

Connecting to life.



Beyond Hearing Aids



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 or 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.

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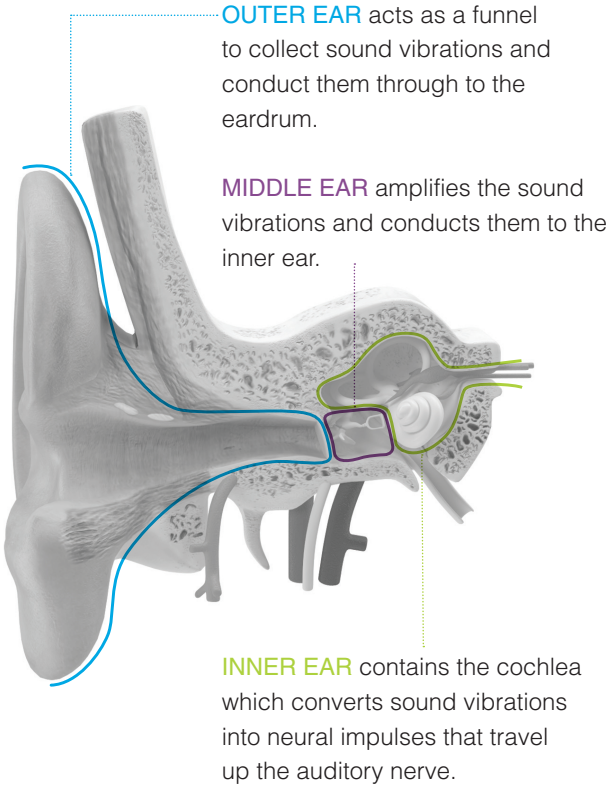
MORE THAN
324,200

people across the world have
cochlear implants²

Understanding Hearing Loss

How is the ear structured?

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



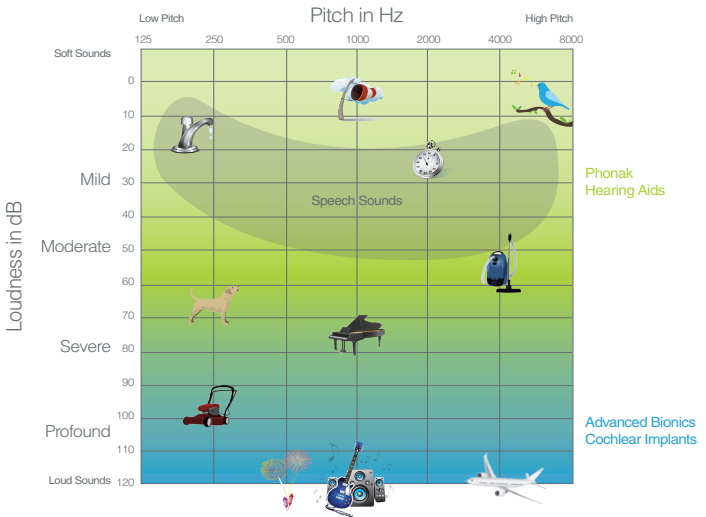
Hearing loss occurs when there is abnormality or damage in any of these structures. For most individuals, the problem occurs in the inner ear (or cochlea) where sound is transferred to the hearing nerve.

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.

Audiogram

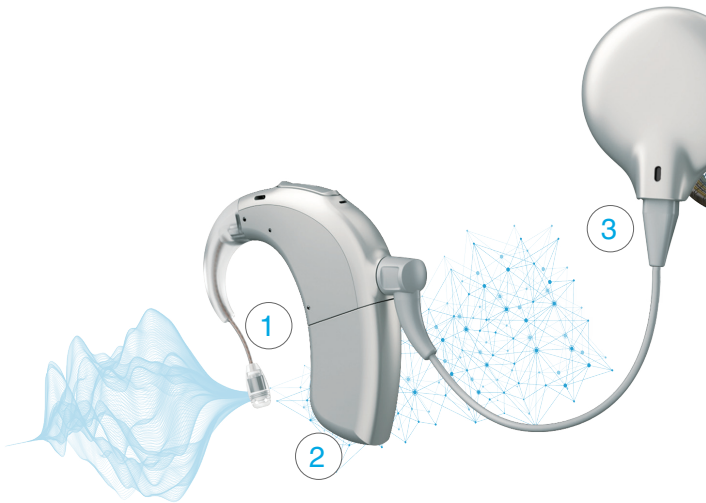


did you know?...

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

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 implanted by a surgeon. And the second is a series of external components that is worn on the ear.



1

The **microphone** captures sound waves.

2

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

3

The **headpiece** sends 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.

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 isn't enough, a cochlear implant is the standard treatment.

For those with severe or 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.

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. ”



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 and Advanced Bionics. 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 ADVANCED BIONICS COCHLEAR IMPLANT TECHNOLOGY.



Common Questions

Am I a candidate for a cochlear implant?

If you are struggling to hear with your hearing aids, you may be a candidate for a cochlear implant. The first step is to talk to your Audiologist, ENT doctor or GP and ask them to refer you to a specialist Cochlear Implant Centre for an assessment. While you are waiting for your assessment, learn more about cochlear implants by talking to your local Advanced Bionics team. They can also arrange for you to meet with people who are using cochlear implants and their families so you can hear first-hand about their experiences.

How is a cochlear implant different from a hearing aid?

Hearing aids are sophisticated speakers or amplifiers that make sounds louder specifically to match one's hearing loss. But sometimes making something louder does not always make it clearer or easier to understand. The implant relays the information to the nerve via the electrodes. It completely bypasses the normal pathway of sound and creates a new one.

I heard that surgery is involved. What is the implantation procedure like?

Cochlear implantation is a relatively simple and minimally invasive surgical procedure. In most cases, implantation is done on an outpatient basis. Many recipients return home the same day and resume their normal activities within a week.

How can I obtain a cochlear implant?

Cochlear Implants are usually provided by the NHS for those that meet the NICE (National Institute for Health and Care Excellence) criteria. If you are outside of NICE criteria but still feel you may benefit from a cochlear implant, you can choose to self-fund or fund through an applicable health insurance policy. You can learn more about your options by talking to the Advanced Bionics team.

If I receive a cochlear implant, can I continue to use my hearing aid on the other ear?

Many people continue to use a hearing aid on the opposite ear. The Phonak Naida™ Link M hearing aid was actually designed to work with the AB sound processor as a two ear solution. You can learn more about all the Phonak options that work with an AB cochlear implant when you meet or speak with an Advanced Bionics team member.



A powerful sense of community.

Within the AB Community, you will find caring professionals and a team of volunteers dedicated to providing information and support for choosing, getting and living with cochlear implants.

Our volunteers are Advanced Bionics cochlear implant wearers and family members who are dedicated to sharing their experiences.

HEARINGJOURNEY™

The #1 online cochlear implant community

HearingJourney.com

Ongoing education and rehabilitation.

Register for the HearingSuccess portal to access free rehabilitation and support resources designed to help anyone using hearing aids or cochlear implants.

Our professional rehabilitation and support team is always available to answer your questions.

HearingSuccess

HearingSuccess.com

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.



For more information:

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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.
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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.

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for regulatory approval and availability in your region.