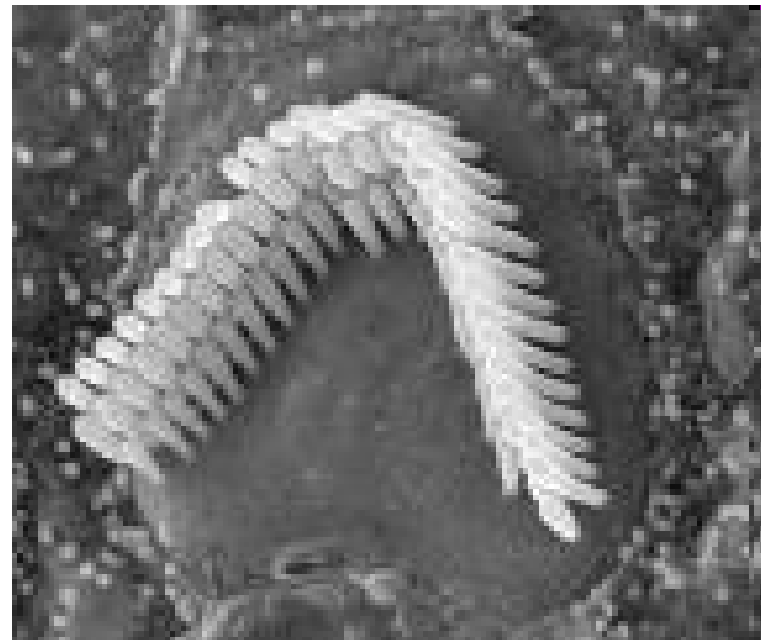
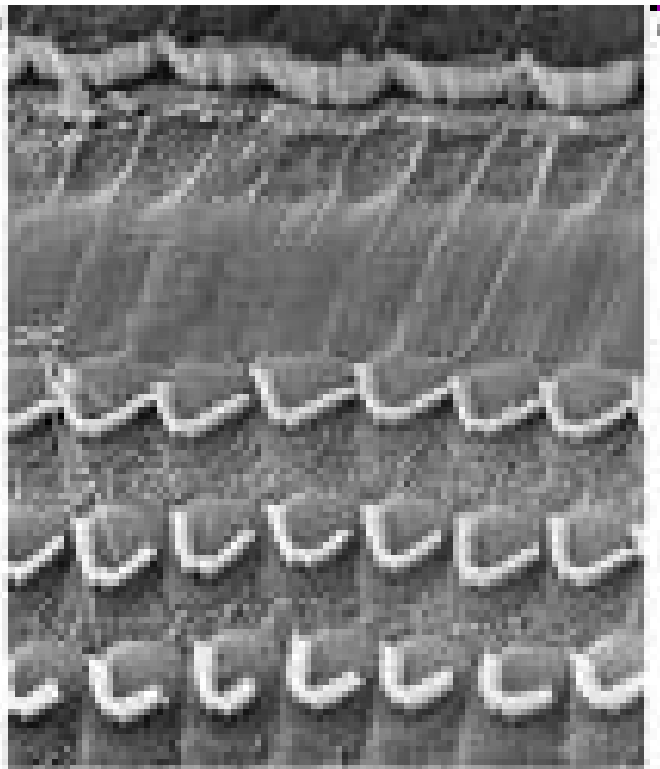
Health effects as a consequence may consist of

- Raised blood pressure
- Reduced immune response
- Gastric ulcers

NOISE INDUCED HEARING LOSS IN THE WORKPLACE

A Human Perspective

Healthy Hearing Cells: Ear Protection provided and worn



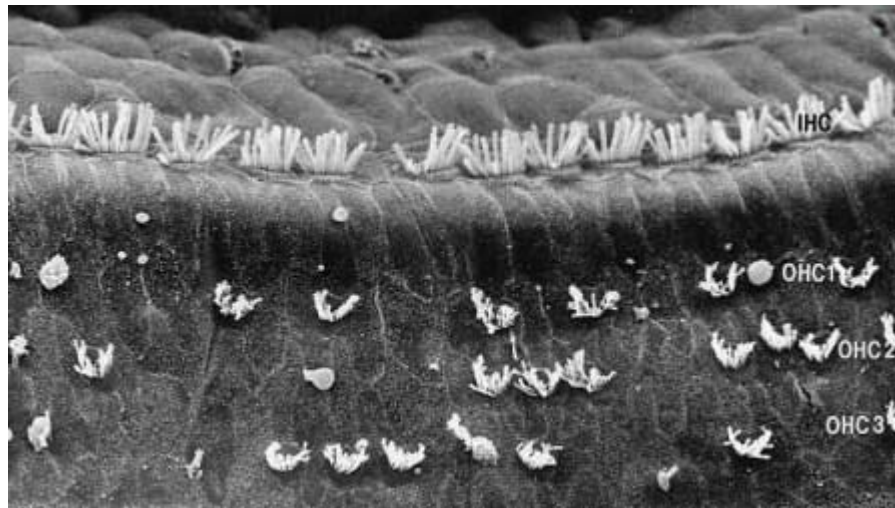
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NOISE INDUCED HEARING LOSS IN THE WORKPLACE

a human perspective

Damaged Hearing Cells: Ear protection not provided or worn



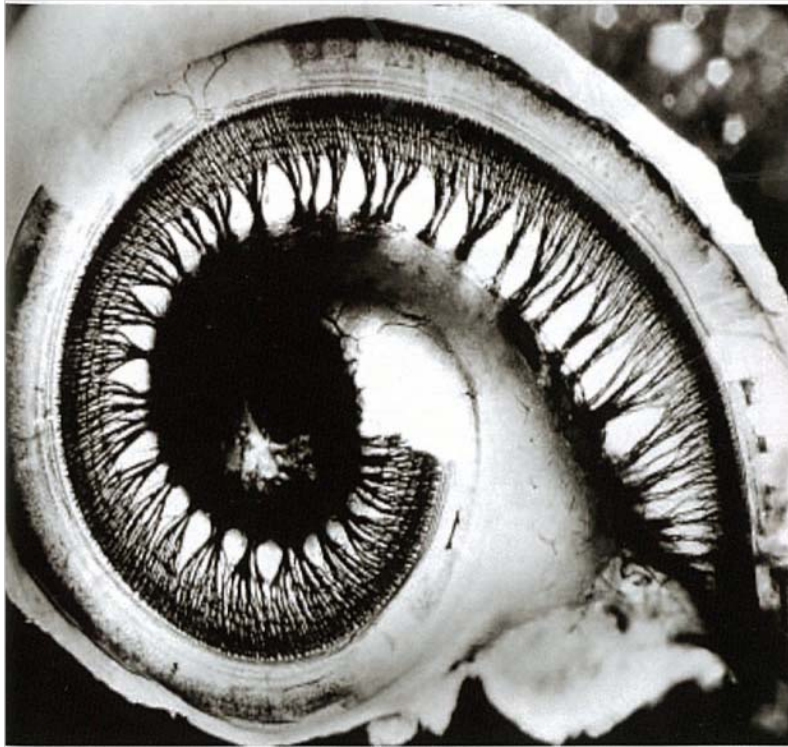
Noise-induced hearing loss represents excessive "wear and tear" on the delicate inner ear structures.

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A human perspective



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Denial?

the human perspective



What happens if you have hearing loss?

Conversations become difficult

Reduced capacity to listen, respond to speaking – communicate
the human perspective

I can't hear you, so I'll just laugh
and hope it wasn't
a question.



Loss of enjoyment, Isolation Sleep deprivation

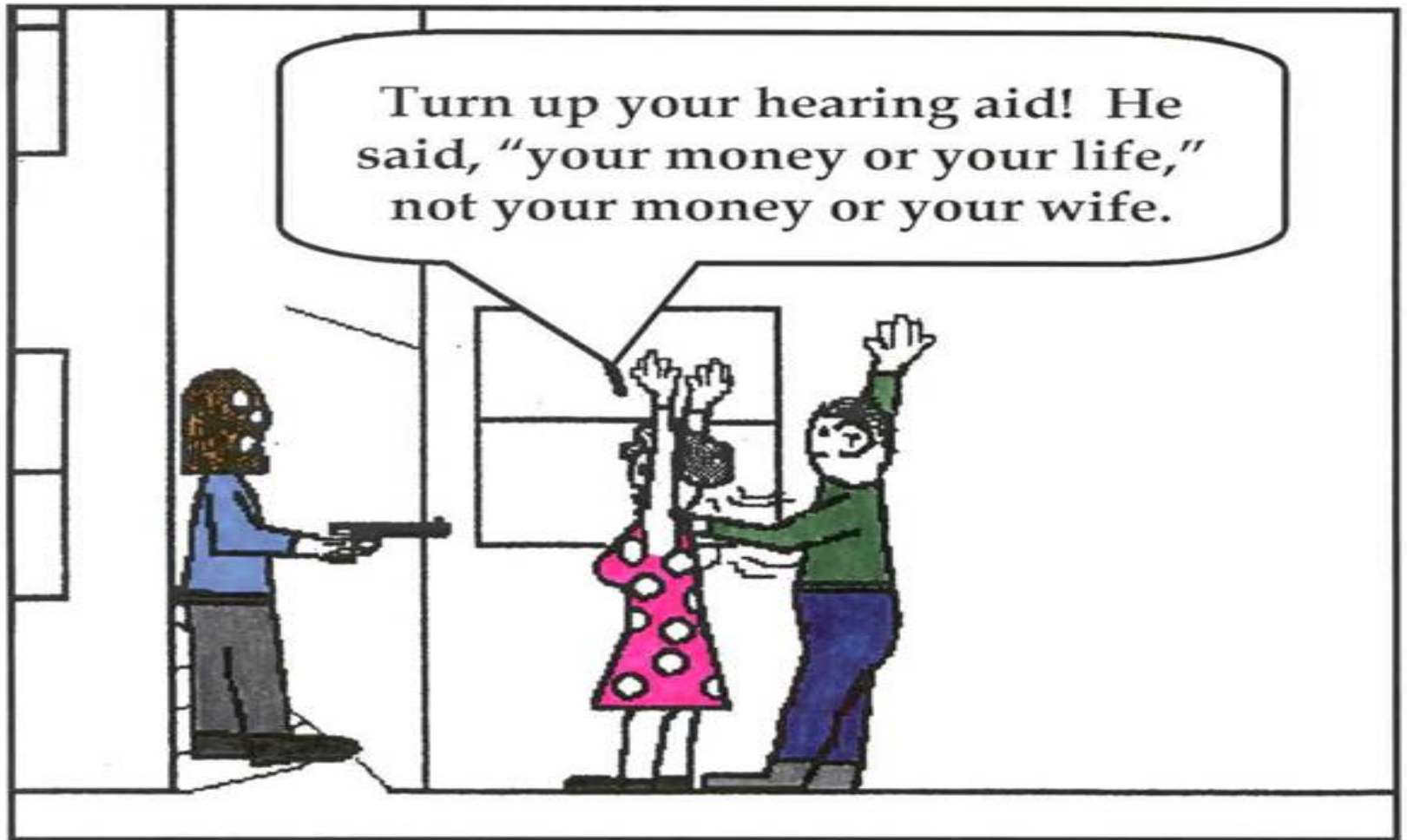
the human perspective

I'm sorry your premature hearing loss makes it hard for people to want to talk to you.



Relationships Suffer

the human perspective



Selective Hearing?

the human perspective



Reduced communication abilities impact on a person's life chances

the human perspective



Embarrassment

the human perspective

Always speak clearly when asking
someone to check out your new spectacles.



Danger!

Consonants difficult to distinguish misunderstand important instructions mishear words

the human perspective



RULE 5

Always use hearing protection

NOISE INDUCED HEARING LOSS IN THE WORKPLACE

An Audiological Perspective

Audiological Outcomes that can result from Noise Exposure

Hearing Loss The hear cells which pick up the high frequencies are damaged first, followed by those which pick up conversational speech frequencies. Thus speech becomes distorted and confused to the point where statements like *pass the sugar* sound like *Ah er oo ah* ie like a badly tuned radio.

Recruitment Is always a by product of a sensorineural hearing loss.

A person who has noise affected hearing loss may ask *someone to speak up, and then tell them not to shout*

Hyperacusis Super-sensitivity to normal sounds

Phonophobia Fear of normal sounds resulting in super-sensitivity to them

Tinnitus

Acoustic Shock

Acoustic Trauma

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NOISE INDUCED HEARING LOSS IN THE WORKPLACE

An Audiological Perspective

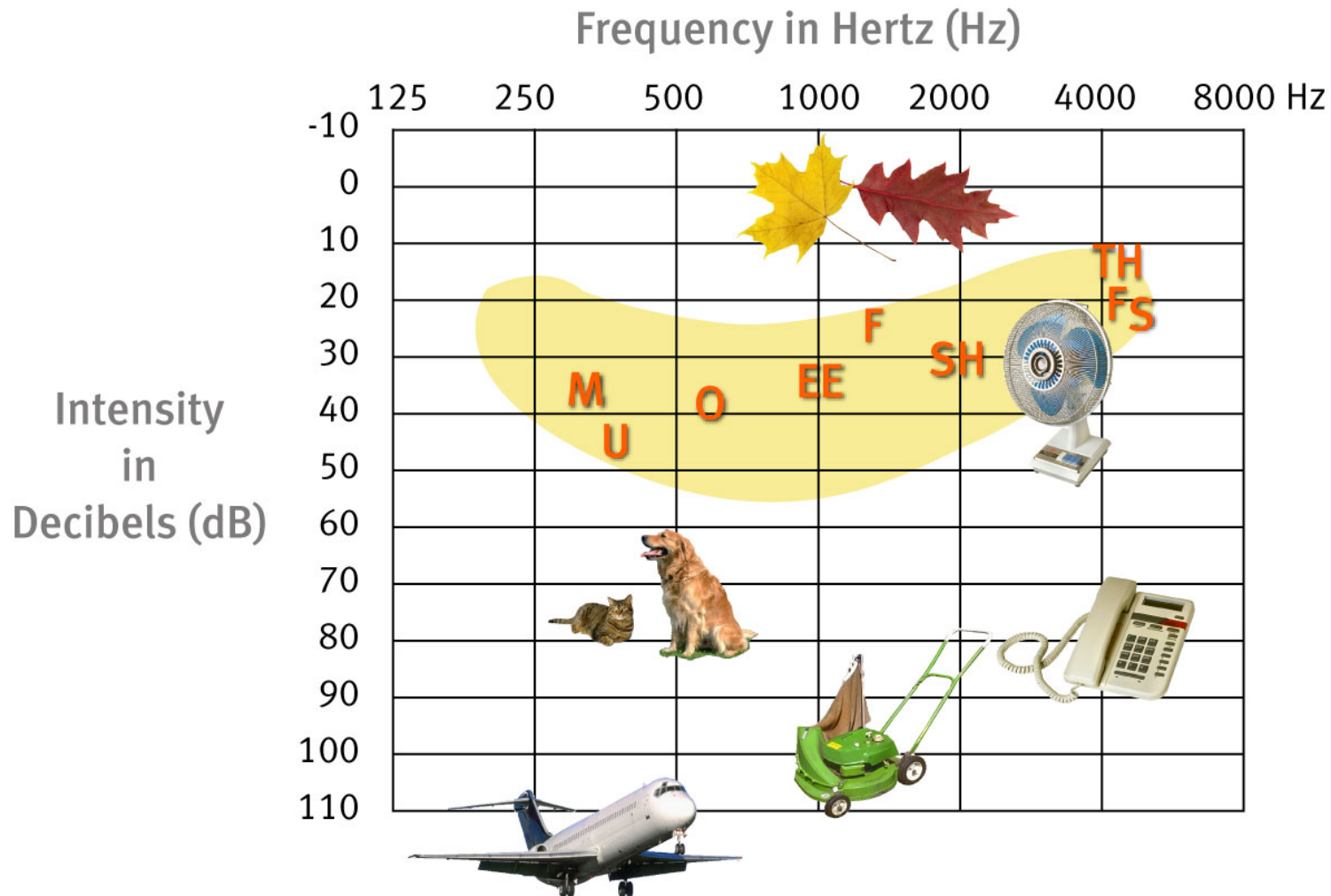
Audiological debilitating effects associated with noise induced hearing loss
acoustic shock or acoustic trauma

- Temporary Hearing Loss
- Tinnitus
- Recruitment
- Hyperacusis
- Phonophobia
- Psychological stress akin to post-traumatic stress disorder
- Emotional trauma is associated with the event as may be physical damage to parts of the inner ear

The Human Side : A combination causes isolation, social interaction becomes a strain and it can cause difficulties in work and family life.

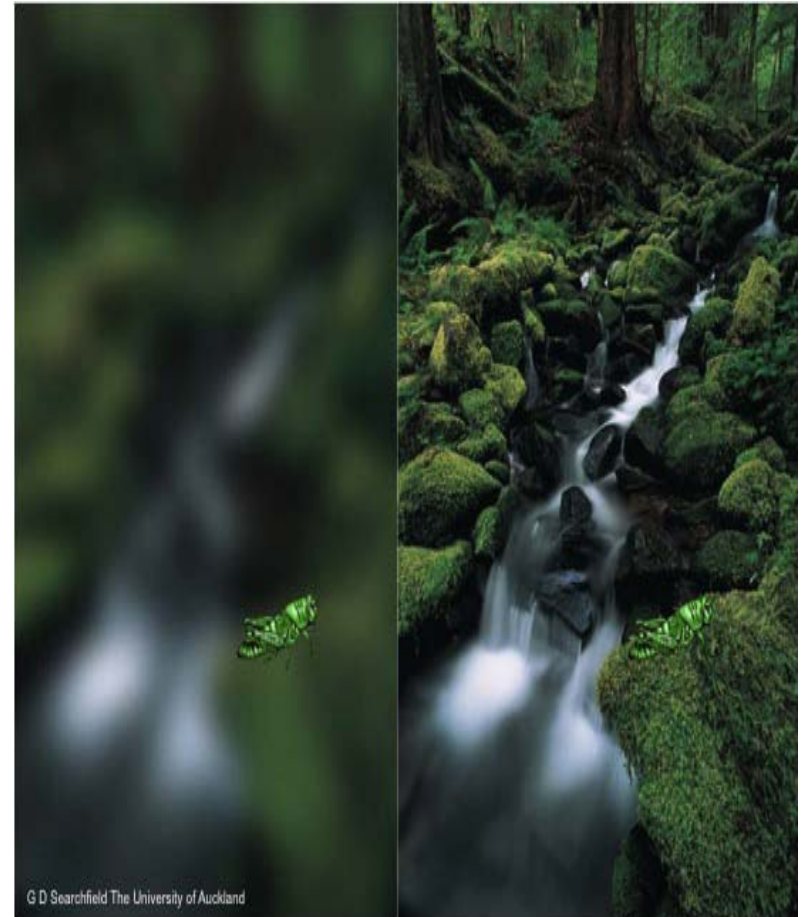
People Mumble!

the human perspective



Tinnitus

a human perspective



Purpose of Harmonization

The intention is for all workplace health and safety laws (including regulations, codes of practice and guidance material) to be harmonized across Australia.

Prior to January 2012, each State or Territory had its own separately drafted set of Acts, Regulations and supporting “best practice” documents. In **Queensland**, these were:

1. The Workplace Health and Safety Act 1995
2. The Workplace Health and Safety Regulations 1997; and
3. Various Codes of Practice on specific subjects – for instance, the Workplace Health and Safety Noise Code of Practice 2004.

The new regime

In order to harmonize state laws, the Fed Govt. has enacted model legislation which has been mirrored in many states (including Queensland). NSW, Qld, ACT and the NT have followed suit by enacting their own individual suites of legislation. In **Queensland**, they are:

- The Work Health and Safety Act 2011
- The Work Health and Safety Regulation 2011; and
- The Managing Noise and Preventing Hearing Loss at Work Code of Practice 2011.

Each State and Territory continues to have its own regulatory body and prosecutions and enforcement will continue to be state based.

Content of the Laws

The new laws require a ***Person Conducting a Business or Undertaking*** (PCBU) to ensure, as far as reasonably practicable:

1. the provision and maintenance of a work environment without risks to health and safety;
2. that the health and safety of workers and the conditions at the workplace are monitored for the purposes of preventing illness or injury.

Duties

The duty falls on the officers of the *PCBU*. Officers includes:

- A CEO and Chairman
- Board members;
- Company secretary;
- Senior Management with the capacity to influence and control decision making about workplace health and safety matters.

Key changes in relation to noise

There are several subtle differences between the old suite of legislation/regulations/Codes of Practice and the new system.

Summarized, they include:

- Previously, the obligation to consult with the workforce about workplace health and safety matters was a **suggested method** of managing workplace health and safety risks. Now, it is a **requirement** that the PCBU consult with the workforce about workplace health and safety matters specifically;
- Positive obligation to consult as far as “reasonably practicable” and the consultation should include consultation with other duty holders at the workplace – e.g. plant manufacturers, contractors, labour hire employees etc.

Key changes in relation to noise

Continued

- There is now a **specific standard** with respect to the audibility of warning signals on moving plant which takes account of the ambient noise of the workplace.
- The risk management process is now more formalised into a **4 stage process** of:
 - o Hazard identification;
 - o Risk assessment;
 - o Implementation of control measures; and
 - o Review and refine effectiveness of control measures.
- Hierarchy of controls – eliminate, minimise (eg modify plant/processes etc), implement administrative controls (scheduling of work, limit time in noisy areas etc) or provide suitable PPE

Key changes in relation to noise

Continued

- The **new** Code of Practice requires (if a hazard identification process identifies a risk) that a noise assessment be done during a typical working shift. **Previously**, it was recommended that a noise assessment (done in accordance with the Australian Standards) occur at least every 5 years.
- Noise assessments can be done by any competent person in accordance with the (same) procedure set out in *Australian Standard AS 12691: Measurement and assessment of noise emission and exposure*
- The **new Code of Practice** contains an appendix with the recommended content of the Noise Assessment report to be completed and retained by the business.

Key changes in relation to noise

Continued

- **A new requirement of the regulations** is to provide audiometric testing for a worker if he/she is required to frequently use personal hearing protectors as a control measure for noise that exceeds the exposure standard.
- The Code of Practice makes clear that a worker who is frequently required to wear PPE to protect against noise that exceeds the exposure standard must be provided with audiometric testing:
 - Within **3 months** of commencing work; and
 - At least **every 2 years** (more frequently if a high risk of hearing loss)

Summary

- Emanating from the Senate Enquiry into Hearing Health in Australia, the legislative intention is to raise the bar in relation to workplace noise issues.
- Hence additional requirements in relation to 'managing' risks around noise, the requirements for noise assessments/audiometric testing and the positive obligation to consult workers and HSRs.
- Inspections and prosecutions will ramp up in 2013.
- Be proactive and you will significantly reduce risk and improve productivity.

Acknowledges the assistance of Belinda Weir, Partner, Workplace Relations, ClarkeKann Lawyers – b.weir@clarkekann.com.au

NOISE INDUCED HEARING LOSS IN THE WORKPLACE

An Audiological Perspective

Consequence of noise exposure for the employer

Occupational noise-induced hearing loss (NIHL) is a major compensable industrial disease in Australia and entails substantial economic and social costs.

Compensation costs

- Increased absenteeism
- Worker turnover
- Lowered work performance
- Workplace injuries and accidents
- Fatigue and depression
- Lower concentration levels
- Safety (lack of awareness alarms)

The Real Problem

Would you allow your workers to wear
Eye Protection that didn't allow them to



Why would you give them Hearing Protection
that doesn't allow them to hear ?

The Human Cost of Risk Management

There is no more important issue than reducing and/or eliminating accidents and fatalities caused by lack of situational awareness or poor communication.



- In to STOP AND THINK is to See and Hear! identifying a hazard, the only way
- SO WHY DO WE BLOCK WORKERS HEARING WITH HEARING PROTECTORS THAT COMPROMISE THEIR OPERATIONAL AWARENESS?



NOISE INDUCED HEARING LOSS IN THE WORKPLACE

An Audiological Perspective

Noise Induced Hearing Loss is

***Permanent
Measurable
Costly***

Preventable

(It also has a human side!)

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An Audiological Perspective

Questions?



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It's windy today!

No, it's Thursday!

So am I!
Let's have a beer!

