



ADVANCED
BIONICS
POWERFUL CONNECTIONS

Bringing powerful
connections to life.



A Sonova brand

Powerful connections start here.

Welcome to the world of powerful connections.	1
Life beyond hearing loss.	2
Understanding hearing loss.	4
Making life changing connections.	6
What is a cochlear implant and how does it work?	8
Phonak and Advanced Bionics.	10
The Advanced Bionics CI.	12
HiRes™ Ultra 3D Cochlear Implant.	14
Naída™ CI Sound Processor.	16
Living with a cochlear implant.	18
Hearing with a cochlear implant.	20
Getting the most out of your cochlear implant.	22
Improving your hearing.	24



Welcome to the world of powerful connections.

The ability to hear is transformative. Without it, the world can feel isolating and disorienting. At Advanced Bionics, we believe everyone can enjoy a life filled with sound.

For over 25 years, we've been developing leading hearing innovations that help people hear again, or for the first time. Our partnership with Phonak allows us to provide even more leading-edge hearing loss solutions through our integration with the world's most advanced and trusted power hearing aids.

We firmly believe that by improving your hearing, we give you the opportunity to make powerful connections with your family, friends, and the world around you.



LIFE BEYOND HEARING LOSS STARTS HERE.

Hearing plays a vital role in living a happy, healthy life.

The reality today is that more people face hearing loss than ever before—466 million people, nearly 5% of the world's population, experiences hearing loss. Left untreated, it can become a struggle to fully connect with family, friends, and the world.

The good news? There is hope. The field of hearing science and technology has made tremendous advancements in recent years. We live in a time where there's a hearing solution for any type and degree of hearing loss.

You are not alone.

Nearly one out of every three people over age 65 is affected by disabling hearing loss.¹ This means there is a broad network of people, just like you, who have met their hearing loss head-on.

There's a solution that's right for you.

For people with mild-to-moderate hearing loss, hearing aids can provide an excellent solution. Hearing aids work by first capturing sound in the environment and making it louder. Then, the amplified sound is sent to your ears to be heard.

When your hearing loss is severe-to-profound, hearing aids may no longer meet your hearing needs. This degree of hearing loss may require a more advanced solution, such as a cochlear implant.

NEARLY
5% of the world's population
experience hearing loss

1 OUT OF **3** people over age 65 is affected
by disabling hearing loss

MORE THAN
324,200 people across the world
have cochlear implants²



UNDERSTANDING HEARING LOSS.

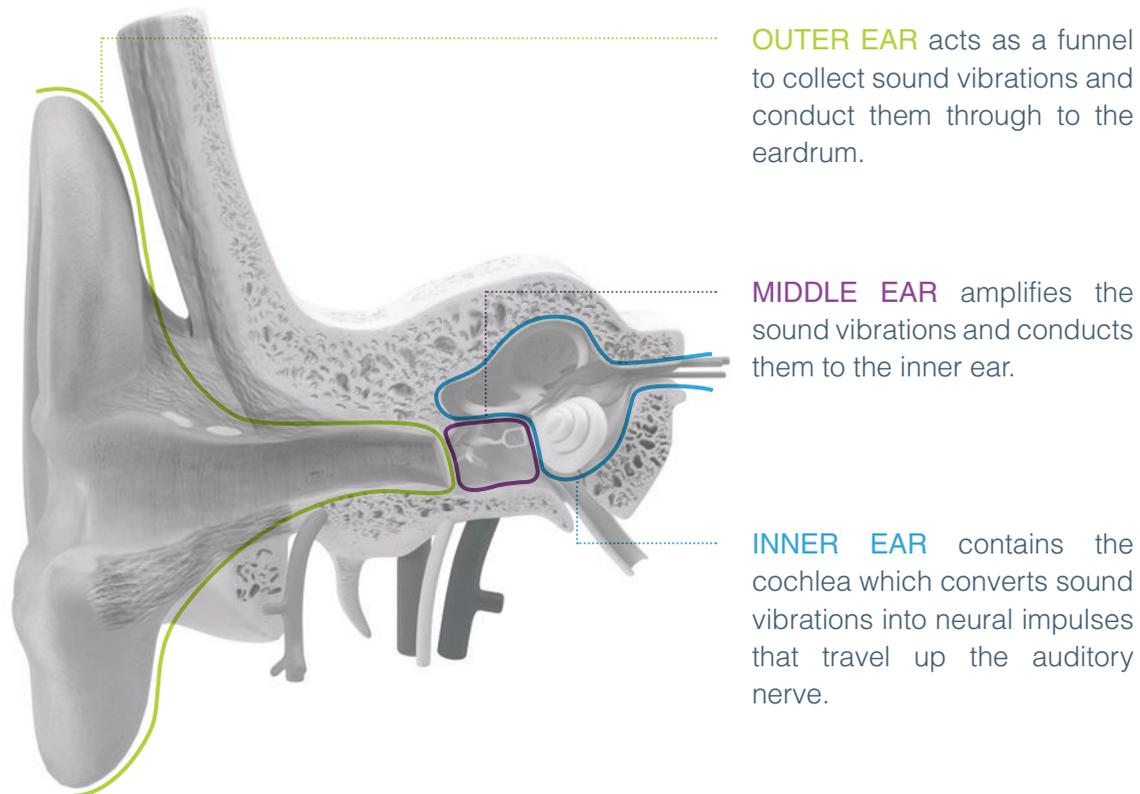
The ability to hear is something that can be easily taken for granted. But hearing is a complex process that relies on several areas of the ear and the brain to work together in harmony.

The ear is responsible for collecting sounds and transmitting them to the brain for interpretation. This process involves three separate areas of the ear: the outer, middle, and inner ear.

Hearing loss occurs when there is abnormality or damage to any of these parts. For most individuals, the problem occurs in the inner ear (or cochlea) where sound is transferred to the hearing nerve. An audiologist can help identify the problem and will begin by conducting a hearing test.

How is the ear structured?

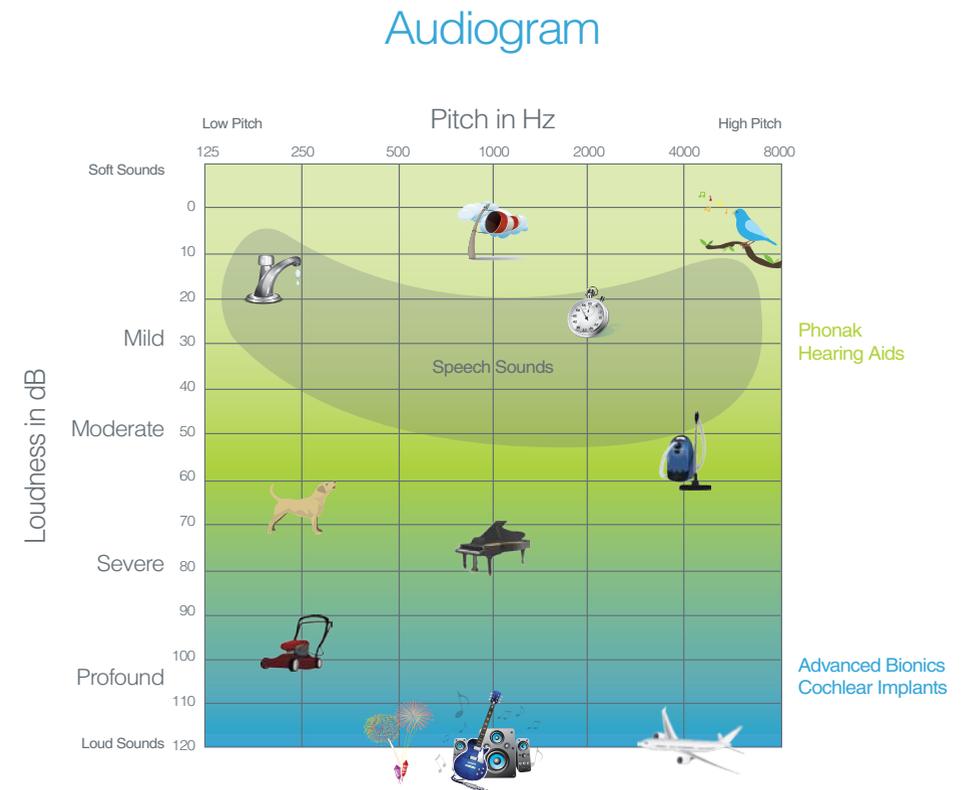
The ear consists of three sections: the outer, middle, and inner ear. Each plays an important role in hearing.



The degrees of hearing loss.

An audiogram is a graphical representation of your hearing ability.

Where the results of your hearing test fall on the audiogram will help your hearing care professionals determine the best treatment options for you.



did you know?...

AGING AND EXCESSIVE NOISE EXPOSURE ARE THE TWO LEADING CAUSES OF HEARING LOSS.³

MAKING LIFE-CHANGING CONNECTIONS.

Hearing loss is caused when sound is no longer transmitted fully to the hearing nerve and brain. In cases where the amplification provided by hearing aids does not provide enough speech recognition, a cochlear implant is the standard treatment.

For those with severe-to-profound, or advanced hearing loss, making the decision to get a cochlear implant can be truly life-changing. This decision starts with understanding how cochlear implants can help you hear and restore the powerful connections in your life.

At Advanced Bionics, we see the large number of people with hearing loss as an inspirational challenge—it's not a statistic, it's millions of individuals that we can help connect with their world.

Are you a candidate for a cochlear implant?

Some hearing aid wearers may be a candidate for a cochlear implant if any of the following apply:

“I still have **difficulty following conversations** without lip reading.”

“I hear pretty well in quiet environments, but still **struggle in noisy environments** or when in a group.”

“I still **cannot follow most telephone conversations**, especially if I don't know the person calling.”

“I still **feel isolated and limited**, both socially and occupationally, because of my hearing loss.”



WHAT IS A COCHLEAR IMPLANT AND HOW DOES IT WORK?

A cochlear implant system includes several pieces of technology that work together to bypass the cochlea—restoring hearing by sending sound directly to the hearing nerve. The first is an internal component (the implant and electrode array) which is implanted by a surgeon. And the second is a series of external components that is worn on the ear and attaches to the implant (the headpiece and processor).

We have two ears for a reason.

Hearing is a team effort that requires both of your ears to work in harmony. Hearing with both ears improves your brain's ability to map and analyze the world of sound around you, giving you a better sense of where sounds are coming from, and allowing you to hear better in noisy situations. That's why you shouldn't settle for any hearing technology that's less than a complete solution.

Advanced Bionics solutions are designed to offer **two ear hearing** so you can fully enjoy a more powerful connection to the world around you.



1
The **microphone** captures sound waves at the opening of the ear canal.

2
The sound waves are converted into detailed digital signals by the **sound processor**.

3
Through a magnet the **headpiece** connects to the implant, sending the digital signals to the **cochlear implant** and electrode array in the inner ear.

4
The **electrode array** stimulates the hearing nerve.

5
The hearing nerve sends impulses to the brain, which interprets them as sounds.



Connecting to life.

Every day. Every hour. Every moment... connections are made. Connections to family, friends, and the world around us.

At Phonak and Advanced Bionics, we believe everyone can experience life's most essential connections. United by a common purpose, we're empowering patients by connecting them to the life they want, and to the people they love.

As the world's largest and most innovative provider of solutions for patients with every type and degree of hearing loss, we're driving a fully integrated approach that's pushing the boundaries of what's possible as no other audiology company can. We offer a comprehensive range of technologies—from hearing aids to cochlear implants to wireless communications solutions—to treat all forms of hearing loss that patients face today.

We are Phonak+AB. We're connecting you to life.



did you know?...

IF YOU ARE ALREADY USING A PHONAK HEARING AID, MANY OF THE FEATURES AND ACCESSORIES THAT YOU HAVE CAN ALSO BE USED WITH AB COCHLEAR IMPLANT TECHNOLOGY.



A woman with brown hair, wearing a black top, is playing a cello. She is smiling and looking towards the camera. The background is a white wall with a blue decorative shape on the left side. The cello is a dark wood color with a white neck and scroll.

The Advanced Bionics CI: bringing **technology to life.**

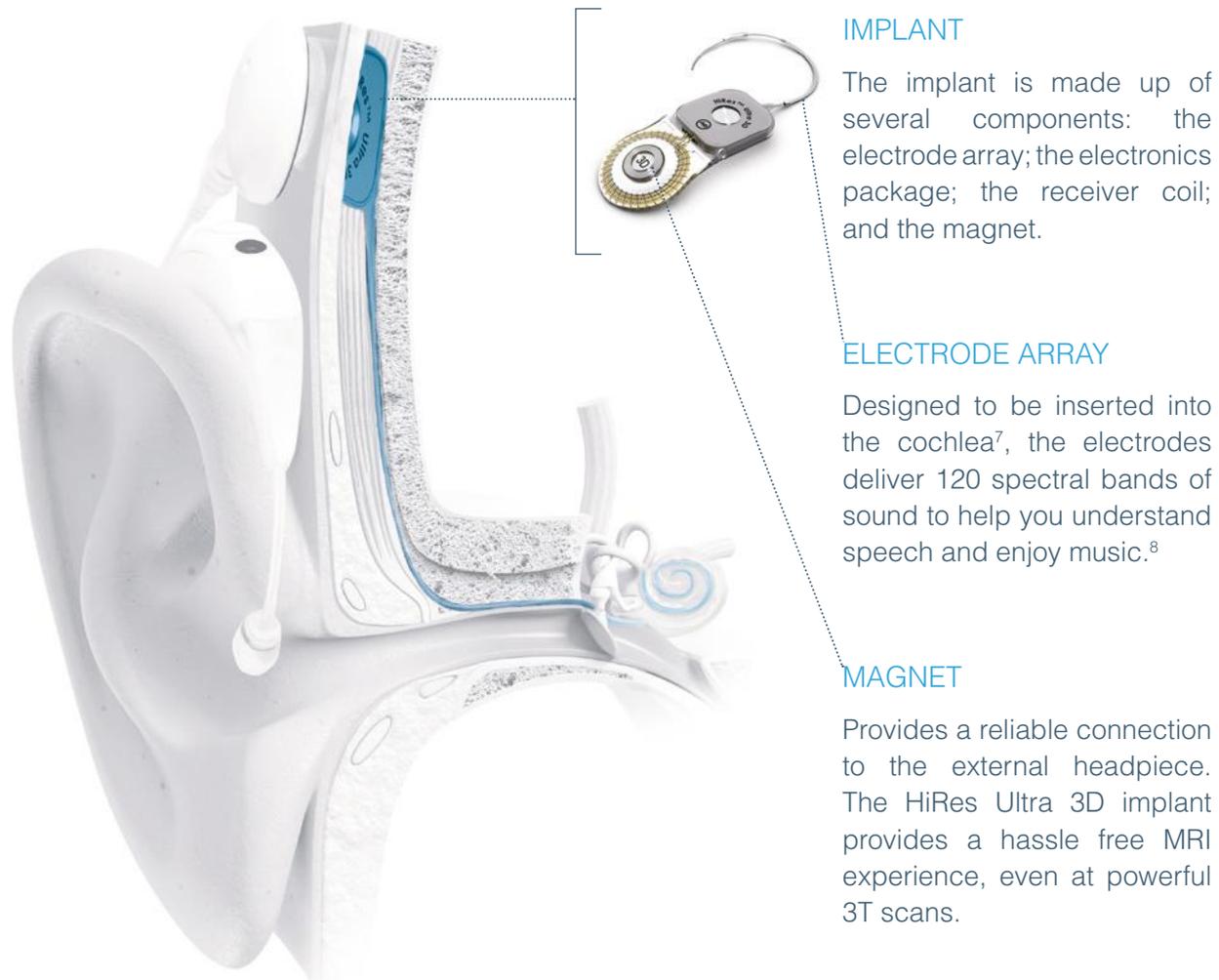
Advanced Bionics provides a comprehensive range of products designed to meet your needs and your lifestyle. Our cochlear implant system (CI) offers more ways to hear than any other CI. And every aspect of our CI has been optimized for clarity, comfort, ease of use, and reliability—allowing you to hear your best.

did you know?...

ADVANCED BIONICS IS A LEADER AND PIONEER IN THE FIELD OF HEARING AND COCHLEAR IMPLANT TECHNOLOGY, HOLDING OVER 400 PATENTS.

HiRes Ultra 3D Cochlear Implant

DESIGNED FOR OPTIMAL HEARING EXPERIENCE.



Sophisticated yet incredibly strong, the award-winning HiRes™ Ultra 3D cochlear implant delivers the proven benefits of clearer speech⁴ and a broader range of sound⁵. It is designed to exceed industry standards for impact resistance⁶, allowing you to enjoy life's adventures without hesitation.

During cochlear implant surgery, our unique AIM system* can use the HiRes Ultra 3D to monitor the function of your cochlea and provide the surgeon with invaluable insights.

**Not available in all centers*

MRI Compatibility: Innovative technology with you in mind.

MRI scans are becoming increasingly commonplace as a diagnostic tool for a wide variety of medical conditions. For CI wearers, this has been a source of hassles and pain, as the magnetic field from MRI machines exerts force on the CI magnet inside the head, causing physical pain for the patient. Therefore, it was common practice to remove the internal magnet prior to high resolution MRI examinations, requiring surgery and interrupting the patient's hearing during the process.

That's why we invented the new magnet design in the HiRes Ultra 3D CI system.

Advantages and benefits of the HiRes Ultra 3D CI multi-magnet assembly.

HASSLE-FREE: Our HiRes Ultra 3D does not require removal of the multi-magnet assembly during an MRI, so you can treat it like any other standard medical examination.

PAIN-FREE: Our multi-magnet assembly allows the magnets to spin in place so there's no movement within the components of the implant—ensuring no pain or discomfort during an MRI.

UNINTERRUPTED HEARING: The only thing that you have to do to get an MRI is to take off the sound processor and put it back on after the MRI examination.

did you know?...



THE HIRES ULTRA 3D HAS BEEN AWARDED MEDTECH'S
BREAKTHROUGH AWARD 2019 FOR BEST OVERALL
MEDICAL DEVICE SOLUTION

NAÍDA CI Sound Processor

DESIGNED FOR PERFORMANCE.

The human ear is designed to process an amazing range of sound detail from many different environments. Cochlear implants from Advanced Bionics are designed to deliver access to every one of those details—intensity, frequency, pitch, duration, etc.—allowing you to enjoy a full world of sound.

The Naída CI sound processor is a small, lightweight external device that connects to the implant headpiece. The processor provides unique, groundbreaking features proven to help you effortlessly hear better in any environment.

MICROPHONE

The cochlear implant system captures the sound around you with one or more microphones. Advanced Bionics has microphones on the front and back of the processor, in the headpiece and positioned at the opening of the ear canal.

SOUND PROCESSOR

Our sound processors use the industry's most advanced technology to make hearing easier and include the only sound processing strategy in the industry recognized by the FDA to improve speech understanding in noise.

HEADPIECE

Processed sound is transmitted through the headpiece to the implant. Advanced Bionics implant systems feature the most advanced sound processing circuitry in the world, with programming flexibility that provides nearly unlimited ways to deliver sound.



The perfect combination.

The integration of both Phonak and Advanced Bionics technology in our Naída CI ensures your system will deliver incredibly powerful sound. Phonak's leading hearing aid technology constantly evaluates environmental sounds and automatically applies special sound cleaning features that help you hear your best.

Two ear hearing with Naída.

The Naída CI sound processor is the only cochlear implant system capable of automatically establishing a wireless network with devices on the other ear. By sharing audio signals with another Naída CI or a Phonak hearing aid, Naída makes sure you hear speech more clearly in background noise and on the phone.

VARIETY OF COLORS

Choose from a variety of colors, including Velvet Black, Caribbean Pirate, Sand Beige, Princess Pink, and Silver Gray color options.*



*Color options vary by region. Ask your audiologist to view what's available to you.

LIVING WITH A COCHLEAR IMPLANT.

Swim. Exercise. Fly. Connect. From the implant to the processor to the accessories, our Advanced Bionics cochlear implant system is designed for life.

Whether it's listening to a live performance, talking to a friend or relative on the phone, participating in a meeting, playing sports, or simply enjoying the sounds of the world around you, each feature we offer is built for seamless integration into your daily activities.



Wireless Connectivity

Go wireless with accessories that are Bluetooth® enabled and provide crystal clear sound for phone calls and audio streaming.

Activity & Flexibility

Don't worry, do what you love to do. Dive in with our waterproof AquaCase enclosure and AquaMic™ headpiece.

Two Ear Hearing

Experience the most advanced technology possible for hearing with both ears with Naída CI Q90 sound processors.

MRI Compatibility

Experience peace of mind with our first-of-its-kind multi-magnet assembly that does not require removal during MRIs.

Color Options

Showcase your personality with fun colors that let you make a bold statement, or subtle hues that offer a more discreet look.

Phonak Integration

Get the broadest range of options with Phonak's power hearing aids and Advanced Bionics cochlear implants.



HEARING WITH A COCHLEAR IMPLANT.

Just like being fitted for a hearing aid, the journey to better hearing with a cochlear implant is a process, not an instant fix. Similar to how children need to learn to recognize different sounds they hear, whether it's speech or a car honking, so too must new cochlear implant recipients learn how to recognize what they are hearing through the implant. This process starts two to four weeks after implantation, during the activation phase.

The good news? As a cochlear implant recipient, you should expect to make continual progress as your brain becomes familiar with the new way it is interpreting the sounds being transmitted from your implant.

Advanced Bionics uses the most cutting-edge technology and offers comprehensive support and educational tools to help smooth the way on your journey to better hearing.

[Visit HearingJourney.com](https://www.hearingjourney.com) to engage with other Advanced Bionics recipients and learn about their experiences.



The implant surgery.

Unlike hearing aids, cochlear implants require a surgical procedure. While any type of surgery has some associated risks, it is important to know that complications are extremely rare. Keep in mind that surgery is a necessary but brief part of the process and that hundreds of thousands of people have undergone the procedure all around the world. Most go home the same day or the very next day.

It is also important to know that having surgery doesn't automatically mean that you will lose whatever hearing ability you still have. In fact, Phonak and Advanced Bionics offer solutions that take advantage of residual hearing so that some recipients can hear acoustically as well as through the implant.

Activating your cochlear implant.

After the implantation, you may experience the roller coaster of "hurry up and wait," as activation of the cochlear implant typically takes place two to four weeks after the procedure—depending on the healing process.

Initial stimulation (referred as "switched on") will take place in your audiologist's office, and is an extremely exciting and emotional milestone. During this appointment, the audiologist will also create a customized set of listening programs for your external sound processor, and show you how to use and take care of your CI. This initial activation process will vary depending on your particular cochlear implant center.

Post-activation—the longer term.

Follow-up programming and training sessions to improve your hearing performance are typically scheduled in the weeks and months following the initial session. Long-term, adults typically have annual check-ups; younger children generally require more frequent ones.

While the implant is designed for life, Advanced Bionics and Phonak are continually developing new external components that can improve your hearing. Your annual check-ups will dictate which product upgrades, features, etc. will benefit you the most as time goes on.

And of course, Advanced Bionics will continue to support your journey to better hearing with educational resources, technical support, and outstanding customer service to ensure that you stay powerfully connected to a full world of sound.

GETTING THE MOST OUT OF YOUR COCHLEAR IMPLANT.

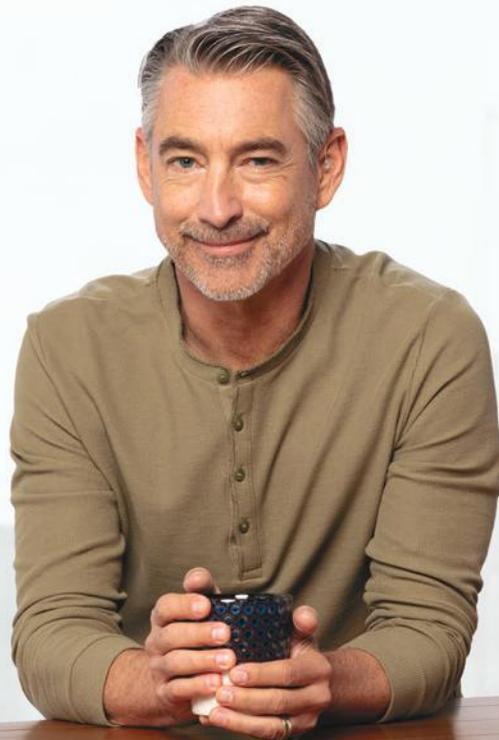
Getting used to hearing and living with your cochlear implant are huge milestones, but they are just the first steps on an exciting hearing journey. A journey that will continually evolve. That's why Advanced Bionics will always be there to lend you a helping hand.

A large part of our work is focused on ensuring you get the most out of your cochlear implant in the months and years to come. We offer unparalleled support, rehabilitation, and specifically-targeted programs that are all designed to get you hearing your best and remain powerfully connected to the world around you.

did you know?...



ADVANCED BIONICS AND PHONAK ARE PROUD CONTRIBUTORS TO THE HEAR THE WORLD FOUNDATION, WHICH SUPPORTS PEOPLE WITH HEARING LOSS IN DEVELOPING COUNTRIES—PROVIDING EDUCATION, FUNDING AND HEARING TECHNOLOGIES.



A powerful sense of community.

Enjoy access to a network of CI recipients just like you. We have several online resources, communities and tools to support you on your journey, so you'll never have to go at it alone.

HEARINGJOURNEY™
The #1 online cochlear implant community



Ongoing education and rehabilitation.

Learn about our rehabilitation resource, SoundSuccess, which is designed to help adults and seniors, who are using hearing aids or cochlear implants to improve their speech understanding.

We're dedicated to being there at every step of the process as you learn to navigate life with your implant. Our professional rehabilitation and support team is always available to answer your questions.

SOUNDSUCCESS™

As technology improves, so does your hearing.

Cochlear implant systems are cutting-edge technology. And we know technology advances quickly. You can count on the Advanced Bionics and Phonak Research and Development teams to always be on the forefront of the latest innovations so that your hearing improves as technology advances.



Improving your hearing. Connecting your life.

At Advanced Bionics, we believe everyone can live without the limitations of hearing loss. That's why we've developed the most flexible, innovative, and patient-centric cochlear implant solutions available today.

Our industry-leading cochlear implant platform matches the best technology and services to your specific needs to help improve your hearing. And when you can hear, you can fully connect with the world of sound. It's as simple—and life changing—as that.

All around the world, tens of thousands of people have already benefited from our cochlear implants. Experience the powerful connection for yourself.

Visit us at [AdvancedBionics.com](https://www.advancedbionics.com) and start your journey to better hearing today.



FOOTNOTES

1. World Health Organization, Key Facts, Deafness and Hearing Loss.
<https://www.who.int/news-room/fact-sheets/detail/deafness-and-hearing-loss>
2. National Institutes on Deafness and Other Communication Disorders, 2017
<https://www.asha.org/public/hearing/cochlear-implant>
3. Hearing Loss Association of America, “Causes of Sensorineural Hearing Loss”
<https://www.hearingloss.org/hearing-help/hearing-loss-basics/types-causes-and-treatment>
4. Koch DB, Osberger MJ, Segel P, Kessler DK. (2004) HiResolution and conventional sound processing in the HiResolution Bionic Ear: using appropriate outcome measures to assess speech-recognition ability. *Audiology and Neurotology*, 9:214-223.
5. Firszt JB, Koch DB, Downing M, Litvak L. (2007) Current steering creates additional pitch percepts in adult cochlear implant recipients. *Otology and Neurotology*, 28(5):629-636.
6. EN 45502-2-3:2010. Active Implantable Medical Devices. Particular Requirements for Cochlear and Auditory Brainstem Implant Systems.
7. Lenarz T, Prenzler N, Salcher R, Andreas Buechner A. (2017) First experience with a new thin lateral electrode array. American Cochlear Implant Alliance, San Francisco, July 26–29, 2017.
8. Osberger MJ, Quick A, Arnold L, Boyle P. (2010) Music benefits with HiRes Fidelity 120 sound processing. *Cochlear Implants International* 11(S1): 351-354.

🏠 **ADVANCED BIONICS LLC** – 28515 Westinghouse Place - Valencia, CA 91355, United States
T: +1.877.829.0026 - T: +1.661.362.1400 - F: +1.661.362.1500 info.us@advancedbionics.com

EC REP **ADVANCED BIONICS GMBH** - Feodor-Lynen-Strasse 35 – 30625 Hannover, Germany

For information on additional AB locations, please visit advancedbionics.com/contact

Advanced Bionics - A Sonova brand

Please contact your local AB representative for regulatory approval and availability in your region.