

Audiology Newsletter

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Easter 2006

Issue 8

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Personal Stereos & Hearing Damage

Research conducted by the National Acoustic Laboratories has shown around 25% of people who use personal stereos (e.g., iPods and MP3 players) are playing them at volume levels which will cause hearing damage (*International Journal of Audiology* 2005; 44:231-236). People were selected randomly from crowds outside Flinders Street Station, Melbourne and Sydney Town Hall, and the age of both male and female users ranged between 15 and 48 years. It is not only the young who have succumbed to the personal stereo habit (more than 1.3 million units were sold in Australia in 2005) and the effects of hearing loss from noise exposure is certainly not just restricted to the young.

In some ways, the advances in technology that have led to iPods have made matters worse for our ears. Before the 1980s electronically reproduced music became distorted above certain volumes, but digital sounds allow it to be played much louder without affecting the quality. When MP3 and iPods are turned to full volume, the sound can reach 104dB—the maximum allowed by safety standards and almost as loud as a pneumatic drill (110dB). The advice from audiologists is

Beyond Hear-

quite simply to turn down the volume (set the volume at the manufacturer's half-way mark or lower) and limit use of such devices to one hour a day.

Noise may be putting more than our hearing at risk. Research studies have shown chronic noise exposure can be a risk factor for heart disease (*European Hear Journal*, 2006) and for benign tumour development (known as acoustic neuromas) on the auditory nerve. Researchers at Ohio State University report people regularly exposed to loud noise are more than twice as likely to develop acoustic neuromas and just five years of listening regularly to loud music (80dB or more) increases the tumour risk by 2.25 times. Too much noise may even make you fat—Pennsylvania State University researchers found that noisy environments lead women (but not men) to binge on junk food to cope with rising

Medibank Private PackageBonus

If you have private health insurance with Medibank Private, and your membership type entitles you to be a PackagePlus member, your membership automatically receives a PackageBonus of \$100 on 1 January every calendar year. This can accumulate to a maximum of \$500 for single memberships.

You can put your PackageBonus towards a range of approved membership and health related expenses. Health-related expenses include hearing aid batteries. In order to claim your benefit, you need to take your tax invoice and receipts showing details of your approved purchase to a Retail Centre or Medibank Private Agent. You can then make your claim and receive a benefit to the value of your entitlement (currently maximum cash payable is \$200).

You may also be able to use your PackageBonus for audiological consultations. Please note, if you have private health insurance with another fund, make sure to check with them what audiology services and / or devices your membership may entitle you to claim a benefit from. For example, *Teachers' Union Health* fund provides a \$65 rebate for an audiological consultation.

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Scientists Wax Clinical About What's In Our Ears

LONDON: A seven-page scientific paper recently published in the *Nature Genetics* journal is solely devoted to the genetics of earwax! Human earwax comes in two varieties—wet and dry. The new research explains there is an East-West divide between the two types. Dry earwax is seen in up to 95% of east Asians, but no more than 3% of people of European and African origin. In both Europeans and Africans, the wet type completely dominates. It has now been shown that the ABCC11 gene is the reason for this difference. The role of earwax however remains unclear. The most plausible functions are still reported to be insect trapping, self-cleaning and prevention of dryness in the ear canal.

Neurological, Ageing & Balance Clinic

The Neurological, Ageing & Balance (NAB) clinic is a Physiotherapy clinic within the University of Queensland Health and Rehabilitation clinics. The NAB clinic has a special interest in the management of Neurological (*e.g., stroke, spinal cord injury and traumatic brain injury*), Ageing (*e.g., Parkinson's disease, falls and mobility problems*), and Balance disorders (*e.g., Meniere's disease, labyrinthitis*) and also offers a Vestibular Rehabilitation service. Vestibular rehabilitation can assist in the treatment of vertigo and dizziness, gaze instability and postural instability.

Client groups commonly seen in the clinic for vestibular rehabilitation include:

- Benign Paroxysmal Positional Vertigo (BPPV)
- Pre and post removal of acoustic neuroma
- Post vestibular labyrinthitis or neuronitis
- Age related vestibular hypofunction
- Post trauma (central and peripheral)

The clinic offers a full clinical assessment to aid differential diagnosis and targeted treatment which may include laboratory manoeuvres, habituation exercises, gaze stability and balance retraining.

For further information please contact the NAB clinic on 3365 2232.

The final page of this newsletter discusses a common auditory disease—*Meniere's disease*. If you would like any other auditory disease or hearing topic profiled in this newsletter please phone Bronwen on (07) 3720 9555.

If you have any hearing jokes you would like to contribute to this newsletter please share them with Bronwen on (07) 3720 9555. A sample is provided below!



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Meniere's Disease

What is Meniere's Disease?

Meniere's Disease is a term given to the condition that has four symptoms:

- Fluctuating hearing loss;
- Fluctuating, rotational vertigo (a form of dizziness);
- Fluctuating tinnitus (ringing in the ears);
- Fluctuating, aural fullness (a sense of pressure in the ear).

As a result of the rotational vertigo, patients also experience nausea and vomiting.

What is the Cause of Meniere's Disease?

The cause of Meniere's disease is unknown. Meniere's disease is linked to problems in a tiny part of the inner ear, known as the vestibular system, which helps the body maintain its balance. The vestibular system detects where you are relative to gravity. It is basically what allows you to walk down the street and stay upright and not fall over to one side. Most researchers believe that the symptoms that are called Meniere's Disease in most patients are the result of "idiopathic endolymphatic hydrops" - excess endolymphatic fluid (one of two inner ear fluids) from an unknown ("idiopathic") cause. Under this theory, acute attacks occur when excess potassium-rich endolymphatic fluid leaks through a separating membrane into sodium-rich perilymphatic fluid (the other inner ear fluid), contaminating it.

What is the Treatment for Meniere's Disease?

There is no cure for Meniere's, however, there are many treatments for the symptoms of Meniere's. "It's such a complicated thing because treatments which will really help one individual may have little affect on someone else" (Elizabeth LaMont, Washington University graduate undertaking research at Newcastle University). Possible symptomatic treatments range from dietary and lifestyle changes to medications to intracranial (brain) surgery. Some people cut salt from their diets and eliminate alcohol while others resort to the surgical removal of the nerves in the inner ear.

It is very important that people who suffer with Meniere's disease be their own 'health care manager'. They should keep a diary of the frequency and duration of attacks, note any tinnitus and fluctuation in hearing and / or aural fullness. It is also important to establish what treatments do and do not work for them, and keep a dietary list of possible triggers and relief foods. A full list of possible dietary treatments can be found on the internet at:

<http://oto.wustl.edu/men/>

Community Awareness

From January 5 through 29 this year in Manhattan, New York, the nexus of science and art was explored in *NEUROfest*, the first-ever theatre festival dedicated to neurological conditions. The play "*Vestibular*" by playwright Kelly Haydon showcase Meniere's Disease and in conjunction with the performance, *NEUROfest* also hosted a series of seminars / panel discussions with noted experts.

Support for Meniere's Sufferers

Information, support and counseling for people with Meniere's Disease is provided by volunteer Meniere's Support Groups. Residents of Queensland should contact:

Meniere's Support Group of N.S.W.

PO Box 1077, Bowral, NSW 2576

Phone: (02) 4861 3751

Web: www.menieresnsw.org.au

Email: info@menieresnsw.org.au

"It is like being incredibly drunk combined with being on a spinning chair that's rotating around and then being on a rollercoaster as well."

"The attacks come out of nowhere. There isn't necessarily a way to predict it and they can hit at anytime".

...Descriptions of Meniere's as described by one patient.

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I sincerely appreciate the ongoing support I am receiving from all of my clients. Please do not hesitate to give me any feedback and suggestions about either your own personal audiological rehabilitation or about the clinic. I am very fortunate to have found such extremely rewarding 'work'.

I wish you and your families a very happy and safe Easter.

Warmest Regards,

Bronwen

PLEASE NOTE THE FOLLOWING CLINIC CLOSURES:

EASTER

Thursday 13th April—Monday 17th April, 2006.

MAY

Due to my attendance at the Audiological Society of Australia conference in Perth, the clinic will be closed Friday 12th May—Friday 19th May, 2006.

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