# hearalways

Newsletter

December 2008

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## Hearing in Stereo Sound

Hear now. And always Cochlear™

# Enjoying life in surround sound...

At 50 years young, Glenda Froyland works as a teacher's aide at a state high school, where she provides learning support for the Special Education Unit. Married to Ian with three grown up children, Glenda tells Hear Always about her journey with bilateral cochlear implants.

I received my first cochlear implant in my left side in August 2006. I had great success! It was absolutely amazing to hear voices, understand people speaking and use the telephone again.

By the next year, I was seriously considering getting my right ear implanted. This was a difficult decision – and I have to admit I had reservations…mostly because my right ear had been profoundly deaf for over twenty years and I figured the rehabilitation would be a long, winding road.

My audiologist explained the pros and cons of binaural hearing and in June 2007, I took the plunge. I am so incredibly grateful that I made the decision. To my amazement, I was able to understand speech immediately after switch-on, which is truly unbelievable considering I'd been profoundly deaf in that ear for over 20 years.

The most obvious benefit for me was in noisy environments, where my hearing tested 30% better! The benefits were also obvious in my daily work – I no longer come home fatigued at the end of the day.

Not long after my second implant, it was my daughter's wedding. At the reception there was a band in the background and normally this would have made conversation difficult.

But by using my SmartSound™ 2 Noise program on my processor, I was able to talk to people and enjoy the music at the same time! WOW!

And I'm starting to appreciate music again – mostly the songs I was familiar with before losing my hearing. It's so good to enjoy Country and Western music again.

Having a second implant has far, far exceeded my expectations.

Speech sounds fuller and rounder with two ears. The sound seems more real; so much clearer and with more depth.

I can pick up the direction of sound now too – something I could never do with one implant. If I hear a siren, I no longer need to look around to work out where it's coming from. I just know. The safety aspect for me is a very big thing.

Life in general is wonderful – at work, at home and socially. I'm an independent person once again, actively participating in life with very few challenges.

I am what I am, and I consider myself a very blessed person.

## My Story: Hearing in stereo sound with bilateral cochlear implants.

"My life would be very different without cochlear implants because without them I can only hear very loud sounds like thunder. Without my implants, I can't hear voices and that makes it very hard to communicate!" – Grace

# Amazing Grace

## Listening to 11 year old Grace's piano performances and energetic conversations, it's hard to believe that she is profoundly deaf.

Grace's academic achievements certainly surpass many of her normal hearing peers. Ranked among Singapore's top 1% of students, she is learning English, Chinese and French, plays the piano at grade 5 level, practices grade 3 ballet, fences, excels in Chinese calligraphy and floral arrangement, and loves to read.

Grace's mother shares her inspirational story:

When we first discovered Grace was profoundly hearing impaired we despaired about her future. We thought she would be confined to just signing as a means of communication. Then a friend told us about cochlear implants.

As part of our research into this technology, we discovered that profoundly hearing impaired children using hearing aids don't articulate as well as those using cochlear implants. The cochlear implant recipients seemed to be able to access speech better, and they also pronounced better. So we decided to explore this option.

We went ahead with the operation when Grace was 1 year old.

In the days after switch on, I knew she was understanding me because she would give actions to familiar nursery rhymes. Speech followed and, within a year, she was tracking like a normal child.

Now, at 11 years, she's as normal as a normal child can be. She goes out to McDonalds and orders a hamburger like any other kid!

Grace had a bilateral implant when she was 8 years old, and this has really helped with localising sound. If you ask her, she would tell you she hears better with two ears, rather than one. In fact, she's so used to it that if she only has one speech processor on she naturally asks for the other.

Our recommendation to parents who are considering bilateral implants is to go for it while the child is young. Playing the catch-up game was tough and if Grace had been implanted earlier, we believe she would have received the benefits earlier too.

# Bilateral implants: Your questions answered

**Why should I consider a second cochlear implant for myself or my child?**

A second cochlear implant may improve hearing in difficult listening situations such as classrooms, meetings, restaurants and other busy, noisy places.

The benefits of bilateral cochlear implantation may also include improved localisation and better speech understanding in noisy environments. Some recipients even report an improved quality of life.

While many cochlear implant recipients or candidates can benefit from bilateral cochlear implantation, you should consider the alternatives too. Your clinic will be able to discuss whether a second cochlear implant is the right choice for you or your child.

**Should I wait for future technology?**

There have been many advances in cochlear implant technology over the past 25 years and, no doubt, there'll be many more discoveries and improvements. The scientists and engineers at Cochlear™ are dedicated to finding innovative solutions and even better hearing outcomes.

So, while we expect cochlear implant technology to continue improving, the benefits of early bilateral implantation and access to the critical auditory development period easily outweigh the benefits of waiting. In particular, delaying a second cochlear implant for your child may deprive them of essential sound input during their critical auditory development period[1,2].

What's more, Cochlear's lifetime commitment ensures you or your child will have access to tomorrow's technology if you get your implants now. So your hearing could actually get better with age!

**How soon will I notice the benefits?**

Some bilateral recipients find their hearing performance improves immediately following switch-on of the second cochlear implant. For others, improvement is more gradual. Your own experience may depend on factors such as the duration of your hearing loss and how much experience you have with your first cochlear implant, or with a hearing aid.

**Should I get two cochlear implants at the same time?**

Some people choose to have both devices implanted during the same surgery. Others receive their second device at a later date. There are a variety of factors that might influence your decision, and you should discuss them with your audiologist and cochlear implant surgeon to find out which approach is right for you.

[1] Litovsky, RY. Cochlear Whitepaper: "Binaural Hearing."

[2] Litovsky, RY. Cochlear Whitepaper: "Potential Advantages from Bilateral Cochlear Implants."

# Making the most of the phone

Many recipients ask us which telephone accessories we recommend. The following products have proven popular with many recipients – although we do recommend trying them for yourself, as every ear hears differently.

**NoiZfree® Music & Mobile**

A special hands free accessory that plugs into your mobile phone offering hands-free conversation, improved speech clarity and reduced distortion and background noise. Can also be connected to i-pods and walkmans. This is a single ear hook and is not compatible with Nokia mobile phones. Order number Z61135.

**NoiZfree® Beetle**

This Bluetooth headset interfaces with your mobile phone, transmitting speech directly to your speech processor. It virtually eliminates the interference buzz that's sometimes experienced when using a speech processor with a mobile phone. Order number Z61261.

**NoiZfree® Nokia Monaural Telecoil Induction Earhook**

Mobile Induction Earhook compatible with Nokia mobile phones only. Order number Z61136.

**To order these accessories, call or email:**

- Australia: 1800 620 929 or email customerservice@cochlear.com
- New Zealand: 0800 444 819 or email customerservice@cochlear.com
- South East Asia: +65 6553 3814 or email cssg@cochlear.com
- South Asia: Please contact your local Cochlear distributor.

When you place your order, customer service will also check your current registration and contact details.

NoiZfree® Music & Mobile

NoiZfree® Beetle

# Tips and hints: Cochlear Awareness Network

Faye Yarroll received her first cochlear implant in 2005 and her second in 2007. Today, she's an active member of the Cochlear Awareness Network in Australia, and shares her tips for using the phone with bilateral implants.

**What accessories do you use with landline and mobile phones?**

I have a few landline phones at home, all designed for hearing impaired people. For me, each one has to have good volume control, speaker phone functionality and telecoil compatibility. I looked for the same things in my new Nokia mobile phone. I've also used the Nokia and Artone Loopsets, which both work well.

At work, I use a Plantronics supra binaural headset and amplifier with my Freedom™ speech processor.

I think it's a fantastic set-up, but there are a few tricks to using headsets:

1. I find a 'binaural headset' (two earpieces) helps balance your hearing.
2. I recommend getting 'leatherette donut-type ear cushions' for your headset. The full foam ear cushions seem to muffle the sound more.
3. Positioning your headset is very important. I prefer to position the ear cushions towards the top of my ear, so they're close to my speech processor's microphone. You might even attach a small spacer to the headband, to get it to sit a little higher.

**How do you use these accessories to enhance your phone use?**

At work, I can't live without my Plantronics headset and amplifier. They're a great combination with my desk phone.

Otherwise, I always try to use the speaker phone on both my landline and my mobile when convenient. I find it much easier to hear using the speaker function.

**What advice would you offer other implant recipients?**

Using a telephone can be daunting, even stressful, so practice whenever you can. Position the handset or mobile at the top of your processor, near the microphone, to optimise the volume. Then get the right telephone and accessories, and practice by calling friends until you're really comfortable. It does take some getting used to. You just have to give yourself a chance…Practice makes perfect!

**Do you have any other useful comments?**

My best tip would be to get the right telecoil function added to your favourite programs. As a bilateral cochlear implant user, I can have the best of both worlds. I use the T switch on my right processor to block out background noise, so I can focus on the telephone listening situation. And I use MT (Mixed "M"icrophone and "T"elecoil) on my left processor, so that I can still pick up background noise through the processor's microphone. It means I can hear myself when I talk on the phone, and hear if anyone in the room tries to talk to me at the same time.

Some people don't know they can choose T or MT functionality, so ask your audiologist what has been set up for you.

# Ask the Professional… Steven Lee



With a Masters Degree in Clinical Audiology and experience as an Audiologist at Singapore General Hospital, Steven Lee is now the Senior Consultant Audiologist and Managing Director of Widex Singapore.

**Is phone use an important goal for many cochlear implant recipients?**

Yes, definitely. The telephone is a part of everyday life in today's world and we rely on it to stay connected at home and at work. Recipients therefore naturally want to be comfortable using the telephone.

**How do you manage their expectations in this regard?**

I tell them that phone sounds aren't as clear and natural as talking to someone in person. Phones cut out some of the sound frequencies of natural speech. Another important factor is that you can no longer lip read or take other visual cues from the speaker's facial expression and body language.

**Can most recipients use the phone straight away?**

Not always. In my experience many recipients, particularly pre-lingual recipients, take a while to adjust to all levels of conversation immediately after switch on, even face-to-face conversation. While some recipients have great success on the phone straight away, for most, mastering this tool takes practice.

**What are the big challenges?**

Many cochlear implant recipients want to use the phone straight away, but are often frustrated by the phone's limitations and that inability to lip-read. Recipients need time to develop their communication strategies and to find suitable telephone accessories.

**What else will help?**

- A good quality phone
- Assertiveness: tell the other person to speak slowly
- Communication strategies like paraphrasing the other person
- Positioning the phone on the speech processor appropriately
- Making good use of telephone accessories
- Practise, practise, practise!

**Are there differences between using mobiles and landlines?**

Oh yes. Landline signals tend to be more stable, while mobile phone reception can vary. However, some recipients have told me that 3G mobile phones are a great improvement – particularly with the video calling option.

**The Freedom Speech Processor allows phones to be used acoustically (through the microphone), via the telecoil, or with a range of accessories. Can you tell us more about these options?**

You need to position the phone next to the microphone, not your ear! You'll probably need to shift the phone around the microphones to find where it gives the best sound quality.

With the telecoil, the speech processor picks up phone sounds as electromagnetic radiation emitting from the handset, minimising background noise interference. The telecoil in the Freedom processor is very effective.

The telecoil can also pair the processor with a Bluetooth device, such as a mobile phone, so recipients can enjoy using their mobile hands-free!

**What's your overall advice for phone users?**

Text messaging has become very popular but nothing beats a good chat on the phone. So try your best, practise, and use accessories to optimise your ability to use the phone.

# How Parth made the Principal happy

Eight year old Parth Shukla of Ahmedabad, India is one of the top in his class and a star student at his school. But getting enrolled wasn't easy for him.

Parth was born with more than 50% hearing loss. His parents were constantly worried as he grew up, especially when he was outside playing.

"We were so worried about what his future might hold. It was very stressful," says Parth's father. "What if someone wanted him to move out of the way? If a horn sounded and he didn't move, an accident could occur. Someone had to be with him all the time."

When Parth's parents tried to enrol him into English Middle School, the interview process progressed well until the Principal learned about his hearing impairment. It was then implied that a Deaf & Dumb school might be a better option.

Determined that he would have the best possible education, Parth's parents persisted with the enrolment. Eventually, it was accepted on one condition – that Parth's progress would be monitored and his placement in the school reassessed in a year's time.

During that year, Parth received a Baha®. He was 7 years old. Concealed under his hair, the Baha is neat and discrete. Hardly anyone even knows he has it – and the results speak for themselves.

"Thanks to Baha, a major source of stress has been removed from our lives," explains his father. "It's been a huge improvement. My boy is able to hear 101%. He has no problems with his hearing now. He can lend a hand. For example, if we need things from the market, we ask Parth to go and he can go alone. He can buy things and bring them back. There's no stress or worry."

"As a family, we can also enjoy watching TV at a normal sound level, which is good for us – and our neighbours too!"

As for the school, Parth certainly proved his worth by achieving a score of 90% in the second standard. Needless to say, the Principal was very happy, and Parth remained at the school.

"For us, it's a big deal that our son can hear," Parth's father concludes proudly. "It's a miracle".



Eight year old Parth Shukla of Ahmedabad

# Profile of a cochlear visionary Jim Patrick

Associate Professor Jim Patrick's involvement with cochlear implant research and development stretches back to 1975 when he joined Professor Graeme Clark's Melbourne University research team. As part of the team that performed the first ever human cochlear implant on Rod Saunders, he continues to play a critical role today, heading the global research program behind our future technology.

**Jim, what was the vision for cochlear implant technology when you first got involved in 1975?**

Honestly, we had no real idea. We had a lot of hope, but not the knowledge. The interest from the start was to develop a clinical treatment. We knew there was a real need and we were motivated by the possibility of meeting this need.

**Did you imagine how much it could affect the lives of people with severe -to-profound hearing loss?**

At that time, we thought it could be an aid to lip reading. We could tell this was important by how adults were willing to wear a wire frame headband and the sizable bodyworn processor (see below). I think this is a testament to the value they were getting.

**You have been with Cochlear for many years. What's kept you so passionate?**

It is truly the most extraordinary and wonderful job to have. I've been privileged to meet so many families and recipients, and see the impact we have on their lives. The diversity of the different research areas – clinical, engineering & biomedical – is always fascinating. In my role, I'm surrounded by such clever, inspiring people. I can't imagine being able to do this anywhere else!

The future is also so exciting. We have so far to go. In many ways, we've just begun. We're still only reaching a fraction of the people who could benefit and the cochlear implant is still a long way from normal hearing.

**You would have had many special moments over the years. Is there one that stands out?**

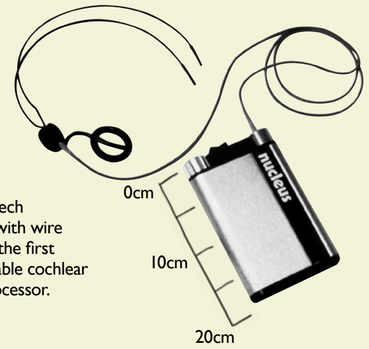
The first human implantation with volunteer Rod Saunders. At the time, it was the culmination of years of work by a committed team. Just succeeding to build and test a device to the point where it was suitable for human implantation was a terrific achievement. And yet that was just the beginning of the next phase – exploring how it could be used to give Rod hearing.

**What can those who suffer from moderate-profound hearing loss expect in the future?**

In the near future, I think we can expect three key things, and they'll be greatly aided by bilateral implants.

1. Significant improvement in noisy environment performance. This is so important to our recipients' daily lives.
2. Appreciation of music is also very important. We expect that more people will gain a true ability to appreciate music.
3. Better access to the components of tonal languages. So many recipients and candidates live in countries with tonal languages, like China, which makes it vital for us to continue developing this functionality.

Further into the future recipients can expect really exciting innovations, like a fully implantable system.




The Wearable Speech Processor (WSP) with wire frame headband – the first commercially available cochlear implant speech processor.

## A speedy fix

Once you have your cochlear implant, it soon becomes hard to imagine living life without it. So sending your processor away can cause adult wearers a lot of stress, and children even more distress. A little regular maintenance and use of our self-help troubleshooting services means you can take care of simple service and maintenance at home.

## Online self-help trouble-shooting guide

These friendly, step-by-step pages will help you identify the problem with your Freedom, ESPrit™ 3G, SPrint™ or Spectra processors, and what you can do about it.

**Freedom users:**
Visit www.cochlear.com/freedom, and select the appropriate language

**ESPrit 3G, SPrint or Spectra users:**
Visit www.cochlear.com.au/Support/606.asp and choose your speech processor.

## Manual and quick reference guide

Alternatively, the User Manual and Quick Reference Guide which came with your speech processor, both have trouble-shooting sections. Simply follow the steps to identify the problem and solutions you can try yourself.

If you don't have these guides handy, you can also view or download the latest version of these documents at www.cochlear.com.au/Support/607.asp.

If you still experience problems, please contact your cochlear implant clinic or distributor.


For further information on Cochlear and its products and services visit www.cochlear.com or contact your local Cochlear office or distributor, or your hearing health professional.

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N31871F ISS3 DEC08

# Let's hear it for New Zealand!

## New Zealand medical student wins Graeme Clark Scholarship 2008

Not only is Dunedin resident Sam Taylor the first student with a cochlear implant to be accepted into the Dunedin School of Medicine, he is now the first ever New Zealander to be awarded the prestigious Graeme Clark Scholarship.

Born profoundly deaf, Sam, of Maori descent, was awarded the tightly contested scholarship based on his outstanding academic achievements and his demonstrated leadership qualities.

"It is a great honour to be the first New Zealander to ever receive this scholarship, recognising as it does the accomplishments of those who have made the most of the gift of hearing a cochlear implant provides," Sam says. "The cochlear implant has made an incredible difference to my life, both personally and academically."

"It has opened doors that I had not even considered before – one of those being the very real possibility that I could one day become a surgeon."

"My medical course requires us to be out in the community dealing with patients. That's something I could never have attempted without the benefit of a cochlear implant – and it's proving to be one of the most rewarding things I've ever done."

Professor Graeme Clark's own comments really say it all:

"Sam's commitment to his studies, extra curricular activities, community involvement and leadership skills impressed the committee very much this year. We believe he has a very bright future and wish him well with his studies in medicine. I'm sure he will make a wonderful role model for other implant students."

## Call for applications for the Graeme Clark Scholarship.

Are you a recipient of a cochlear hearing solution who is currently studying at university? You might be eligible to apply for the Graeme Clark Scholarship.

The Graeme Clark Scholarship is a unique award established to help Australian and New Zealand recipients of Cochlear hearing solutions further themselves by undertaking university studies.

2009 Applications are now open. To find out more, visit www.cochlear.com.au, email us at customerservice@cochlear.com or call:

| Australia | New Zealand |
|---|---|
| 1800 620 929 | 0800 444 819 |

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Share your journey to a world of sound with others!
Email hearalways@cochlear.com and tell us your story.

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