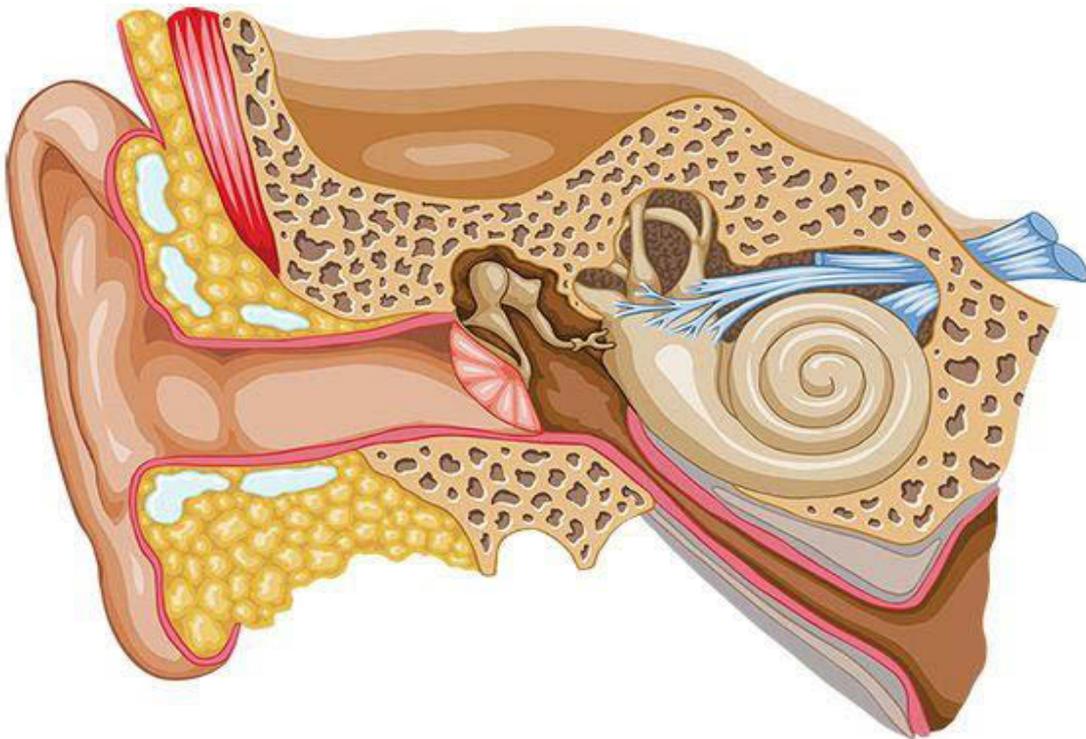




Southern  
**Cochlear  
Implant**  
Programme  
Hear things differently

# Rehabilitation Manual



Version 1.0

May 2014



# Rehabilitation Manual

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# Welcome to SCIP and to life as a cochlear implant user!

It's very normal for you to be feeling uncertain and hesitant about what lies ahead on your path as a cochlear implant (CI) user.

'Switch-on' day can be very emotional and represents the start of your journey to hearing and listening with a CI. Everybody's journey is different. Take comfort in the knowledge that we all have to start somewhere and that with practice, patience and time you can achieve your listening goals.

In the next few days and weeks your brain will be getting access to a whole new world of sound, some familiar, others not! Your brain is busy learning to interpret the electrical signals from your CI and translating them into something it can understand.

- You may be experiencing a crackle and/or an echo; this is a reaction from your auditory nerve that is being stimulated after an often long time of lying dormant.
- Speech may sound tinny, robotic, and 'chipmunky' or like Donald Duck.
- You may not yet understand speech without looking.
- Everyday noises like paper scrunching, water running and traffic noises may seem terrifically loud!
- Background noise may seem quite overwhelming!

**All of these things are 'normal' – with time your brain will start to make sense of your new world of sound.**

Especially in the early days be proactive:

- **Ask** "What is that sound?"
- **Move** through your home picking things up, switching things on and off and listening to the sounds.
- **Explain** "I can hear you but you're speaking too fast, please slow down".
- **Write** down new or interesting sounds you have identified.
- **Encourage** your friends and family to help you with listening practice and to give you feedback.
- **Think** about and prepare any comments or questions for your audiologist and rehabilitationist in time for your next appointment.
- **Relax** and remember that, with time your brain will sort out the new sounds, and that listening and understanding will improve.
- **Enjoy!**

# Basic Communication Strategies

### Reflective listening

It's important that you and your partner, friends and family can put some trust in your hearing. Non-committal shrugging due to not understanding should become a thing of the past! **Reflective listening** works on the basic principle that the listener (you) **reflects** some of the speaker's statement in your answer.

E.g. Speaker – “Wasn't it a cold and windy day yesterday?”  
You – “Yes it was very cold and windy wasn't it?”

This exercise helps your friends and family **trust** that you've heard them correctly.

### Active Listening

If you want to practise active listening (listening without looking), make sure your communication partner is aware of this so they continue to keep talking when you are not looking directly at them. It takes a bit of getting used to the fact that you need to try hearing without looking for both parties!

### Passive listening

In a small, familiar group that you're comfortable with just ask if you can 'check out' and spend some time removed from the conversation but still physically present. This gives you the chance to just listen and try to identify the words and/or speaker without looking, while also taking the pressure off you having to answer questions or be directly involved.

### Listening with your ear(s) not your eyes!

Because your friends and family are so used to you looking at them when they speak to you it can be a good idea to warn them if you're going to practise looking away while they're speaking! If you look away without warning them they may stop speaking which will halt the exercise! With all these exercises allow yourself 3 repeats before you turn and look for help.

Try these:

- Ask your training partner to practice colours, vegetables, shapes, days of the week or animals etc. with you. They should sit/stand behind or

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beside you and clearly say “red, orange, blue” etc. while you repeat back. This is a closed set task so there is some predictability in what is said which will help build your confidence to try trickier tasks.

- During a conversation angle yourself so that you can hear the speaker but not see them, continue the conversation the best you can while just listening.
- Asking your training partner to read aloud from the newspaper or a magazine while you listen. They should read slowly and clearly either behind or beside you. They could ask you to repeat what they’ve said or ask questions to test your understanding afterwards. As you improve the speaker should speed up a little.

Last but not least, it is very important not to compare yourself and your listening abilities to other implantees. It is tempting, and very human, to do this but please try not to. Everyone has their own unique hearing history which will invariably influence how well they do with their cochlear implant.

### **“Success” is a very individual measure.**

For one person it might be the ability to hear environmental sounds, for another it may be having a long conversation on the phone, for others being able to understand their grandchildren.

The important thing is for **you** to be satisfied you are doing your very best and that you are achieving goals that are realistic to your own situation.

Learning to get the best from your cochlear implant can be challenging. It is up to you how much listening practise you do, how often you use your implant and how you get others to communicate with you clearly.

We are here to help provide support and give you the “tool kit” but it’s up to you how you choose to use the “tools”!



# Accessories

## Bits and Pieces

### Batteries

Most people use their rechargeable batteries at first especially during normal day to day living and save their disposables for when they go away or can't easily use the rechargeable batteries for some other reason.

Depending on your battery life you may like to get into the habit of changing your rechargeable battery every morning when you first put your processor on and rotating the batteries on the charger so as to spread their use evenly.

Cochlear: You will get a 2 beep warning when you have about 10-15 minutes of battery life left.

MED-EL: You will get an intermittent 6 beep warning about 2 minutes before your battery runs out.

It's a good idea to carry a spare battery in case you get caught short!

### Drying Box

You should put your processor in the drying box every night where possible. This helps prevent moisture corroding the important parts, therefore prolonging the life of your processor! There is no need to disassemble the processor first you can just pop it in, making sure you have turned it off first.

**\*It does pay to remove the coil/cable to prevent it from becoming brittle which will prolong its life.**

**Change your Dry-Brik every 2 months** or if using the round metal canister check the desiccant colour regularly and bake if necessary.

After closing the lid on your dry box firmly don't forget to push the button on the side to set the 8 hour drying cycle!

### Cable

This is the wire that connects your coil (the round, magnetic bit) to your speech processor (the bit you wear on your ear). It's the most vulnerable part of the unit. If you have trouble with intermittent sound or crackling it can sometimes be due to your cable being damaged. To test it – give it a wiggle while wearing your processor – if the wiggling causes sound to cut out it needs to be replaced. You should have a spare one in your switch-on kit. If not, contact SCIP.



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# Medic Alert

It is recommended that all cochlear implant recipients have a Medic Alert (or similar) bracelet or necklace. In an emergency situation you may not be able to tell people that you have a cochlear implant. An MRI, executed without the necessary precautions, can seriously damage your cochlear implant and cause extreme pain. There are other contraindications for medical treatment for CI users which can also be kept on file with Medic Alert to keep you safe.

You can either go online [www.medicalert.co.nz](http://www.medicalert.co.nz) to order one or we can give you a copy of the form.

If applying online, there is a medical section that needs to be printed off, completed and signed by either your GP or Audiologist here at SCIP. You then post this to Medic Alert.

### Medical Condition Info to be included on form:

#### Doctor:

Mr Phil Bird  
L2/9 Caledonian Road  
St Albans  
Christchurch  
Ph: 962 6020

Mr Daran Murray  
L2/9 Caledonian Road  
St Albans  
Christchurch  
Ph: 376 4437

Dr Melanie Souter  
L2/9 Caledonian Road  
St Albans  
Christchurch  
Ph: 355 3299

### Engraved on Bracelet/Emblem:

(Bilateral) Cochlear Implant (L/R) (fill out as appropriate) – No MRI scan

### Medical Conditions (on form):

- (Bilateral) Cochlear Implant (L/R)
- MRI contraindicated
- Avoid current flow head and neck
- No ECT
- No ionising radiation
- No monopolar or electrosurgery (head region)
- No neurostimulation
- No shortwave or microwave diathermy

### Smoke Alarms

As a CI user you would usually detect the sound of a traditional smoke alarm in the daytime, however at night with your processor asleep in its dry box it's a different story. A special smoke alarm for deaf and hearing impaired people may be a worthwhile investment, particularly if you live alone. It uses a vibrating pillow pad and strobe light to alert you in the event of a fire. You may be eligible for funding, contact your local **hearing therapist** for details.

### Waking alarms

There are several portable options available. These can be very handy for those who travel a lot or who are just heavy sleepers and need that wake-up call! If you are interested, we have a demo **mytinyreminder** in the Clinic so just ask to see this. There are also other affordable options on Amazon

[www.mytinyreminder.com](http://www.mytinyreminder.com)

[www.amazon.com](http://www.amazon.com)

### Telecoil hooks

These aren't included in your kit but are available to try out at SCIP. Essentially they are a set of "headphones" and can be used with any device that has a headphone/headset socket. They work using the telecoil function on your speech processor and Hearing aid (if you have one in the other ear). Below are some examples of what they can be used with.

- TV
- Stereo
- Mobile phone
- Some home phones that have a headset jack.
- Airplane (great for movies, music)
- IPod/MP3 players
- Computer (Skyping, movies, music, games etc.)

They come as a single or double hook, depending on your needs and can be purchased directly from:

[www.tecear.com](http://www.tecear.com)



There are two brands available, Noizfree and T Link. T Link seems to be a little more reliable and they are also able to be fixed if they do break whereas the Noizfree can't be.

There is also an adaptor cable available for smartphones/iPhones.

**Personal Audio Cable – ask your rehabilitationist**

## Airline Adaptor Plugs

You will require one of these should you have telecoil hooks and wish to use them on the plane. These can be purchased at:

[www.shureonline.co.nz](http://www.shureonline.co.nz)

Once on the site, go to:

Earphone accessories >Adaptors and Cases>EAADPT-EA Ear phone adaptor plug. They cost \$9 and the shipping is free

# Phone tips – a guide to successful phone use:

Your success when making or receiving phone calls is dependent on several factors. It's worth recapping these as they are extremely important!

### 1/ Confidence and beating the “fear factor”

Not surprisingly, these have a huge influence as to how people cope with using the phone. Often we have terribly embarrassing memories of the last times we used a phone which was the end of our “phone career” before receiving an implant. This could have been quite some years ago but the memories are often still very vivid! To be a successful phone user we need confidence and the ability to get over the fear of “stuffing it up”!!

### 2/ Phone type

Your implant does best with the old technology - analogue phones with inbuilt telecoils. The good news is that many new digital phones offer a good clear signal as well – ask to try before you buy if possible! You can also visit your local hearing therapist or hearing association to trial a phone. Smartphones can be great too – bear in mind you get a better signal with Telecom and 2Degrees than with Vodafone.

### 3/ Positioning of the phone

Cochlear: The receiver of the phone needs to be over the top of the microphones on the processor. These microphones are situated just back from the ear hook on the top.

MED-EL: The receiver of the phone needs to be at the front of your ear just above the ear hook.

If you are not in the right spot the person will sound miles away. Also be aware that gravity pulls your hand down the longer you are on the phone. Some people report that they start off hearing really well but after a couple of minutes it's not so good...this is often gravity!

**Do experiment with the placement to get a good result.**

### 4/ Using the 'telecoil' option

This is especially helpful when just starting to use the phone again. It increases the volume as well as the clarity. In time after lots of phone practice, many people find they do not need to use the telecoil anymore. At the beginning it's easier to switch your "T" as you walk to the phone so the telecoil is activated by the time you answer.

### 5/ Troubleshooting

A common perception is that if you are not hearing well on the phone, it must be **YOUR** problem. This is not always the case!

If you have implemented all of the above and are still experiencing difficulties, it is more than likely that the problem is coming from the other end. This is when you need to troubleshoot!

#### Common causes

- Person is on a fax phone
- Person is on a digital phone
- Person is on a portable phone **AND** is possibly some distance from the base unit
- Person is wearing a headset where the microphone is positioned under their chin rather than in front of their mouth!
- There is excessive background noise (at either end)
- **Person is speaking too quickly**

#### Solution

- See if the person can change phones i.e. if they have a landline or fixed phone this is far easier to hear than a portable phone in most cases.
- Get them to slow their speech down or if applicable move their headset to a better position
- Eliminate the background noise

Using the phone successfully requires **confidence** and **loads of practice!**



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### Tips and practice

- Start by phoning family members or very close friends who are familiar with how they need to speak on the phone...**SLOWLY AND CLEARLY – not LOUDLY!**
- Make initial conversations very brief, build up the length as you gain more confidence
- Ask friends/family to phone at a designated time so you know who's calling.
- You do the calling to start with so you know who is going to answer.
- As confidence builds you can move on to more difficult tasks such as making appointments, phoning for takeaways, calling shops to see what time they close.

A great place to practice is on automated menus that some companies have such as:

- Air New Zealand
- Hoyts Cinemas
- Government Departments
- Supermarkets
- Metservice – 0800 WEATHER
- Local shopping malls

Use ones with 0800 numbers so it doesn't cost you to practice!

# Websites for Listening Practice

- **Pulse of the Planet**

This site has short audio recordings which are accompanied by the complete text with pictures on one page. These programs are created by Jim Metzner For PULSE OF THE PLANET and include customs and traditions from around the world.  
<http://pulseplanet.com>
- **Randall's ESL Cyber Listening Lab**

At this site, you can choose from a list of listening assignments that vary in length and difficulty. The conversations are created for second language learners to test their listening and you can read the transcripts and get help with vocabulary at Randall's place too.  
<http://www.esl-lab.com/>
- **EFL Club Songs**

Listen to the Beatles and other popular singers and improve your vocabulary. For a little more of a challenge, some of the words are missing from the lyrics for you to guess! This website is lots of fun!  
<http://www.eflclub.com/2songs/songs.html>
- **Elo**

Todd Beuckens designed this excellent site for beginner and intermediate learners of English. The audio clips are one to two minutes in length, use natural and informal English, and come with quizzes and dictionary links. Todd features interviews with speakers from all over the world.  
<http://www.ello.org>
- **TED: Ideas worth spreading**

Lots and lots of great speeches to listen to and learn from.  
<http://www.ted.com>
- **Many things**

Great practice with minimal pairs (words that only vary by one sound), songs, poems and tongue twisters.  
<http://www.manythings.org/pp/>
- **The Listening Room**  
<http://www.thelisteningroom.com>

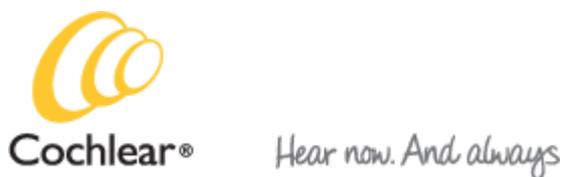
- **AngelSound**

Angel Sound™ is an **UPGRADED** and **FREE** version of “Sound and WAY Beyond”, an auditory rehabilitation program based on CAST technology and distributed by Cochlear Americas. Angel Sound™ includes more advanced training protocols (i.e., [bilateral training procedures](#), [advanced psychophysical training protocols](#), animated audio and visual feedback, remote data access, and advanced training customization with favourite [setting](#)) than Sound and WAY Beyond. Also, Angel Sound™ has more advanced training modules (i.e., [comprehensive music training](#), [auditory resolution training](#), and [functional hearing test module](#)). The functional hearing test module provides a perfect tool to self-assess your functional hearing with a variety of speech and music recognition tests, including auditory resolution, phoneme, music, speech in quiet and noise, and auditory cognition (short-term memory) etc.

[http://angelsound.tigerspeech.com/angelsound\\_about.html](http://angelsound.tigerspeech.com/angelsound_about.html)

# Angel Sound™

- Also try checking out the individual cochlear implant brand websites for up to date user support/rehabilitation websites. (Cochlear and MED-EL)



<http://www.cochlear.com/wps/wcm/connect/au/home/support/rehabilitation-resources/rehabilitation-resources>

MED<sup>9</sup>EL

<http://www.medel.com/bridge-rehabilitation/?titel=Rehabilitation&>

# Talking books

Talking books are a great way of practising your listening when your training partner is busy or you live alone.

If you've been given talking books by your rehabilitationist here are some pointers in how to use them effectively.

The idea of talking books is that it is a brain training exercise. Initially you may not understand any words without seeing them in the book but with practise this will gradually change.

- **Do NOT** attempt this task if you are tired
- **Short sessions** of 5-15 minutes are ideal
- **Listen AND read** along with the book one page at a time.
- **Rewind** the tape, close the book and repeat the page **just listening**
- **Repeat** this 2-3 times for each page  
(at this stage you're focussing less on the story and more on the actual words being spoken)
- When you're quite comfortable with the content of the story try just listening and see how much you can understand. **Only refer to the book if you get stuck.**
- As your ability to understand what is being said improves, challenge yourself by randomly fast forwarding the tape then try to pick up where you are in the story.
- Talking books also help with phone training as you are just listening and have no visual cues.

# Music

Cochlear implants were initially designed to enhance speech communication. However, as technology has improved over the years, people want more from their implants and music appreciation is high on a lot of people's lists.

Those with a long history of hearing impairment prior to implantation sometimes find music sounds much better post implant compared to the limited or distorted sound they got with their hearing aids. Those who've had a sudden and/or recent hearing loss tend to be more critical of the sound quality of music post implant.

Initially music can sound terrible but with time and practise, this can definitely improve.

### Tips for enjoying music:

- **Start out somewhere quiet** with good acoustics (i.e. not too much echo)
- **Good quality recordings** on good equipment gives you the best sound. No \$10 transistor radio is going to sound good!
- **Start with your old music** that you are familiar with or those with a simple repetitive melody and beat.
- **Listen to more simple music** to start with like country music or solo artists. Launching into heavy metal or an orchestra straight off is just too much for the brain to cope with!
- **Watching the artist** on You Tube or a DVD can be helpful as you can use visual cues to help you understand.
- **Obtain the words** to your favourite songs so you can follow along, you might discover you've been singing a few wrong words for years!
- **Practise and repetition** is the key to gaining or regaining pleasure from your music. The more you put in, the more you will get out! Listen to the same song for a few days then leave it for a week. You will be surprised at how much better the song sounds a week later.
- **Don't give up!** All good things take time. For some, music appreciation comes early on and for others it can take up to 2 years. So if it's really important to you, keep persevering, it will improve!

### Recommended websites for song lyrics:

[www.leoslyrics.com](http://www.leoslyrics.com)

[www.metrolyrics.com](http://www.metrolyrics.com)



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### Useful information:



Your local Hearing Therapist is:

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Your local Support Group contact is:

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Join the SCIP Facebook page:

<https://www.facebook.com/#!/groups/scip.paed/>

Check out the SCIP website for FAQ's and other interesting links/information:

<http://www.scip.co.nz/>



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### Component Warranty Periods for Cochlear and Med-EL

#### Cochlear

##### Nucleus CP900 Series

Internal Implant	10 years
Processor Unit	5 years
Coil, Coil cable and/or Coil Magnet	1 year
Rechargeable battery modules	1 year
Battery chargers and/or charging kits	1 year
Battery holders and/or battery covers	1 year
Remote assistant and/or remote control	1 year
Accessory cables and/or adaptors	1 year
All other accessories	90 days

#### Med-El

##### Opus 2

Internal Implant	10 years
Processor Unit	5 years
Coil	2 years
Fine Tuner	2 years
DaCapo Charger	2 years
Zephyr Dry Aid Kit	2 years
Audio cable	2 years
Battery Packs	1 year
Coil cables	1 year
DaCapo battery	1 year
All other parts	1 year

#### Rondo

Processor Unit	5 years
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**\*After warranty periods expire you will be required to cover the cost of any necessary parts or repairs.**

### Recommendations for use around water

Please refer to your implant manufacturer's website for guidelines about using your speech processor around water.

## Cautions for treatments

### 1/ Magnetic Resonance Imaging (MRI)

This is used to obtain images inside the body. It is carried out in a very strong magnetic field and metallic objects (like an implant) can move during examination.

Strengths of MRI machines can differ and lower strength machines can be used providing the head is heavily bandaged. For stronger machines the magnet may need to be surgically removed before the MRI can be safely performed.

**In all instances, please contact your Audiologist/Surgeon should there be a need for an MRI so the correct procedure can be followed.**

### 2/ Electrosurgery or Diathermy (in head or neck area)

This treatment is often used in surgical procedures to stop bleeding. Diathermy is also used as a deep heat treatment by physiotherapists

**Note: bipolar diathermy is considered safe.**

### 3/ Ionising Radiation Therapy

Is used to treat cancer. The concern is that the implant may stop some of the radiation.

### 4/ Electroconvulsive Therapy (ECT)

Used in the treatment of severe depression. Other treatments can be used.

**If in doubt about any proposed treatments or procedures please contact your Audiologist/Surgeon for clarification**



# Contact details:

### Rehabilitationists:

**Penny Monteath**

[penny.monteath@scip.co.nz](mailto:penny.monteath@scip.co.nz)

**Nikki Cleine**

[nikki.cleine@scip.co.nz](mailto:nikki.cleine@scip.co.nz)

**Phone**      0800 500 405 or 03 355 3041

**Fax**         03 355 3045

**Text**         027 355 3041

**Email**        reception@scip.co.nz

**Website**     www.scip.co.nz

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Milford Chambers  
St Georges Hospital  
249 Papanui Road  
Christchurch 8014