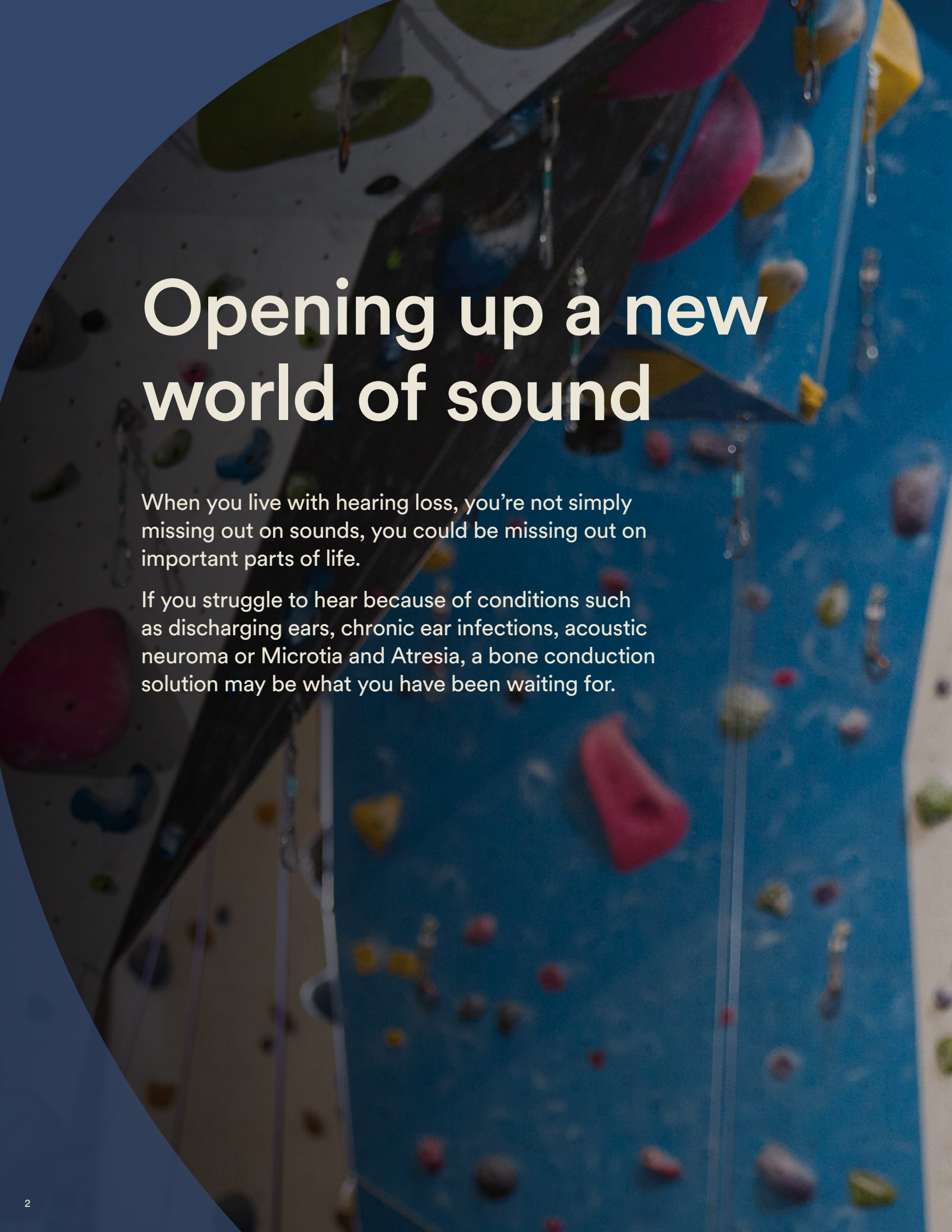


Cochlear®
Hear now. And always

Life's worth hearing

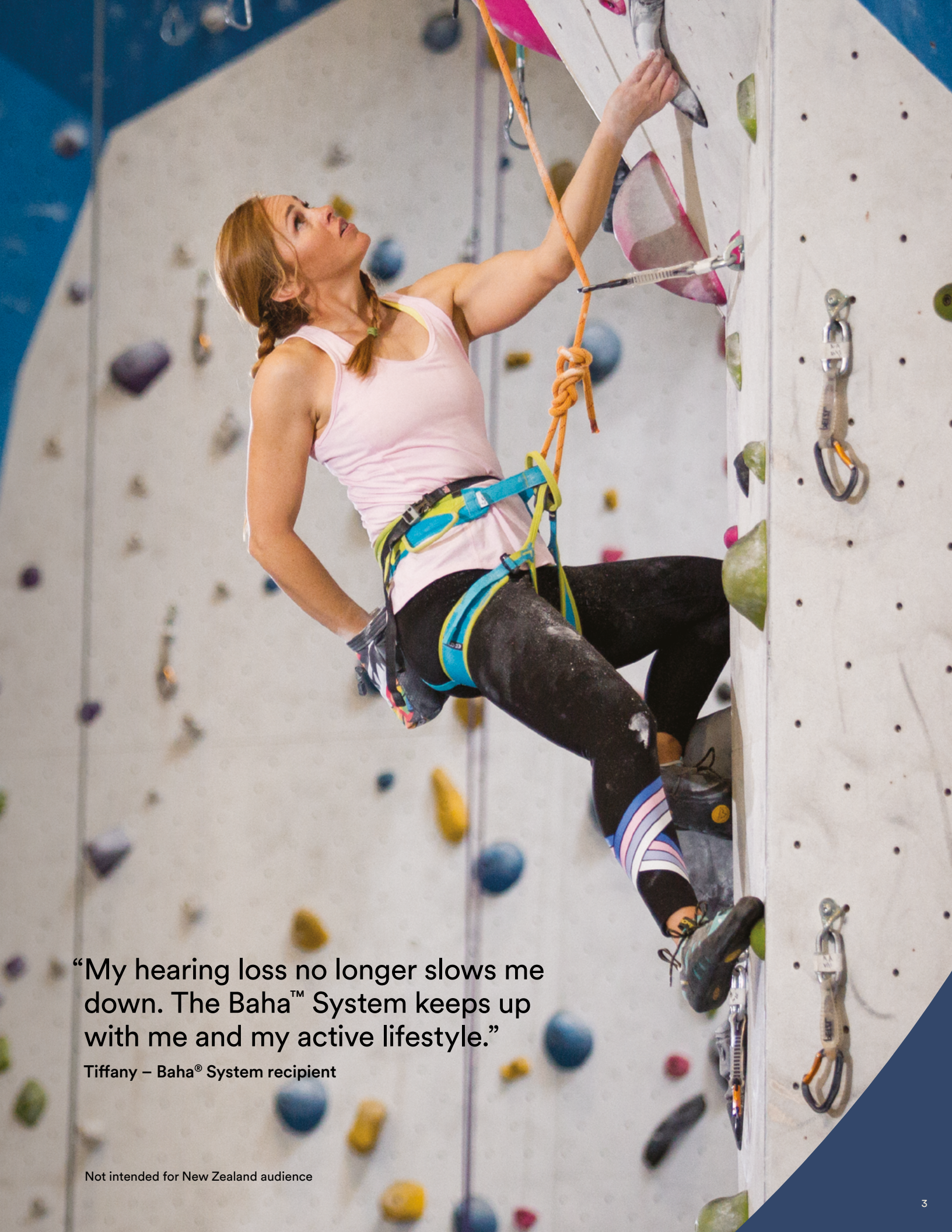
Exploring a Cochlear™ Bone Conduction Solution



Opening up a new world of sound

When you live with hearing loss, you're not simply missing out on sounds, you could be missing out on important parts of life.

If you struggle to hear because of conditions such as discharging ears, chronic ear infections, acoustic neuroma or Microtia and Atresia, a bone conduction solution may be what you have been waiting for.



“My hearing loss no longer slows me down. The Baha™ System keeps up with me and my active lifestyle.”

Tiffany – Baha® System recipient

Not intended for New Zealand audience

Hope when you need it most

Every hearing loss is different and the causes vary from person to person. Your hearing loss may affect one ear or both ears and it may stem from a problem in the inner, middle or outer ear. Depending on the degree of hearing loss and which part of the ear is damaged, a bone conduction solution may help you regain access to the sounds you have been missing.

Cochlear™ bone conduction solutions are clinically proven medical treatment options for those with single-sided deafness, conductive hearing loss or mixed hearing loss.

Single-sided deafness (SSD)

Sensorineural hearing loss in one ear where you have little or no hearing in that ear, but normal hearing in the other ear.

Possible causes:

- Sudden deafness
- Acoustic neuroma
- Birth defects
- Genetics
- Head trauma
- Meniere's disease
- Adverse reactions to drugs
- Malformation at birth or missing inner ear or cochlea

Conductive hearing loss

When your outer or middle ear is damaged and prevents sound from reaching your inner ear.

Possible causes:

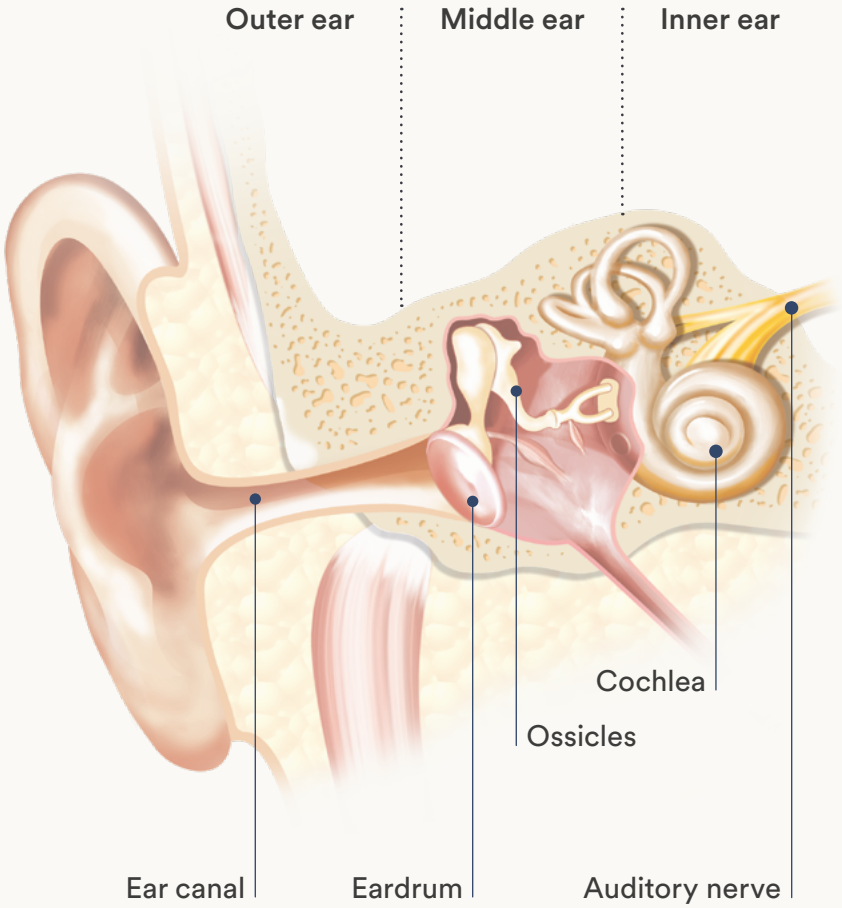
- Malformations at birth
- Microtia and/or Atresia
- Discharging ears
- Chronic ear infections
- Previous ear surgeries
- Chronic mastoiditis or middle ear infections
- Skin growth or cyst (cholesteatoma)
- Syndromes such as Down, Goldenhar and Treacher Collins

Mixed hearing loss[1-6]

Refers to a combination of conductive and sensorineural hearing loss. This means there may be damage in both the outer or middle ear and the inner ear.

Any of the causes of conductive hearing loss plus any of the following:

- Ageing
- Exposure to loud noise
- Head trauma
- Genetics
- Meniere's disease



Anatomy of the ear



This image displays a Baha 7 Sound Processor

Understanding treatment options for your hearing loss

Today there are a variety of hearing solutions to treat different types of hearing loss. Depending on the type of hearing loss you have, some hearing solutions may be more effective than others. Speak to your audiologist or surgeon about trialling a bone conduction solution to see how it sounds for you.

Possible solutions for single-sided deafness

- Contralateral Routing of Sound (CROS) hearing aids
- Bone conduction solutions
  - Cochlear™ Osia® System
  - Cochlear™ Baha® System

Possible solutions for conductive and mixed hearing loss

- Medications
- Surgery and amplification
- Hearing aids
- Bone conduction solutions
  - Cochlear Osia System
  - Cochlear Baha System

How bone conduction solutions are different

To CROS and traditional hearing aids:

- Our portfolio of bone conduction solutions offers discreet wearing options that you only need to wear on the hearing impaired ear(s), while CROS hearing aids require users to wear devices on both the normal and the hearing impaired ear.
- Research in patients with SSD shows better speech recognition in noise with bone conduction hearing devices compared to CROS hearing aids.[1-3]
- While wearing conventional bone conduction hearing aids, volume and sound quality can be limited because the skin acts as a barrier.

Than middle ear surgery:

- If you have had an unsuccessful middle ear surgery or surgeries to help restore natural hearing, a bone conduction solution might be for you.

Could a bone conduction solution help you?

Ask yourself the following questions and if you answer "yes" to ANY of them, then speak to your audiologist on whether a bone conduction solution may be right for you:

- ☐ Can you only hear from one ear?
- ☐ Do you suffer from sore or irritated ears due to your hearing aids?
- ☐ Do you have trouble getting sufficient loudness when using hearing aids?
- ☐ Do you suffer from chronic ear infections?
- ☐ Do you have draining ears?
- ☐ Do you battle feedback such as whistling hearing aids or distorted sound?
- ☐ Do you have malformed ears or ear canals?
- ☐ Are you unhappy with your hearing aids?



Benefits of hearing through bone conduction

Research and decades of experience demonstrate the benefits of a bone conduction solution compared to leaving your hearing loss untreated.[4-6]

With a bone conduction solution you may be able to:

- Hear better, even in noisy situations.[1,4]
- Enjoy a clean, more natural sound because bypassing the damaged part of your ear may reduce the amount of amplification needed to help you hear better.[3,5,6]
- Hear sounds as if they are coming from both sides.[1,4,8]
- Become more aware of your surroundings, increasing your ability to hear important sounds.[4,7,8]



Adrian – Osia recipient



Cochlear bone conduction solutions

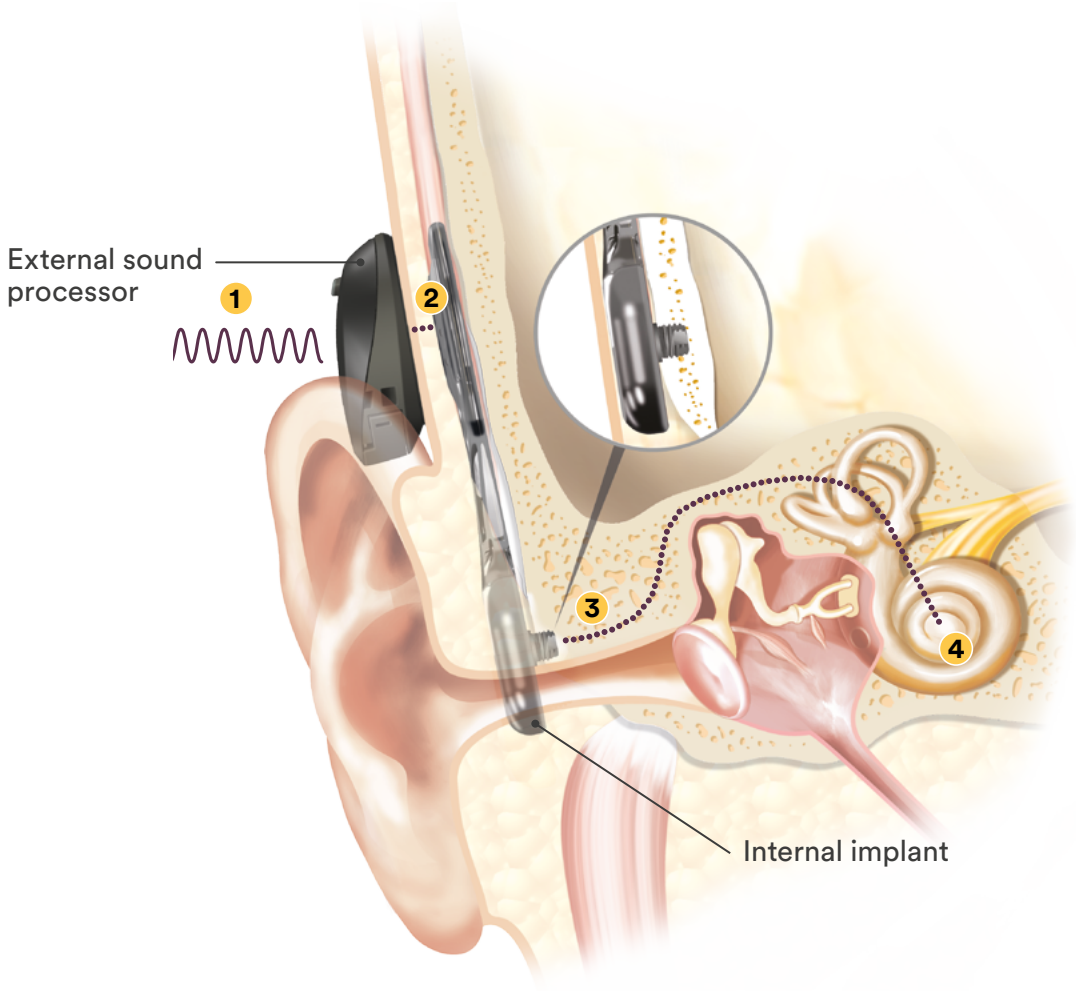
The Cochlear portfolio of bone conduction solutions offers implantable and non-surgical options that are designed to meet your individual needs and provide exceptional hearing performance. Our bone conduction solutions are supported by strong clinical evidence for managing conductive and mixed hearing loss, as well as single-sided sensorineural deafness.

Cochlear bone conduction solution

Osia® System

The Osia System

It uses piezoelectric stimulation to bypass the damaged areas of the middle and outer ear to send vibrations directly to the inner ear. This type of stimulation is novel for bone conduction solutions. The Osia System is made up of two parts: the implant and transducer (the part that creates the vibrations) that are located under the skin, and the sound processor which is placed externally off the ear.



How the Osia System works

1. The discreet sound processor sits just off the ear where it captures sound in the air and analyses the signal.
2. The processed sound signal moves through the skin to the OSI300 Implant. The implant sits fully under the skin.
3. A transducer in the implant generates sound vibrations, which cannot be felt, and sends them through the implant to the bone.
4. The vibrations travel to the inner ear where they are converted into electrical impulses and sent to the brain to be interpreted as sound.

Osia 2(I) Sound Processor**

The slim, off-the-ear Osia Sound Processor is light and comfortable to wear. As a one-piece unit that includes the magnet and battery, you can simply place it on your head and you're ready to go. Its small size is designed to allow you to wear it all day.

- For those with hearing loss up to 55 dB SNHL*
- Offers direct streaming with compatible Apple devices**
- Dust and moisture resistant†
- Can easily become waterproof with the Aqua+ accessory†
- Control your hearing experience conveniently from your compatible smartphone with the Osia Smart App
- LED light to confirm that the sound processor is on and connected
- Provides easier access to MRI scans at 1.5 and 3.0T strength without the need to surgically remove your implant or implant magnet.‡



Osia 2(I) Sound Processor

Colour options:

Sandy Blonde | Chocolate Brown | Slate Grey | Silver Grey | Black

* SNHL means sensorineural hearing loss.

** The Osia 2(I) Sound Processor is only compatible with the OSI300 Implant.

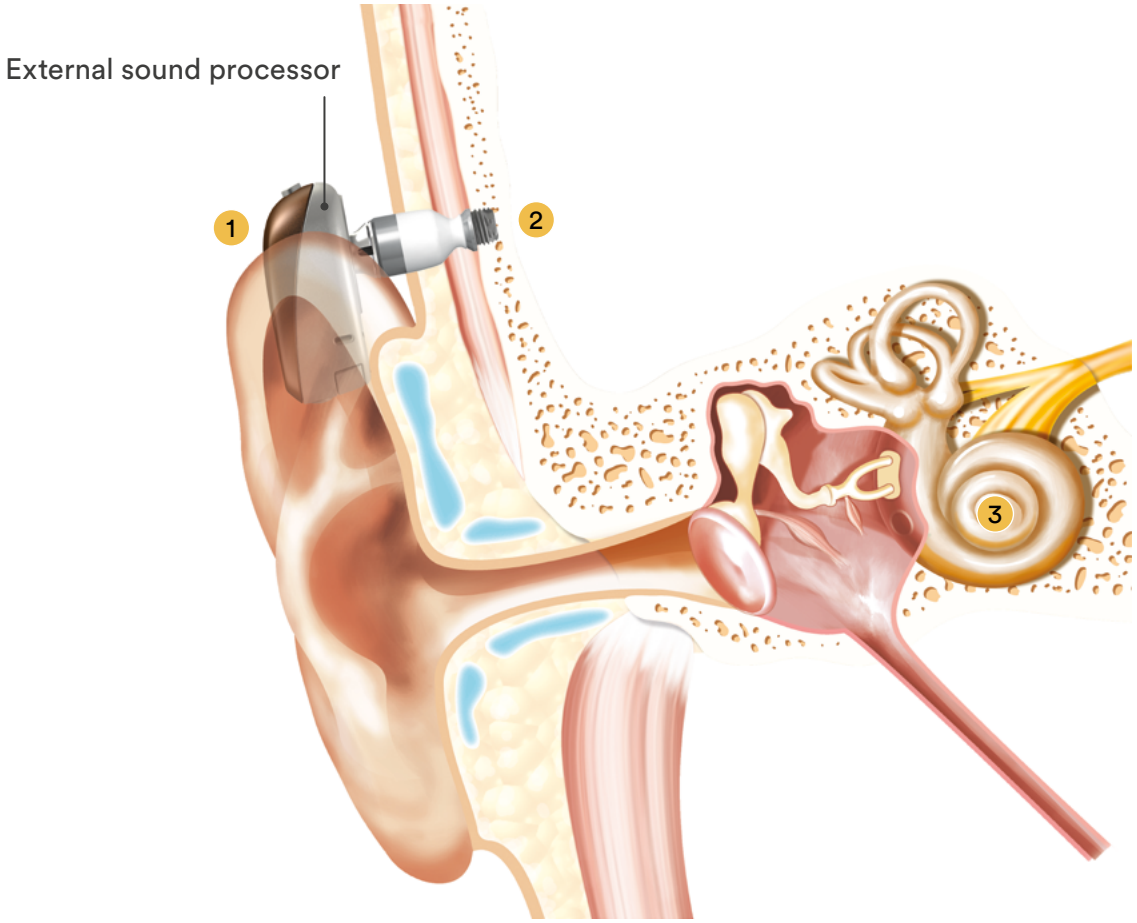
† The Cochlear Osia 2 Sound Processor, with battery compartment excluded, is dust and water resistant to level IP57 of the International Standard IEC60529. The Osia 2 Sound Processor with Aqua+ is water resistant to level IP68 when used with LR44 alkaline or nickel metal hydride disposable batteries. Refer to the relevant user guide for more information.

‡ Cochlear Osia implants are MR Conditional, meaning they have demonstrated safety in the Magnetic Resonance Imaging (MRI) environment within defined conditions. Always read the instructions for use and discuss with your doctor before undertaking any MRI procedure.

Cochlear bone conduction solution

Baha® System

The Baha System uses a small abutment to provide a direct connection between the implant and sound processor.



How the Baha Connect System works

1. The Baha® 7 Sound Processor picks up sound vibrations from the environment.
2. The sound vibrations are transferred through an abutment to a small titanium implant inserted in the bone behind the ear.
3. The sound vibrations are then sent directly through the bone to the inner ear (cochlea) where they are converted into electrical impulses by tiny hair cells inside the cochlea. These impulses travel to the brain, allowing you to perceive sound naturally.

In Australia, Baha® bone conduction implant systems are intended for the treatment of moderate to profound hearing loss.

Baha 7 Sound Processor

To help you experience clear, rich and natural sound in noisy environments, a powerful sound processor is very important. When we designed the Baha 7 Sound Processor, we wanted to ensure that although it is small in size, it is packed with power.

- For hearing loss of up to 55 dB SNHL*
- Stream phone calls, meetings and music directly to the sound processor with iOS and Android™ compatibility.#
- First sound processor with Bluetooth® LE Audio, enabling connection to compatible devices
- Auracast™ broadcast audio ready, enabling access to audio streams in supported public venues†
- Dust and water resistant (IP68) **
- LED visual indicator to show device status
- Baha Smart App‡: control and adjust settings, programs, and track hearing progress
- Remote Care compatible‡: remote counselling and full programming via Baha Smart App and Baha Fitting Software



Baha 7 Sound Processor

Colour options:



Mint Black Brown Copper Silver Blonde Lavender

* SNHL means sensorineural hearing loss.

For information regarding the compatibility of Cochlear's sound processors with Apple or Android devices, visit www.cochlear.com/compatibility

† Auracast™ broadcast audio capability is subject to third-party adoption of the Auracast protocol.

** The Cochlear™ Baha® 7 Sound Processor, with battery compartment excluded, is dust and water resistant to level IP68 of the International Standard IEC60529. Refer to the relevant user guide for more information.

‡ Cochlear's range of Smart Apps are available on App Store and/or Google Play. For information regarding the sound processors, operating systems and devices that are compatible with Cochlear's range of apps, visit www.cochlear.com/compatibility

Because children deserve the best start

The whole world is a child's classroom, and parents want to feel sure their child is tuned in, ready to learn and grow. The more confident a child feels wearing their device, the more confident they'll feel exploring the sounds around them.

Baha Start is an easy-to-use bone conduction solution that doesn't require surgery. There are two types of wearable options available: the new Baha SoundBand™ and the Baha SoundArc™. By attaching the powerfully small Baha 7 Sound Processor to either, eligible patients can gain immediate access to sound as early as possible, or as a demo solution for all ages before choosing an implant.

The Baha SoundBand is a durable, comfortable solution specifically designed for infants and toddlers who are not yet ready for implantation. It is an effective solution for an infant with conductive hearing loss due to microtia or other aetiology.

The Baha SoundArc is a sleek, stylish and more discreet solution designed to be used by older children or adults usually prior to implantation. Baha SoundArc sits comfortably behind the head and can be used as an evaluation tool of the potential benefits of bone conduction.



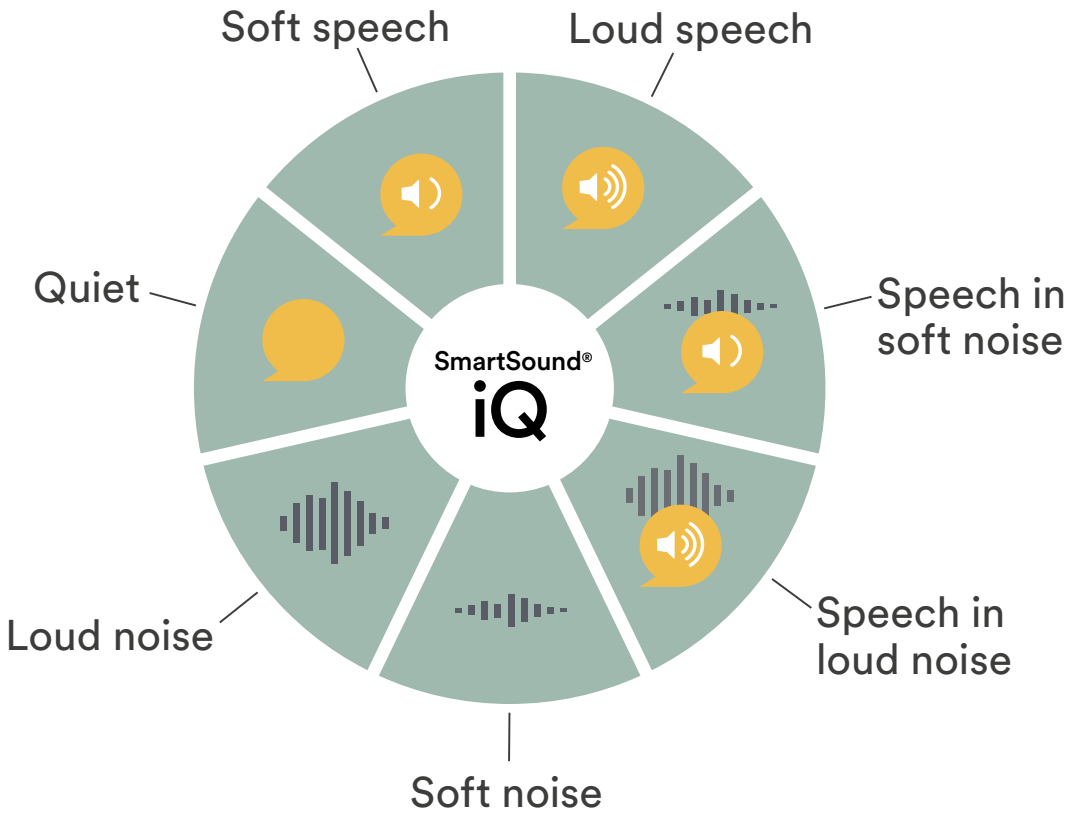

We are here for you – today and in the future

Sound processors that adjust automatically

Every listening environment is different with varying levels of background noise. Natural hearing adapts seamlessly to these changes. Both the Osia Sound Processor and the Baha 7 Sound Processor are designed to act the same way that natural hearing works without the need to make manual adjustments.

SmartSound® IQ technology is designed to:

- Analyse your surroundings, identify the listening environment and automatically adjust sound processor settings based on where you are
- Provide a more comfortable listening experience with improved hearing performance
- Help you enjoy clearer, crisper sound even in noisy environments



Hear what you want to hear, no matter where you are

Cochlear is leading the industry in connectivity. Whether with Baha Start, the Osia System or the Baha System, patients and their hearing health professionals have access to smart technologies designed to improve the hearing experience.

Streaming options

Whether it is in a noisy restaurant, at work or at home, patients can enjoy speech, sound and music streamed directly to their sound processor from their compatible* phones and other devices, as well as compatibility with a range of wireless devices. Cochlear is also the first in implantable hearing to enable Bluetooth® LE Audio and ready for Auracast™ broadcast audio streaming**, making it possible for LE Audio-enabled sound processors to connect in more situations than ever before.

SmartSound® iQ sound quality

Cochlear's bone conduction devices feature SmartSound® iQ signal processing. Its scene classifier scans the full soundscape and automatically adjusts for the patient's environment. It is designed to enhance speech, reduce noise and increase comfort.

Connected Care

The intuitive design of Cochlear's fitting software aims to streamline the fitting experience for hearing health professionals.

Cochlear's Smart Apps, available on App Store and Google Play, let recipients personalise their hearing experience, including changing programs, activating streaming, adjusting volume on their sound processor and much more.

Made for iPhone | iPad | iPod

* For information regarding the compatibility of Cochlear's Sound Processors with Apple or Android devices, visit www.cochlear.com/compatibility. Cochlear's range of Smart Apps and Support Apps are available on App Store and/or Google Play. For information regarding the sound processors, operating systems and devices that are compatible with the Cochlear's range of Smart Apps and Support Apps, visit www.cochlear.com/compatibility.

** Auracast™ broadcast audio capability is subject to third-party adoption of the Auracast protocol.

Better hearing starts here

Those who have a bone conduction solution reported a significantly higher quality of life compared to when they left their hearing loss untreated.[7,8]

Once you make this life-changing decision, there are a few steps to get you on your way to better hearing.

01 Visit a Hearing Implant Specialist for a hearing test

If you haven't already met with an audiologist, then now is the time. You will complete a hearing test to find out if you may benefit from a bone conduction system.

To find an audiologist in your area, visit https://www.cochlear.com/au/en/connect/find-a-clinic

02 Obtain insurance approval

Unlike hearing aids, bone conduction implant systems are typically covered by your private hospital insurance.* You will need to check your coverage to ensure the device is covered and you understand any additional costs associated with your hospital stay, such as a gap or excess. The hearing implant team or your audiologist may submit the necessary paperwork to your insurance company to start the approval process.

For more information, visit https://www.cochlear.com/au/en/home/diagnosis-and-treatment/costs-and-payment

03 Choose the best bone conduction solution for you

All bone conduction solutions are designed to restore access to sound in a similar fashion, yet there are noticeable distinctions between the devices. Think beyond today and consider what you want for the future.

04 Outpatient surgery

A bone conduction implant procedure is typically a same day, outpatient procedure and is performed under general anaesthesia. The procedure is considered fairly routine, but, as with any surgery, there are risks. We encourage you to speak with your surgeon about any concerns or questions.

*Conditions and eligibility criteria apply. Please speak to your health insurer and/or healthcare professional to confirm your coverage.

05 Activating your bone conduction system

After the initial healing period, you will have an appointment with your audiologist to receive your new sound processor. This is the day you may start to hear sound through your new device!

06 Ongoing care

We have many “how to” videos available on our Cochlear website, and our Engagement team will be happy to answer any questions you have along the way to help ensure you are taking good care of your new device.

Every moment matters. Why wait?

Cochlear gives you more than hearing—we give you hope

That's why we are devoted to pioneering the most advanced implantable hearing solutions. Over 40 years ago Dr. Tjellström and his team of experts pioneered the world's first bone conduction solution, it opened up a whole new world of hearing to those who suffer from conductive hearing loss, mixed hearing loss and single-sided deafness. Since then, we've never stopped improving the technology.

If you're struggling to hear clearly even with powerful hearing aids, a bone conduction solution may be the answer you've been looking for. Take the next steps today.



The Cochlear Engagement Team is a team of experts that are ready to answer your questions and assist you in learning about the process, our products, technology and company.

hearinghelp@cochlear.com
1800 875 212 (Australia)
0800 445 367 (New Zealand)



Learn more about bone conduction solutions.

www.cochlear.com/au



Chris – Osia recipient

Questions to ask my hearing health professional

Cochlear Engagement Team

Personal support from the start

We offer a free information service for clients wanting to discuss and explore bone conduction solution, such as:

- How does a bone conduction solution work?
- What funding is available and how much will it cost?
- What resources can you provide me?
- What happens in a bone conduction solution candidacy evaluation?

Contact us today

1800 875 212 (Australia)
0800 445 367 (New Zealand)

hearinghelp@cochlear.com
SMS: +61 447 243 454 (Australia)

www.cochlear.com/au
(Australia & New Zealand)



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 700,000 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 collaborate with leading clinical, research and support networks.

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

References

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Please seek advice from your health professional about treatments for hearing loss. Outcomes may vary, and your health professional will advise you about the factors which could affect your outcome. Always follow the directions for use. Not all products are available in all countries. Please contact your local Cochlear representative for product information. Views expressed are those of the individual. Consult your health professional to determine if you are a candidate for Cochlear technology. The product images shown are for illustrative purposes only and may not be an exact representation of the product. "A lifetime of hearing performance" and similar phrases should not be understood as claims relating to the expected life, reliability, quality or performance of Cochlear's products. Any testimonial features is not intended for a New Zealand Audience.

In Australia, Baha® bone conduction implant systems are intended for the treatment of moderate to profound hearing loss. In Australia, the Cochlear™ Osia® System is indicated for patients aged 5 years and above with up to 55 decibels sensorineural hearing loss. Patients should have sufficient bone quality and quantity to support successful implant placement. Surgery is required to use this product. Any surgical procedure carries risk. For Cochlear™ implant, Osia® and Baha® systems: This product is not available for purchase by the general public.

For information on funding and reimbursement please contact your healthcare professional. For Cochlear™ implant, Osia® and Baha® systems: This product is not available for purchase by the general public. For information on funding and reimbursement please contact your healthcare professional.

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