Getting the Most Out of Your N5 Cochlear Implant

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Who is Cochlear?
They said nothing could be done about hearing loss. Good thing he didn’t listen.
• Over 30 years of delivering trusted and reliable products
• #1 leader in implant reliability\textsuperscript{1-3} built to last your lifetime
• More people choose Cochlear Nucleus than any other cochlear implant in the world – over 250,000 recipients
• Proven lifetime commitment
• Cochlear has made more advances to existing technology and continues to outperform all other implant systems\textsuperscript{1-3}
• Cochlear continues to forge the way in the development of science and technology in our field of expertise – cochlear implants

More people trust their hearing to Cochlear than all the other hearing implant companies combined.
The Cochlear difference – A+ Hearing

A+ HEARING is only possible when you combine the four pillars of hearing performance; perfected over our many years as the global market leader. This knowledge is further strengthened by the experience shared by more than 260,000 Cochlear™ implant recipients we have treated since inventing the world’s first cochlear implant nearly 40 years ago.

FOUR PILLARS OF HEARING PERFORMANCE

= A+ HEARING
About Cochlear™ Implants
The cochlear implant basics

Two components of a cochlear implant:
The cochlear implant basics

Two components of a cochlear implant:

1. An internal implant placed just under the skin, behind the ear
2. And an external sound processor
How a cochlear implant works

1. The **sound processor** captures sound and converts it into digital code
2. The coded sound is transmitted via the **coil** to the implant
3. The **implant** converts the coded sound to electrical signals and sends them to the electrode array
4. The **electrodes** stimulate the hearing nerve, which relays sound to the brain
Cochlear Implant “Mapping”

- “Mapping” refers to the set up of the program for each individual using a cochlear implant
- This measures individual responses to sound electrically through the cochlear implant
- Different levels/configuration for each person and each ear
- These levels change over time
- There is no ‘perfect map’
- Ongoing annual programming is required
Aural Rehabilitation

Hear now. And always

Cochlear®
The brain is the major organ of hearing .......

The ears are only the way in.

Aural Rehabilitation

• Getting a cochlear implant gives you better access to sound, but you need practice to make the best use of these sounds
• Practice makes perfect – repetition provides an opportunity for the brain to learn new sounds
• Adult aural rehabilitation services focus on making the best use of your cochlear implant, exploring assistive devices that might help, managing conversations, and taking charge of your communication.
Aural Rehabilitation

• Getting an implant is like having the keys to a car but not knowing how to drive it, aural rehabilitation is the key to helping an implant user interpret sound in their environment and use it in a meaningful way.

• It is important to set aside time everyday to use tools that can help make maximum use of your new access to sound, it can be as easy as listening to an audio book.
Aural Rehabilitation Resources
Resources on the web

• A number of resources are available on the Cochlear website under the ‘Support’ section.
Rehabilitation resources

Cochlear provides a wide range of information and activities designed to help recipients and the professionals they work with develop or re-learn listening and language skills.

- **Accessories**
  - There are a variety of accessories available to assist with you with getting the best out of your device.

- **Instructional videos**
  - How-to videos for your cochlear implant system or Baha® system.

- **How-to guides**
  - User manuals and troubleshooting for your device and what to consider if you are a parent, teacher or caregiver to someone with a cochlear implant system or Baha® system.

- **Rehabilitation resources**
  - Cochlear provides a wide range of information and activities designed to help recipients and the professionals they work with develop or re-learn listening and language skills.

Kanso™ How-to Guides

- **Common questions**
  - Answers to some common questions about living with your device.
Rehabilitation Resources

- Angel Sound - Interactive Listening Rehabilitation and Functional Hearing Test Program
  - Angel Sound™ (formally known as Sound and Way Beyond) is an interactive auditory training and hearing assessment program.
  - Can access for free online at http://angelsound.tigerspeech.com/
Cochlear Sound Processors
Cochlear - a history of innovation

`83 WSP
`89 MSP
`94 Spectra
`97 SPrint™
`98 ESprit™
2013 Nucleus® 6 Sound Processor

Hear now. And always
N5 (CP810) Sound Processor
Getting the Most out of Your Programs
SmartSound Technology

• Since your hearing needs change depending on your surroundings, SmartSound features four settings – Everyday, Noise, Focus and Music, which allow you to create the ideal situation no matter the situation.
SmartSound Technology

- **Everyday** - This program provides improved hearing in environments with minimal background noise and will likely be your primary map.

- **Noise** – The noise program provides improved hearing when in an environment with significant background noise on all sides.

- **Focus** – The focus program is designed to provide improved hearing when in background noise, most useful when you want to hear people directly in front of you.

- **Music** – This program is useful for music or many find it also useful when watching television.
Processor Care & Maintenance
Everyday

- **Wipe** the processor, coil, cable, and earhook with a soft dry cloth.

- Keep your processor free from moisture by drying it every night in your dry aid kit.

- Remove the battery module and make sure all the contacts are clean. Carefully tap or blow on them to remove any dirt.

- Check the microphone protectors for signs of dirt or grime and replace if needed.
Every two months

- Replace the dry brick in your dry aid kit.
- We recommend that recipients/parents mark this in a diary.
Every three months

- Replace the microphone protectors.
- Note: If the recipient is exposed to high levels of dust and moisture, the microphone protectors may need to be replaced more often (e.g. every two months).
Microphone Protector Applicator

• Tool to apply microphone protectors to the sound processor

• Two replacement microphone protectors adhered to plastic strip for easier insertion
Cochlear Implant Accessories
Accessories

- All Cochlear N5 processors have the ability to connect to a variety of other equipment via accessory adaptors and cables

- The N5 processor has a built in telecoil

- There are waterproofing accessory available for the N5 processor
Main Benefit of Accessories

• Improve the **signal quality**
• Improve the **signal-to-noise ratio** (SNR) of the wanted signal
• For FM systems it’s helpful when there is a:
  – Distant speaker
  – Room with poor acoustics (e.g. reverberation)
  – Background noise
N5 Accessory Connection
Detecting Attached Accessories

- **N5 & N6** Processors – the accessory is automatically detected when attached to the processor
Personal Audio Cables

- For use with battery operated audio or video components
- NOT for use with electrically operated components
Nucleus® TV / Stereo Cable & Mains Isolation Cable

- Surge protected for use with electrical components
- Connect to headphone jack:
  - Television
  - Stereo
  - Computer
  - DVD player
  - Home theater

Mains Isolation + PAC or Bilateral PAC
Lapel Microphone

• Bring sound closer

• Clip remote microphone near sound source

• Troubleshooting processor microphone
Monitor Earphones

- Troubleshooting the sound quality at the microphone level
- Used by someone with normal hearing to listen to the output of the microphones
- Note: This is not the map you are listening to...just the microphones
Telecoil

- A telecoil is a small, magnetic device, which can be found inside the Freedom, N5 & N6 Cochlear processors.
- It enables hearing aids and implants to pick up sound signals directly from other electronic devices.
- In order for this to work, a room or area must be ‘looped’, meaning there is a wire running around the room.
- This wire carries the electronic signal from the device you want to listen to.
- Some telephones can transmit using a telecoil.
An FM System can help improve speech understanding in noise and when speech is presented from a distance.

FM Systems typically consist of three main parts:
1. Microphone worn by the speaker
2. Transmitter
3. Receiver worn by the individual who is using the FM System, some connect to the processor and some utilise the telecoil inside the processor.
Cochlear™ Nucleus® Aqua+ and Aqua Accessories
The earth is 70% water. Aqua+ makes it 100% yours
The reusable Aqua Accessory is designed to work with N5, N6 and Freedom processors with rechargeable batteries only.

The reusable Aqua Accessory has been designed to be used in any water based activity to a depth of 4 metres.

Aqua Accessory can be used in saltwater, sulphur environments, soapy bath/shower, chlorinated pools, partial salt water/chlorinated pools; anything which is safe for skin contact.

Testing shows the Aqua Accessory reusable can be re-used 20 times, but this may vary depending on your particular use of it.
Aqua+ Accessory

Cochlear™ Nucleus® Aqua+ Coil
Reusable integrated Coil/Cable & waterproof plug (one year warranty)

Cochlear™ Nucleus® Aqua+
Reusable and sealable silicone sleeve with a built-in earhook (replace if it gets worn or damaged)

Latex Free
Cochlear™ Nucleus® Aqua+

• The Aqua+ lets your recipients swim in and under the water with confidence, due to its waterproof technology.

• The re-usable soft silicone sleeve when used with the Aqua+ Coil, keeps the sound processor dry during use in water, with an ingress protection rating of IP68.

• The Aqua+ includes a waterproof coil and a sleek silicone sleeve that fits easily over a Cochlear™ Nucleus® 5 or 6 Sound Processor.
Questions?
Hear now. And always