

Audiology Newsletter



Bronwen Hofmeister Audiologist

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www.baudiologist.com.au

Christmas 2008
Issue 15

Contents:

- OHS Accreditation
- Be IOT Hearing Aid
- Tax Rebate
- Barotrauma
- Music Power
- Smoke Alarm Rebate
- JobAccess
- Simulated Hearing Loss
- Catalyst
- Stem Cell Research
- Meningitis

CHRISTMAS CLOSURE DATES:

22nd Dec 2008 — 8th
Jan 2009

Office of Hearing Services (OHS) Accreditation



Bronwen Hofmeister Audiologist is now accredited to provide hearing rehabilitation services that are fully subsidised by the Federal Government (to eligible clients). You are eligible to apply for a hearing services Voucher if you are an Australian Citizen or permanent resident 21 years or older and you are:

- a Pensioner Concession Card Holder;
- receiving Sickness Allowance from Centrelink;
- the Holder of a Gold Repatriation Health Card issued for all conditions;
- the Holder of a White Repatriation Health Card issued for conditions that include hearing loss;
- a Dependent of a person in one of the above categories;
- a Member of the Australian Defence Force; or
- undergoing an Australian Government funded vocational rehabilitation training and you are referred by your service provider.

OR

You are eligible to receive other declared hearing services if you are an Australian Citizen or permanent resident and you are:

- younger than 21 years; or
- a participant in a Community Development Employment Projects Program; or
- an Aboriginal person or Torres Strait Islander who is over 50 years.

What services will you receive?

- Hearing assessment;
- Hearing aids from a range of quality devices made by leading manufacturers;
- Follow up services to ensure you receive maximum benefit from your hearing aids.

In addition, eligible people can obtain maintenance of their hearing aids and devices and a regular supply of batteries on payment of a small annual maintenance fee.

If you wish to apply for a hearing services voucher, please contact Bronwen.

New Hearing Aid Style

A completely new style of hearing aid—**Invisible Open-Fit Technology (IOT)** - was launched in October. The aid is attacking the stigma of wearing a hearing aid. This is quite a revolutionary hearing aid in both sound and aesthetics. It is by far the smallest hearing aid in the world and the first product using open-fit technology that sits invisibly in the ear. In a recent consumer survey, it was judged to be the latest 'gadget' with only 3% correctly guessing it was in fact a hearing aid. The aid weighs only 1.1 grams including battery. At this early stage of release, the aid is not appropriate for everyone's ear canal shape or degree of hearing loss, but further developments are being made to expand its suitability for people with more severe degrees of hearing impairment.



If you would like information on the **Be** hearing aid please contact Bronwen.

The websites for the Be aid are:

www.bebyresound.com
www.gnresound.com.au

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Income Tax Return

Hearing aids and the *Neuromonics* tinnitus treatment are potentially claimable medical expenses for Australians with private health insurance submitting a tax return. A rebate of 20% is available for medical expenses (such as hearing aids) over \$1,500, calculated after Medicare and private health reimbursement.

More information is available from the Australian Taxation Office's "net medical expenses tax offset" website page: <http://www.ato.gov.au/individuals/content.asp?doc=/content/19181.htm>

Barotrauma

Barotrauma is the term used to describe an injury which is caused when the pressure in closed, air-filled cavities in the body changes too quickly in relation to the surrounding pressure. Air travel is a common cause of barotraumas—around one third of all flight passengers suffer from the change in cabin air pressure between takeoff and landing. You should not fly with acute problems such as inflammation of the middle ear (*otitis media*) or a sinus infection (*sinusitis*). Air travellers with a common cold, hay fever or other blockages of the Eustachian tubes such as polyps on the mucous membrane should always have a nasal spray handy and use it 30 minutes and again at 20 minutes before landing. Chewing gum, frequent yawning, swallowing and the *Valsalva* maneuver (*the same maneuver divers use when descending; hold your nose so you cannot breathe through it, take a deep breath through your mouth and then try to blow air out through your blocked nostrils*). Alternatively, a product known as *Earplanes* can be used—these use a micro-filter which ensures a gradual equalisation of pressure between the environment and the middle ear and prevents earpopping and earache. *Earplanes* are available at most chemists and airport newsagencies.

The Power of Music (Brain magazine, Teppo Särkämö)

According to the latest studies, music appears to promote language memory in patients who have suffered from a stroke. One study by Finnish researchers states that it also improves patients' mood and concentration. The type of music is completely irrelevant. Participants of the study could choose between pop, classic or jazz. They listened to their favourite music for a few hours a day and this seems to be a welcome supplement to conventional treatments. The test patients were divided into three groups; one listened to music, the second received audio books and the third had only silence to listen to. Among the patients who listened to the audio books, language memory improved by 19%. In the group that listened to music, however, it improved by a massive 60% within only three months. The researchers suspect that the combination of music and language plays an important role for the brain.



Smoke Alarm Rebate Scheme



The Queensland Government offers a financial assistance rebate scheme to assist hearing impaired people with purchasing specialised smoke alarms. The rebate is designed to include additional devices which work in tandem with standard smoke alarms which can alert hearing impaired people through devices which when activated vibrate vigorously or use strobe lighting to alert them to smoke / fire in the home. The rebate covers up to \$400 per home.

Further details on the rebate scheme can be found on the internet at:

http://www.emergency.qld.gov.au/smokealarms/Internet_text_for_interim_rebate.html

If you would like to discuss specific products that are available (from a home device signaling that the phone is ringing, or a child is crying or that the smoke alarm has been activated) please contact Bronwen.

JobAccess

JobAccess is a comprehensive website and professional telephone information and advice service. Users of the service can access confidential, expert advice on matters relating to the employment of people with disability. This includes the range of Australian Government services and incentives available for people with disability, employers, service providers and co-workers. For more information go to:

www.jobaccess.gov.au

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Simulated Hearing Loss

If you would like to demonstrate to people with normal hearing what hearing impairment actually sounds like, there is a good website which will allow you to do exactly this. If you cannot access the website below please ask Bronwen to demonstrate it to you during your next consultation.

<http://www.cdc.gov/niosh/mining/products/product47.htm>

Click on the link 'What does a hearing loss sound like?'

Catalyst

The ABC Catalyst show screened an excellent segment on hearing loss and noise damage on the 24th July, 2008 (8pm). For a transcript of the show, go to:

<http://www.abc.net.au/catalyst/stories/2304484.htm>

The 'Ear, Nose & Throat' documentary explained how our ears are "intricate pieces of machinery and vulnerable to damage. So much so that nearly nine million people in the UK suffer from some form of hearing loss". (RNID stats) Viewers watched Dr Alice Roberts getting a short insight into what it is like to cope with hearing impairment, with specially designed hearing-loss simulator headphones, as she struggled to order a drink at a bar and do some clothes shopping. Then she discovered how loud noise can cause irretrievable damage to our ears. The documentary also answered the question 'how loud is too loud for your MP3 player before it does damage'?

Stem Cell Research (ScienceNOW)

John Brigande, a developmental neurobiologist at Oregon Health and Science University in Portland, and colleagues has produced key ear cells in mice and for the first time verified that the cells work just like natural ones. Previous studies isolated a protein which triggers hair-cell growth: Atoh1. The researchers injected embryonic mice with DNA containing several copies of Atoh1. The findings indicated that mice that produced the extra Atoh1 had almost twice as many hair cells as did control mice. The extra hair cells were divided into inner and outer hair cells, just like the normal ones, and they made the same proteins. Next, the researchers determined that the engineered cells responded to sound waves and turned them into electrical signals. "That's exciting because it offers a strong rationale to pursue cell-replacement strategies for hearing loss," Brigande says. Other auditory experts agree. Matthew Kelley, a developmental neuroscientist at the National Institute on Deafness and Other Communication Disorders in Maryland, USA, applauds the method of introducing the Atoh1 during the embryonic stage. "It's a brand new technique. This has been one of the major challenges and roadblocks in inner ear research." But before researchers can develop a treatment for humans, they have to answer questions such as how many copies of Atoh1 are necessary to stimulate hair cell growth and what is the best way to deliver the gene to a human organ of Corti (*the organ in the inner ear that contains the auditory sensory cells*)?

Meningitis & Cochlear Implants (The Weekend Australian, June 21-22, 2008)

The puzzle of why people with cochlear implants (CI) are more susceptible to meningitis has been discovered by a Victorian researcher, Benjamin Wei. What Wei discovered has implications not just for CIs, but for any device implanted in the brain. Pneumococcal meningitis is the medical term for inflammation or infection of the meninges, the membranes surrounding and protecting the brain and spinal cord, most commonly caused by bacterium *Streptococcus pneumoniae*. Infection can be treated with antibiotics if caught early, but one in five patients will die and up to half will experience long-term complications including deafness, paralysis and mental retardation.

Wei's work identified not only the route and cause of infection in people who received CIs, but also discovered ways to prevent people with CIs getting meningitis. Scientist and surgeons now have a clear understanding of what leads to meningitis in CI recipients, and how to avoid it.

The application of Wei's work goes beyond the ear to include other devices that by their very nature compromise the brain's defences. For example, devices such as brain stimulation for treating Parkinson's tremor and potentially also shunt devices that take fluid from the brain in areas where there's fluid build-up. A bionic eye, also being developed in Australia, would operate on similar principles to the bionic ear (CI) in terms of direct stimulation of the optic nerve, and will therefore also benefit from Wei's findings.

"Research is paving the way for better health, making implants even safer, reducing the chance of infection and making infection risk very low. The research basically ensures current and future cochlear recipients that the chance of acquiring meningitis is no greater than a person without implants" says Wei.

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I wish you and your families a happy, safe and festive Christmas. Thank you for giving me such immense work enjoyment. I look forward to seeing you all in the New Year.

Warmest Regards,

Bronwen



CHRISTMAS CLOSURE

Please note, during the Christmas period the clinic will close on Thursday 21st December, 2008 and reopen on Monday 9th January, 2009.

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