Hear Your Way

Cochlear™ Nucleus® Implant System

Your guide to a lifetime of better hearing

Dianne L.
Cochlear Nucleus recipient

Hear now. And always

Cochlear®

There's never been a better time to experience the joy of better hearing

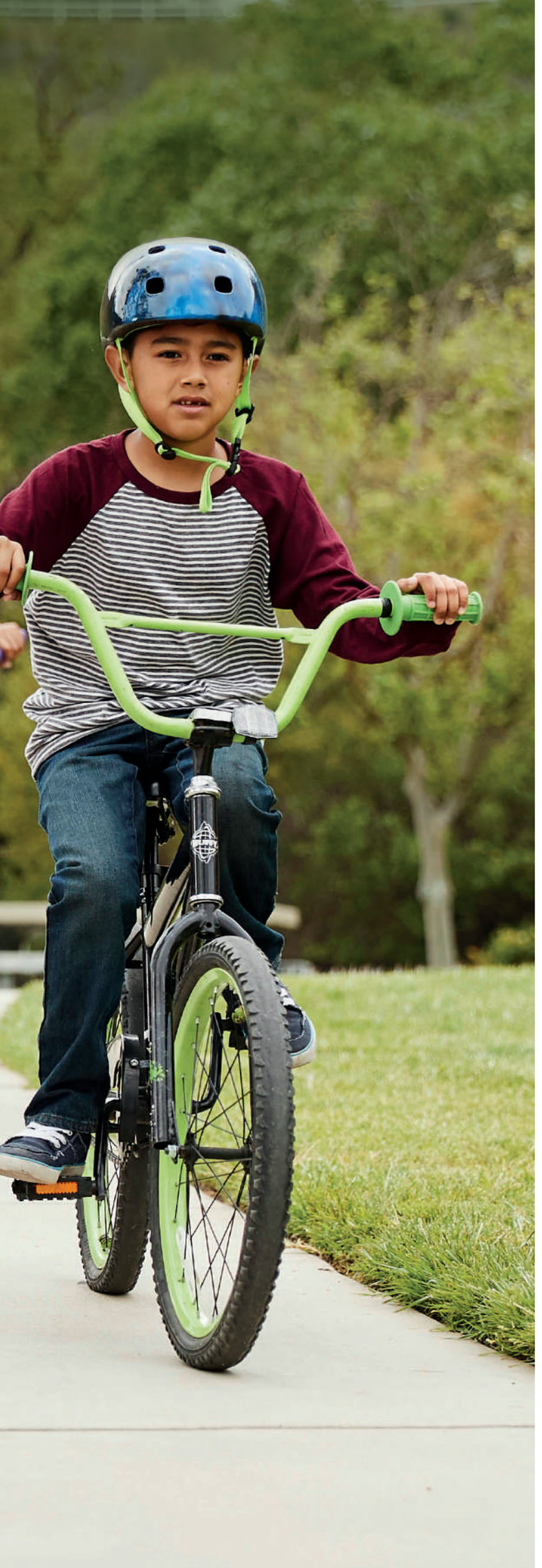
There are certain sounds that warm your heart and bring a smile to your face, like the sweet melody of music, or the familiar voices of those you love.

But what if you find yourself struggling to hear these sounds? Or what if your child isn't experiencing the joy of hearing the world around them?

We are committed to helping you or your loved one achieve the best possible hearing every day. This means providing you with innovative hearing solutions and unsurpassed support throughout your hearing journey – today and into the future.

With the Cochlear™ Nucleus® System we help you to enhance your hearing with a broad choice of wearing options, wireless connections and personalised services. This guide will equip you with key information about our company, products, technology, services and support.

Alexa and Kevin U.
Cochlear Nucleus recipients



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Cochlear Nucleus recipient

Solutions for your hearing loss

How a cochlear implant works

1. Dual microphones on the sound processor pick up sounds, and the processor converts them into digital information.
2. This information is transferred through the coil to the implant just under the skin.
3. The implant sends digital sound signals down the electrode into the cochlea.
4. The hearing nerve fibres in the cochlea pick up the signals and send them to the brain, which is understood as sound.

Justin P.
Cochlear Nucleus recipient

Selecting the right hearing technology is critical to hearing success

For some, hearing aids may be an effective option to treat hearing loss. However, when hearing aids are not enough, a cochlear implant may be able to help you get back the sounds you're missing and reconnect with the ones you love.

If your child has hearing loss, early intervention and access to sound is critical to help lay the foundation for fundamental speech, language, cognitive and social skills.[1] While hearing aids may be suitable for children with mild hearing loss, a cochlear implant may be the best solution if your child is not progressing as much as you and your audiologist expect. Your audiologist will work closely with you and your family to determine the best hearing solution for your child.

Hearing aids versus cochlear implants

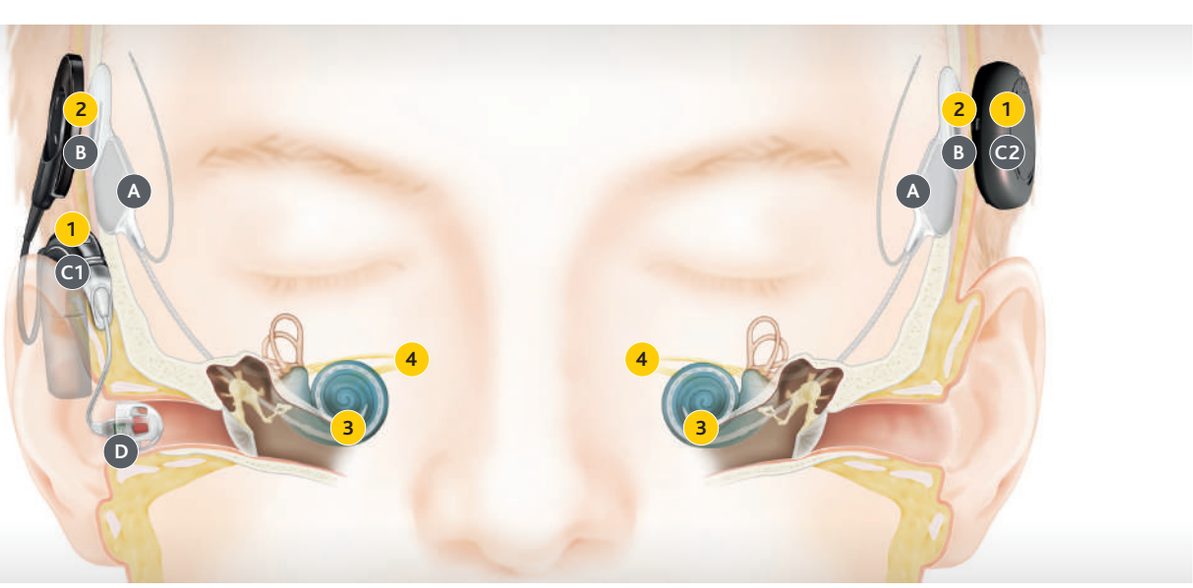
Cochlear implants help those with moderately severe to profound hearing loss who are not receiving enough benefit when using hearing aids. Unlike hearing aids, which make sounds louder, cochlear implants bypass the damaged parts of the inner ear to provide sound signals to the hearing nerve. This can make sound clearer to help you understand what is being said.

Hearing with a Cochlear Nucleus System

A Cochlear Nucleus System has both internal and external parts. The **implant** A is placed just under the skin behind the ear, while the external **sound processor** with **coil** B can be worn either **behind-the-ear** C1 (Nucleus 7 Sound Processor) or **off-the-ear** C2 (Nucleus Kanso® Sound Processor).

Depending on your specific needs, options are available for an additional **acoustic component** D that is worn in the ear canal.

For many, use of a hearing aid in one ear and a cochlear implant in the other can provide enhanced hearing performance.[2] This combination is referred to as bimodal hearing.



Hear Your **Way**

Will you benefit from a Cochlear implant?

Research and decades of experience demonstrate that cochlear implants help improve:

- Speech understanding, sound clarity and language skills[1]
- Awareness of sounds at levels within the normal range of hearing[1]
- Hearing in noise[3]
- Quality of life[3]
- Learning and employment opportunities[4]

When it comes to cochlear implantation in children, cochlear implants have been shown to result in improved speech development and educational outcomes.[1]

There are many factors that contribute to hearing performance with a cochlear implant. We recommend talking with a hearing professional to understand how a cochlear implant can open up a new world of hearing for you or your loved one.

Advanced implants for the best possible hearing

Cochlear Nucleus Implants are designed to give you the best possible hearing today and a future filled with sound.

Based on more than 35 years of research and innovation, the Nucleus Implant System includes unique components and innovative technology designed to give you superior hearing performance:

- Electrodes designed to fit the natural shape of your inner ear and preserve delicate structures
- Pre-curved electrodes for the most effective stimulation of the hearing nerve[5-8]
- Unmatched short-term and long-term implant reliability you can trust
- Implants that support advances in sound processor technology and adaptations to your implant program as your hearing needs change

The right implant for you

You are unique, and your hearing solution should be too. That is why we provide a range of implants and electrodes allowing your surgeon to choose the best one for your type of hearing loss and cochlea anatomy.

The Nucleus Profile™ and Profile Plus Series Implants are the thinnest in the world[7] and have a flexible coil designed to better fit the natural shape of your head.

The sleek, streamlined shape of Cochlear's latest generation implants offer a more discreet appearance than other, thicker devices. A lower profile implant is also important for children and seniors with thinner, sensitive skin.

At 3.9 mm, the Cochlear Nucleus Profile Plus Series Implant is the thinnest implant in the world[9]

Choosing Cochlear means choosing quality

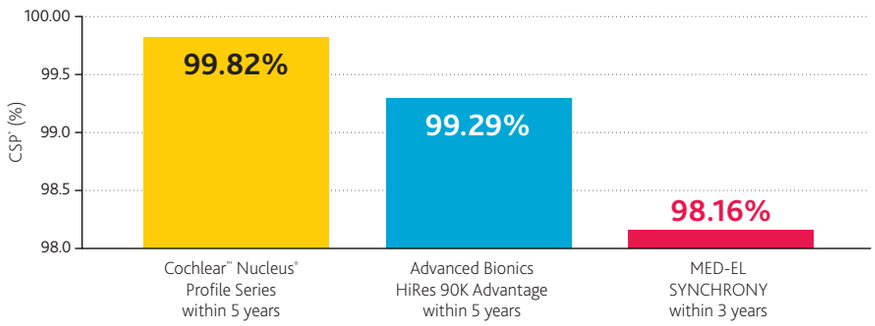
Be it for yourself or a loved one, when you choose a cochlear implant you need to trust that you are choosing the best possible hearing solution.

Cochlear Nucleus Implants are the most reliable in the industry.[10-12] We meet and report against the independent global standards for implant reliability,[13-16] publishing data of every implant generation, past and present.

#1 IMPLANT RELIABILITY[10-12]

Nucleus Profile 99.82% combined CSP* within five years

Latest generation implant reliability[10-12]



* CSP = Cumulative Survival Percentage

** The following Nucleus Profile and Freedom Implants are approved for MRI for up to 3.0T with the magnet removed and 1.5T with magnet in place with use of the Cochlear Nucleus Implant Bandage and Splint Kit: Nucleus Profile: CI512, CI522, CI532; Nucleus CI24RE: CI422, CI24REH, CI24RE(CA), and CI24RE(ST)

Designed for simpler MRI scans

The new Cochlear Nucleus Profile Plus Series Implant is designed for pain-free[17] 1.5 Tesla and high-resolution 3.0 Tesla MRI scans without removing the magnet in your device. This means no additional surgery, no need to wear a bandage in the MRI machine, no waiting for your scan and, most importantly, no unnecessary time without sound.[**]

SmartSound® iQ takes the hard work out of hearing

Speech
Hear speech more clearly

Speech in noise
Enjoy a conversation in noisy surroundings

Noise
Listen comfortably in noisy situations

Wind
Hear easily in the windy outdoors

Quiet
Appreciate soft sounds in quiet environments

Music
Enjoy listening to the music you love

ForwardFocus
Reduce distracting noise coming from behind you

Dianne L.
Cochlear Nucleus recipient

The Nucleus Sound Processor portfolio features our latest technology to help you hear your best

Our processors are designed to provide an optimised hearing experience, regardless of the situation or environment. With Cochlear Nucleus Sound Processors you can:

- Hear your best with industry-leading sound processing technology
- Easily provide key usage information to your audiologist with datalogging
- Enjoy direct streaming and control with world-first smartphone compatibility
- Experience wireless freedom with our range of Cochlear True Wireless™ Devices

Dual microphone technology for enhanced hearing performance

For better hearing performance in noise, Cochlear Nucleus Sound Processors give you the benefit of two microphones, so you hear more of the sounds that matter.

Automatic adjustment takes the hard work out of hearing

SmartSound® iQ with SCAN – the industry's first automatic scene classifier – is a sound management system designed to enable you to hear your best in any situation. It works by detecting the unique features of sound and using them to determine your listening environment. Every day it automatically makes hundreds of decisions to optimise your hearing performance, so that you don't have to.

ForwardFocus is an additional control feature exclusively available for the Nucleus 7 Sound Processor. ForwardFocus reduces noise coming from behind you, so you can more easily enjoy face-to-face conversation.

Hybrid™ Hearing* provides richer, fuller sound

Cochlear Hybrid Hearing is a combination of two proven technologies. The first technology is acoustic amplification. An acoustic component attaches to the Nucleus 7 Sound Processor to amplify the natural low-frequency hearing you may have after surgery.

The second technology is our innovative cochlear implant which provides access to the high-frequency sounds you've been missing.

Hybrid Hearing has been proven to increase hearing satisfaction and improve hearing performance in noise,[18] to help you enjoy richer, fuller sound in conversation with friends or when listening to music.

Cochlear Nucleus Kanso Sound Processor

Cochlear Nucleus 7 Sound Processor

Cochlear Nucleus 7 Sound Processor in Hybrid Mode

* The Cochlear Nucleus Hybrid acoustic component is not compatible with the Kanso Sound Processor.

Connect Your **Way**

Effortlessly connect to all your favourite devices

Cochlear Nucleus Sound Processors can improve your ability to enjoy your hearing every day by letting you connect wirelessly to your favourite devices.

Control at your fingertips

Available with the Nucleus 7 Sound Processor, the Nucleus Smart App lets you monitor, manage and control your hearing experience to ensure you are hearing your best.

You can conveniently access personalised hearing information with the Hearing Tracker, check battery life status or change volume and program settings – all directly from your smartphone.

8 out of 10 parents agree[19]

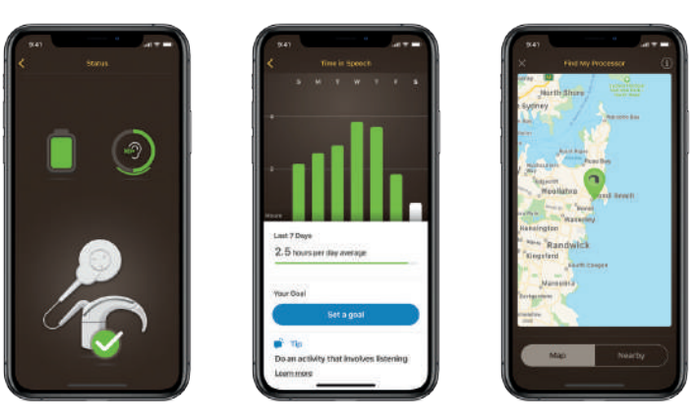
that the Nucleus Smart App gives them confidence that their child's sound processor is working properly

Direct streaming at its best

You can connect to the people you love and the things you love to do as you stream phone calls, video, music and entertainment directly to your Nucleus 7 Sound Processor from compatible Apple or Android devices.* Direct streaming provides outstanding sound quality and allows you to enjoy clearer audio without struggling to understand what is being said.

If your device is not compatible, you can wirelessly stream calls, music and more to your Nucleus 7 Sound Processor using the Cochlear Wireless Phone Clip.

Take control with the Nucleus Smart App



Control and monitor your sound procesor | **Track hearing** | **Locate a lost processor**

Download on the App Store | GET IT ON Google Play

* Visit www.cochlear.com/compatibility for a list of compatible devices.

Experience True Wireless freedom

For truly challenging listening situations, Cochlear's True Wireless Devices can be used with both Nucleus 7 and Kanso Sound Processors to help you watch TV without captions, talk on the phone, hear clearly in meetings and actively participate in classroom discussions.

Cochlear Wireless Mini Microphones

Whether at work, school or home, Cochlear Wireless Mini Microphones help you hear better over distance and in noisy situations, allowing you to hear your best wherever you are. And with the Mini Microphone 2+ you can also benefit from FM connectivity.

> "[Thanks to the Mini Microphone] he went to the top of his class"
>
> Kirsten B., mother of Quinten,
> Cochlear Mini Microphone user

Cochlear Wireless TV Streamer

With the Cochlear Wireless TV Streamer you can stream sound directly from your television to your sound processor without the need to adjust the volume or rely on captions.

Cochlear Wireless Phone Clip

With the Cochlear Wireless Phone Clip, you can stream conversation directly from your mobile phone or Bluetooth® compatible device to your sound processor. You can also stream music with high-performing sound quality, so you can enjoy the music you love.

Cochlear Wireless TV Streamer

Cochlear Wireless Phone Clip

Cochlear Wireless Mini Microphone 2+

Adjust your hearing with our convenient remote controls

In addition to the Nucleus Smart App, Cochlear's pocket-sized wireless remote controls allow you to personalise and adjust your settings on-the-go, without having to touch the sound processor.

Cochlear CR210 and CR310 Remote Controls

Justin P.
Cochlear Nucleus recipient

Participants in one study switching from a hearing aid to a cochlear implant experienced a leap in hearing performance[24]

28% Average hearing performance with two hearing aids

75% Average hearing performance with a cochlear implant and hearing aid

Mattias B.
Cochlear Nucleus recipient

Better hearing with a bimodal solution

For many, a cochlear implant in one ear and continued use of a hearing aid in the other, can provide enhanced hearing performance.[2] This combination is referred to as bimodal hearing.

A bimodal hearing system can provide many benefits:

- Improved speech perception in both quiet and noise[20-25]
- Increased ability to determine where sounds are coming from[20-22]
- Better sound quality and music perception[20,21,25]
- Improved quality of life[23]

These combined benefits help to build your speech and language understanding and are particularly beneficial for a child's learning and development.[26]

> "It streams to both devices at the same time as if it would be stereo... I think the best way to describe it is high definition."
>
> Mattias B., bimodal hearing solution recipient

Collaborating for a premium bimodal hearing experience

Together, Cochlear and ReSound offer a smart bimodal hearing solution which allows you to stream sound simultaneously into both ears using the Nucleus 7 Processor with a compatible Apple or Android device* and ReSound hearing aid.**

With a smart bimodal hearing solution you can use your smartphone to:

- Connect with others on the phone
- Rediscover the joy of music
- Easily control your device settings

Cochlear Nucleus 7 Sound Processor

Compatible Apple or Android device*

Compatible ReSound hearing aid**

* Refer to back page for detailed compatibility information.

** A list of compatible hearing aids is available online at: www.cochlear.com/nucleus/compatibility

24 **Alexa U.**
Cochlear Nucleus recipient

Wear Your Way

Cochlear Nucleus 7
Sound Processor with Hugfit™

Wearing options to suit your lifestyle

You can select from a range of wearing and retention options to help keep your sound processor securely in place, especially during physical activities and sports.

Michael D.
Cochlear Nucleus recipient

The Nucleus 7 Sound Processor is the world's smallest and lightest[26] behind-the-ear cochlear implant sound processor, offering up to 50% more battery life compared to its predecessor[27]

Power to keep you going for longer

With a choice of standard and rechargeable batteries, you have the flexibility to manage your power use all day, no matter where you are. Choices include:

- Disposable batteries (lasting up to three days)*
- Standard rechargeable battery (lasting up to 40 hours)*
- Compact rechargeable batteries (lasting up to 19 hours)*

> "It allows me to hear better, to interact better with other people and to carry on the social aspect and the athletic aspect of my life."
>
> Michael D., Cochlear Nucleus recipient

Innovative and convenient battery chargers

Charge your sound processor anywhere you are with the convenient USB charger that plugs into any high power USB 1.0 or higher. Alternatively, with the easy-to-use Y Charger you can charge two batteries at the same time.

Adventure-proof solutions

Whether your child is swimming, riding or scoring goals on the playing field, with Cochlear's child-friendly and adventure-proof solutions you can have peace of mind that their device remains safe and secure while your child is having fun.

Personalised colour options

The Nucleus 7 Sound Processor comes in a range of six colour options to suit your individual style.

Black (Silver detail) | **Black** (Gold detail) | **Brown** (Silver detail) | **Grey** (Silver detail) | **Sand** (Silver detail) | **White** (Silver detail)

* Battery life may vary by individual.

The Cochlear Nucleus Kanso Sound Processor is the smallest and lightest[26] off-the-ear sound processor available – so small you can forget you're wearing it

Dual microphones for significantly better performance

The Nucleus Kanso Sound Processor is the world's only off-the-ear cochlear implant sound processor with two microphones for better hearing performance in noise.[28]

68% improvement

using SCAN with dual microphones, giving a significantly better performance in noise compared with a single microphone[28]

Stay powered all day

The Kanso Sound Processor comes with disposable batteries so you can stay on air for as long as you need.*

Keep your processor safe and secure

Kanso Sound Processor retention options include:

- Long Safety Line with Hair Clip – can attach to your clothing**
- Short Safety Line with Hair Clip – a more discreet retention option, suitable for children
- Cochlear Headband – an optional accessory that holds the sound processor in place

Shades to match your hair colour

A range of eight colour options means you can choose the shade that best matches your hair or skin tone.

Black | **Chocolate brown** | **Copper brown** | **Golden blonde** | **Sandy blonde** | **Slate Grey** | **Silver** | **White**

* Battery life may vary by individual.

** The Long Safety Line is not recommended for use by children as it may present a risk of strangulation.

Swim, soak and splash with Aqua+

Being able to play in and around water is one of life's joys. Nucleus Sound Processors have an impressive water resistance rating,[29,30] making them sweatproof and splashproof even in high humidity environments. For swimming or other water-based activities, Aqua+ transforms a Nucleus 7 or Kanso Sound Processor into a waterproof solution.[31,32]

Maneh S.
Cochlear Nucleus recipient

 David W.
Cochlear Nucleus recipient

Care Your Way

32 **Holly T.**
Cochlear Nucleus recipient

Holly's story

Holly became totally deaf when she contracted meningitis as a four-year-old in 1987. Eight months later, she was the first child in the world to receive a commercial Cochlear Nucleus Implant.

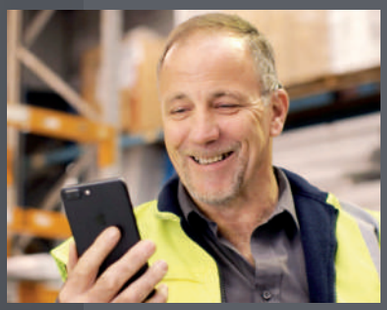
Now a successful corporate lawyer, Holly believes her fast-paced career would not have been possible without her cochlear implant.

> "I can't imagine what my life would be like without the implant. It's allowed me to make the choices that I wanted to make, and live my life the way I wanted to live."
>
> Holly T., Cochlear Nucleus recipient

In the 30 years since her surgery, Holly has benefitted from six new sound processor upgrades, each better than the last as a result of Cochlear's industry-leading technology and enduring commitment to research and development.

Today, her favourite sounds are the heart-warming giggles of her baby daughter.

"The quality of the sound that I hear is incredible… I'm able to hear all the sounds that my daughter makes – the most beautiful sounds – and that to me is pretty amazing."



Karl K.,Cochlear Nucleus recipient

"My confidence has grown hugely since I have had the implant and the sound and clarity of the Nucleus 7 has definitely helped me in my social life. Since I have had the implant I have engaged in conversations with people where I would have not in the past – I would have avoided all conversations."

Getting a cochlear implant can be a transformative journey and is easier than you may think. From initial evaluation through to reintegration into the world of sound, getting an implant is an established and straightforward process.

Evaluation

Getting a cochlear implant begins with an initial screening by a hearing specialist, followed by additional tests at a cochlear implant clinic. If these assessments confirm that a cochlear implant is a suitable solution for you or your child, you will then have the opportunity to discuss the procedure, benefits and possible risks with a specialist before scheduling the procedure.

Cochlear implant procedure

The implant surgery is usually an outpatient procedure, but may sometimes involve an overnight stay. The procedure is typically done under general anaesthesia and usually takes only a couple of hours.

Activation

An activation appointment will be scheduled a few weeks after the cochlear implant procedure.* This is the day that you or your loved one will start to hear sound through the device. Your audiologist will work with you or your child to fine-tune settings over subsequent sessions for optimal hearing.

Rehabilitation

Daily practice is an important part of the process as you need time to adjust to the new way of hearing sound. Your rehabilitation program will involve developing new listening skills through daily activities, which may include:

- Using your implant system for as many hours a day as possible
- Reading aloud to yourself and with your family and friends
- Listening to audio books while you read along with a printed copy
- Listening to songs that are easily recognised

For your child, habilitation will be critical as they learn to listen, talk and develop cognitive skills. Our promise to you is that we will continue to develop innovative technologies and provide tools and resources to support your child on their hearing journey.

* Activation date will be determined by your hearing professional.

Steps to getting a cochlear implant

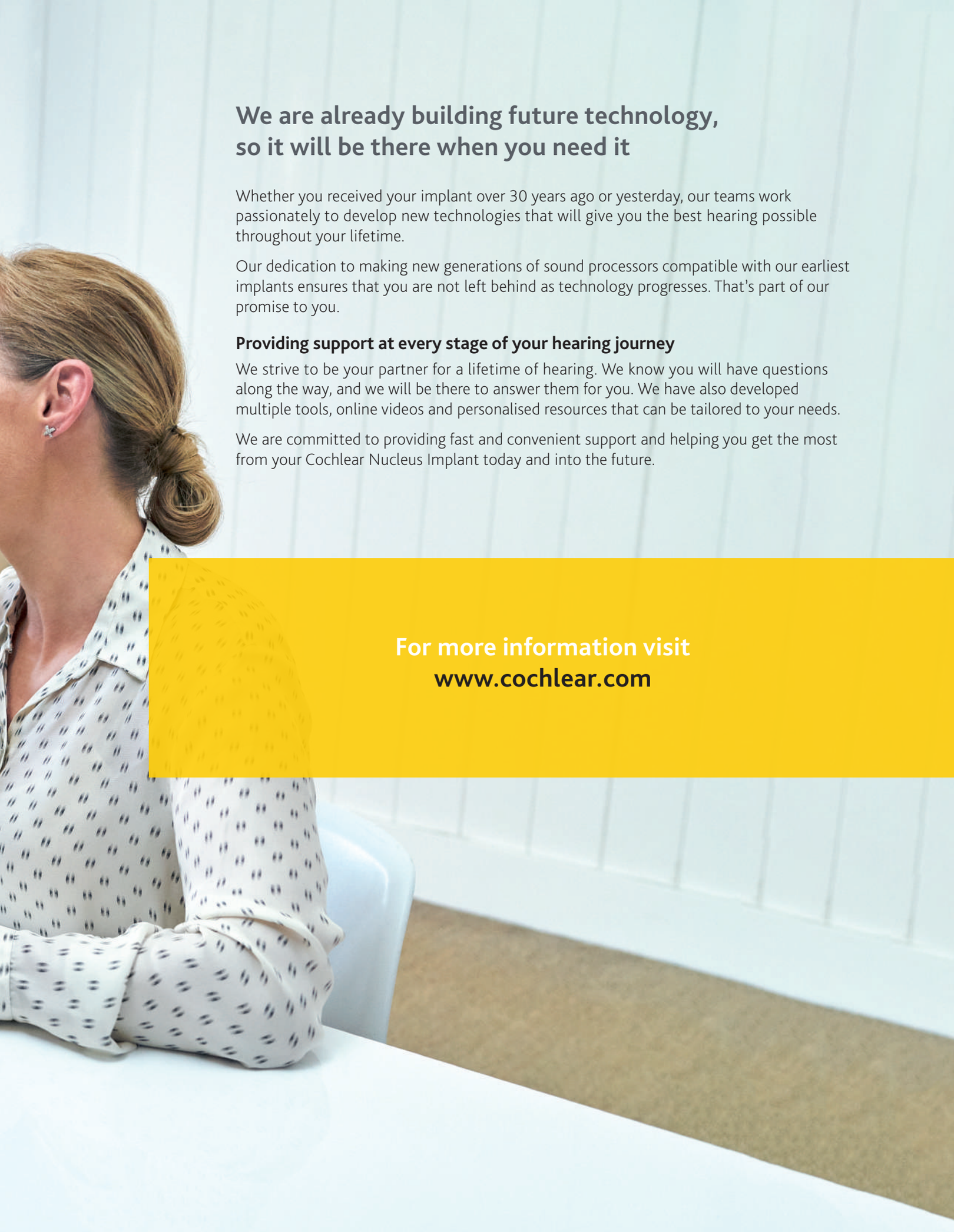
Evaluation
A hearing specialist will run tests to see if you are a candidate

Implant procedure
An outpatient procedure, most people return to normal activities in less than a week

Activation
Three to six weeks after surgery your audiologist will activate your implant

Rehabilitation
Rehabilitation will involve developing or re-learning listening and language skills

Colleen P.
Audiologist



We are already building future technology, so it will be there when you need it

Whether you received your implant over 30 years ago or yesterday, our teams work passionately to develop new technologies that will give you the best hearing possible throughout your lifetime.

Our dedication to making new generations of sound processors compatible with our earliest implants ensures that you are not left behind as technology progresses. That's part of our promise to you.

Providing support at every stage of your hearing journey

We strive to be your partner for a lifetime of hearing. We know you will have questions along the way, and we will be there to answer them for you. We have also developed multiple tools, online videos and personalised resources that can be tailored to your needs.

We are committed to providing fast and convenient support and helping you get the most from your Cochlear Nucleus Implant today and into the future.

For more information visit
www.cochlear.com

This helpful glossary explains some of the terms you may encounter as you begin your journey towards getting a cochlear implant.

Acquired deafness: A severe to profound hearing loss that develops later in life.

Audiogram: A graph obtained during a hearing evaluation that illustrates a person's hearing in each ear, indicating the degree and type of hearing loss.

Audiologist: A professional who diagnoses and treats individuals with a hearing impairment.

Auditory: Relating to hearing.

Auditory Verbal Therapist: A professional who specialises in enabling cochlear implant recipients to make sense of the sound relayed by their devices.

Bilateral hearing: Using the same hearing technology in both ears, either with two hearing aids or two cochlear implants.

Bimodal hearing: Using a hearing aid in one ear and a cochlear implant in the other ear.

Binaural hearing: Using both ears to hear sounds.

Binaural/Bilateral hearing loss: Hearing loss affecting both ears.

Congenital hearing loss: A hearing loss that is present at birth.

Intensity: The loudness of a sound measured in decibels (dB).

Frequency: The pitch of a sound is measured in Hertz (Hz).

Hearing threshold: The softest sound that a person can hear at a specific frequency. Hearing thresholds are displayed on an audiogram to show an individual's hearing loss.

Hybrid Hearing: Combining acoustic amplification with cochlear implant technology.

Localisation: The ability to determine where a sound comes from.

Otolaryngologist: A physician that treats ear, nose, sinus and throat disorders and diseases.

Otologist: A physician who specialises in treatment of ear problems.

Perimodiolar: Close to the hearing nerve.

Post-lingual deafness: Deafness that occurs after language acquisition.

Rehabilitation: Specialised training for people with hearing loss to help them learn to speak and understand language through listening. For a person who has never heard or spoken, this is sometimes called habilitation.

Residual hearing: The amount of remaining hearing that a person has after experiencing a hearing loss.

Sensorineural hearing loss: The most common type of hearing loss, occurring when there is damage to the inner ear (cochlea) or the nerve pathways to the brain. This type of hearing loss is usually permanent.

Speech frequencies: The range of frequencies most important for hearing and understanding speech from 250 to 6,000 Hz.

Speech therapist: A specialist who can assess, diagnose and treat children or adults with communication or swallowing disorders.

Teacher of the Deaf: A professional who specialises in teaching children who are deaf or hard of hearing.

Unilateral hearing loss: Hearing loss in one ear.

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Hear now. And always

As the global leader in implantable hearing solutions, Cochlear is dedicated to helping people with moderate to profound hearing loss experience a life full of hearing. We have provided more than 550,000 implantable devices, helping people of all ages to hear and connect with life's opportunities.

We aim to give people the best lifelong hearing experience and access to innovative future technologies. We have the industry's best clinical, research and support networks.

That's why more people choose Cochlear than any other hearing implant company.

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