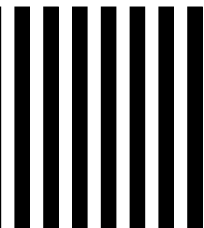


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FEB09_3-01032

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AB's Commitment to You



Request Information
Get information on AB products; educational materials, resources and references; news and events; and a whole lot more.



Comprehensive Warranty
Your internal implant is covered for 10 years; the external processor for three years, including a one-time loss and damage coverage.



Technical Support Hotline
Highly trained representatives provide immediate assistance 12 hours a day (5 a.m. – 5 p.m. PST), Monday through Friday—with paging access on weekends.



Clinic Finder
AB offers a comprehensive listing of cochlear implant clinics around the world.



48-Hour Product Replacement
Should any part of your system break, AB will ship you the necessary replacement part(s) within 48 hours (two business days).



Insurance Reimbursement Services
AB's insurance experts provide comprehensive assistance including reviews of your coverage, pre-authorization services, direct billing, and help with Medicare.



Online Chat Support
Along with phone support, AB also offers online chat support for technical or general assistance, as well as any other questions you may have.



Webstore
Convenient, 24/7 online shopping for parts and accessories.

BIONIC EAR BASICS *A Journey to Choosing Cochlear Implants*



By Advanced Bionics

A WONDROUS JOURNEY

There are many steps on the path to making a decision to receive cochlear implants for you or a loved one. It's an exciting, life-changing journey. While each journey is unique, they all share one common goal—better hearing:

Hearing that allows you to more fully experience and understand intimate conversations, important lessons, exhilarating music, and all the beautiful sounds and noises that make up life's rich soundtrack.

Hearing that can improve your connections with family, friends, and colleagues and help you excel at work or school.

Hearing that contributes to an overall increased enjoyment of life.

Advanced Bionics has been part of the hearing journey for tens of thousands of families and individuals worldwide. To help you along your journey, AB has designed this guide to provide you with easy-to-understand information on cochlear implants and to highlight the steps to better hearing.

As you read on, it's only natural that you'll have questions. That's why AB created the Bionic Ear Association (BEA), a support network of recipients, parents, and professionals who offer assistance by providing you and your loved ones with information, education, and guidance. Through the BEA's mentoring program, you can directly connect with another cochlear implant recipient or parent who can assist you in navigating the process of choosing and living with cochlear implants. You can find out more about the BEA and its mentoring program on page 10.

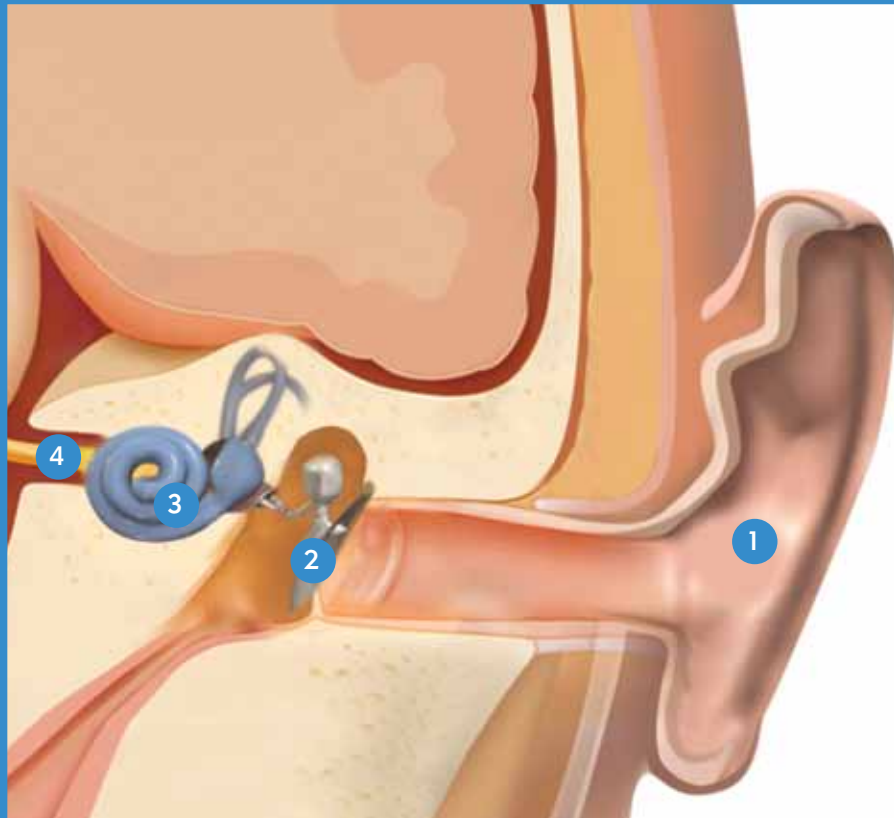


Let the journey begin!

Hearing that gives you a better enjoyment of life

HEARING LOSS and COCHLEAR IMPLANTS

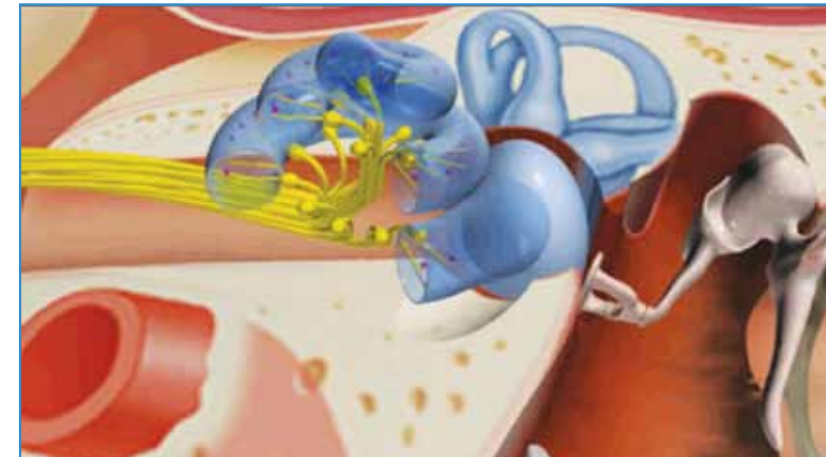
The Normal Hearing Process



Before you can fully understand how cochlear implants work, it's helpful to first have a basic understanding of how normal hearing works:

- 1 The outer ear collects sound waves that pass through the air.
- 2 The sound waves vibrate the eardrum and the three tiny bones (hammer, anvil, and stirrup) in the middle ear.
- 3 This vibration moves the tiny hairs of the sensory cells in the inner ear, or cochlea; sensory cells convert the vibrations to an electrical signal that is sent to the hearing nerve.
- 4 The signal travels up the nerve and into the brain, where it is interpreted as sound.

When any part of this delicate system is damaged, hearing loss can result. For adults, hearing loss, whether sudden or progressive, can cause frustration, isolation, even depression. It can do the same to a child, as well as impact the ability to learn and speak, causing the child to fall behind in his or her development. But for people of all ages, cochlear implants may help end the isolation from hearing loss by bringing the world of sound back into his or her life.



In this cross-section of the cochlea, you can see how the bones in the middle ear (far right) vibrate the tiny hairs of the sensory cells in the inner ear (center). These vibrations are then converted to an electrical signal that is sent through the hearing nerve to the brain (far left).



When any part of this delicate system is damaged, hearing loss can result

HEARING LOSS and COCHLEAR IMPLANTS

Hearing with a Cochlear Implant



What Is a Cochlear Implant?

A cochlear implant is an electronic device that allows many people who've experienced hearing loss to hear better. For those who've never heard before, many experience hearing for the very first time. It's different and more effective than a hearing aid, which merely amplifies incoming sound to make it loud enough for an impaired ear to hear.

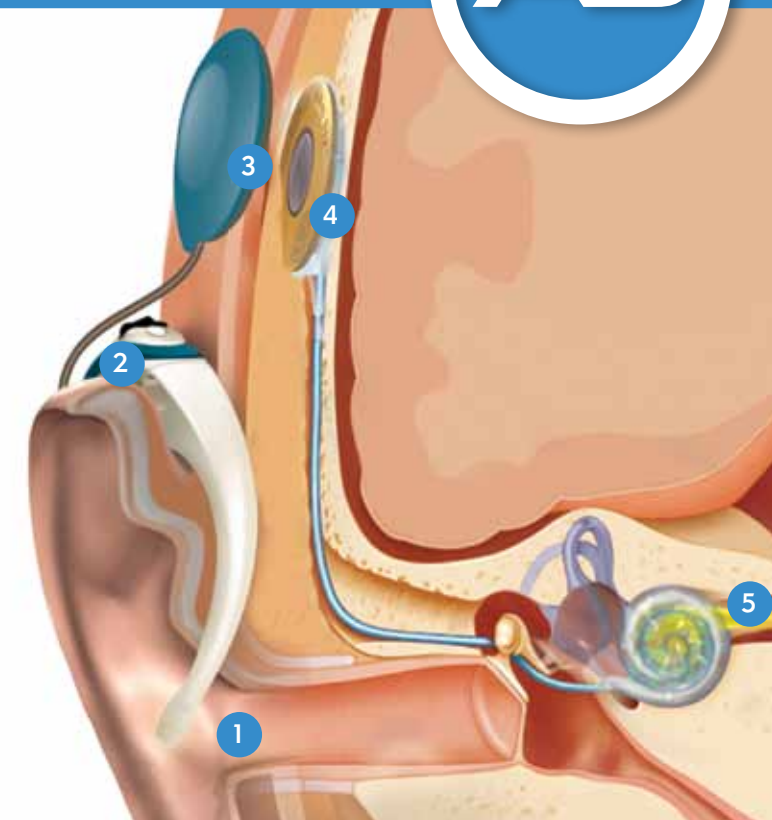
Using state-of-the-art technology, a cochlear implant bypasses the damaged part of an ear and sends electrical signals directly to the brain via the hearing nerve. Cochlear implants are currently the only medical technology able to functionally restore one of the five senses, causing many physicians to refer to cochlear implants as *"technological miracles."*

How Does a Cochlear Implant Work?

A cochlear implant consists of two main components. An external component, called the **sound processor**, is worn on the outer ear or on the body. It gathers sound with a microphone and processes that sound into digital information, which is transmitted to an implant under your skin.

An internal component, which is an **implant with an electrode array**, converts the digital information from the sound processor into electrical signals and delivers them to an electrode array. The electrode array stimulates the hearing nerve, which sends signals up to the brain where they're interpreted as sound.

- 1 Sound is captured by a microphone on the sound processor.
- 2 The sound processor converts sound into detailed digital information.
- 3 The magnetic headpiece sends the digital signals to the implant.
- 4 The electrode array on the implant sends electrical signals to the hearing nerve.
- 5 The hearing nerve sends impulses to the brain, where they are interpreted as sound.



Sound Processor with T-Mic® Microphone



Implant with Electrode Array



Close-Up of Electrode Array

Cochlear implants bypass the damaged part of the ear and send electrical signals to the brain

CHOOSING COCHLEAR IMPLANTS

Are Cochlear Implants Right for You?

For many people with mild to moderate hearing loss, hearing aids are a viable, less-intrusive solution for improved hearing. But if you or your loved one has a severe to profound hearing loss, **cochlear implants may be a much more effective alternative.** That's because, if your inner ear is not functioning correctly or has suffered extensive damage, it doesn't matter how much conventional hearing aids amplify sound—you simply won't hear it.

Cochlear implants bypass the inner ear and send sound directly to the hearing nerve. So even if your inner ear is damaged, sound still gets to your brain, where it's heard and understood. You hear music, conversation, crowd noise—whatever the sound processor's microphone picks up!

Many recipients of AB's cochlear implants report being able to **hear clearly even in noisy environments** like restaurants or sporting event venues. They also state that they can clearly

hear music and conversations over electronic devices like MP3 players, mobile phones, and airline headsets.

Are You a Candidate for Cochlear Implants?

I have difficulty following conversations without lip reading. Yes No

I hear pretty well in quiet environments but struggle in noisy environments or when in a group. Yes No

I cannot follow most telephone conversations, especially if I don't know the person calling. Yes No

I feel isolated and limited, both socially and occupationally, because of my hearing loss. Yes No

If you answered "Yes" to any of these statements, you may benefit from cochlear implants.

Are Cochlear Implants Right for Your Child?

Children begin learning to speak from the day they're born. **By age three, they need to hear approximately 30,000 words a day to develop the language skills necessary to succeed in school.** This need to hear language strongly reinforces the importance of early implantation in children with deafness or hearing loss who would benefit from cochlear implants.¹

For children one year of age or older who have profound hearing loss and are not receiving enough benefit from conventional hearing aids, cochlear implants represent a better alternative. They need to hear the words, inflections, and patterns essential for developing strong speech skills. Because cochlear implants allow many children to hear better in the classroom, implanted children get the same opportunity for academic success as their fellow students with normal hearing.

1. Hart B, Risley TR. (1995) Meaningful Differences in the Everyday Experience of Young American Children. Brooks Publishing Co, Inc., Baltimore, MD.



Is Your Child a Candidate for Cochlear Implants?

Does your child have delayed speech and language development as a result of his or her hearing loss? Yes No

Does your child rarely respond to his or her name? Yes No

Does your child avoid social interaction or lack the appropriate skills to interact with other children or adults? Yes No

Do you have concerns about your child's ability to hear speech in noisy environments? Yes No

Do you have concerns about your child's ability to participate and succeed in school with normal-hearing peers? Yes No

If you answered "Yes" to any of these questions, your child may benefit from cochlear implants.

To find out if you or your child are a candidate for cochlear implants, contact the Bionic Ear Association at **866.844.HEAR (4327)** or visit their website at www.BionicEar.com

Choosing the RIGHT COCHLEAR IMPLANT

Selecting which cochlear implant is right for you is a significant decision

Selecting which cochlear implant is right for you is a significant decision. For something as critical as your ability to hear, you don't want to compromise on quality or performance. You need the most technologically advanced, best-performing cochlear implant available. You need a reliable company you can count on to be by your side each step of the implantation process; one with a proven track record of success for tens of thousands around the world. You need the Harmony® HiResolution® Bionic Ear System from AB.

Only Harmony uses the most sophisticated technology to deliver the clearest, highest-resolution sound. With Harmony, you or your loved one hears the details that make the world of sound so rich—the singing of birds, the nuances of a conversation, the complexities and layers of a piece of music, and so much more. By choosing AB, an industry leader since 1993 and the only U.S. manufacturer of cochlear implants, you'll enjoy peace of mind knowing AB is there for you today, tomorrow, or whenever you need us.



The World of Hearing Awaits

Every journey, no matter how large or small, begins with a first step. You've already taken the first step by reading this brochure. All of us at AB and the BEA encourage you to continue your journey. There's a world of sound full of better understanding, stronger connections, and increased opportunities awaiting you or your loved one.

"I would like to thank you for everything you have done for me—starting with the process of evaluation for a cochlear implant, helping me cope with all the worry, and thinking about me at the time of the operation. I am so grateful for having you beside me on my quest for better hearing!"

—Gilad Borisovsky, implanted at age 23

"When we were researching cochlear implants, we wanted to learn as much as we could about the long-term viability of the companies making the implants. We chose Advanced Bionics because we liked their electronics best, they were developing new products faster—and their growth potential was the most impressive."

*—Margene Bolingbroke, mother of Nathan,
Nathan was implanted at age 4; bilaterally implanted at age 8*

AB is your best choice for the most advanced cochlear implant available

AB will be there to help you through every step of your hearing journey

FREQUENTLY ASKED QUESTIONS

For answers to any of your questions, call the BEA at 866.844.HEAR (4327)



1. How do cochlear implants differ from hearing aids? Hearing aids are designed to simply amplify sound, not necessarily to make it any clearer or easier to understand. For many people with severe to profound hearing loss, hearing aids are not enough to compensate for a damaged ear's inability to adequately hear. Cochlear implants actually bypass the damaged part of the ear, sending sound directly to the hearing nerve, where it's then relayed to the brain. Most cochlear implant recipients demonstrate tremendous improvement in their ability to understand speech, even in noisy environments, compared to hearing-aid wearers.

AB's Harmony HiResolution Bionic Ear System (Harmony) first gathers the sound at a higher resolution than other implants (making it clearer) and then amplifies it before sending it to your hearing nerve. So Harmony recipients hear a wider range of sounds and speech with greater clarity in virtually any environment.

2. Will my insurance cover the cost of cochlear implants? The cost of the cochlear implant system and surgery are covered by many insurance providers, including public health insurance providers like Medicare and Medicaid. Replacement parts and/or repairs may also be covered; however, not all policies, even though they may have covered the initial surgery and cochlear implant system, cover repairs or replacement parts. Please contact your insurance provider for the specifics of your particular plan. If you have questions about insurance procedures, please contact the Insurance & Reimbursement Specialists at insurance@AdvancedBionics.com or [877.779.0229](tel:877.779.0229).

3. Which ear should be implanted? If you are getting only one cochlear implant, there are many factors to consider in deciding which ear to implant. Some prefer to implant their poorer-hearing ear so that they can use a hearing aid in their other, better-hearing ear. Others decide to implant their better-hearing ear, hoping for a better result. Other factors come into play, including surgical considerations of each ear's anatomy, length of deafness

in each ear, or just general preference. Your cochlear implant team will advise you regarding their recommendations based on your specific case. If both ears have an equal chance of success, you may have the ultimate say in choosing which ear to implant.

"I chose to have mine put in my left ear because that was my stronger ear in the days when I could still hear with the help of hearing aids—implanting the left ear would let me hear through the side I was accustomed to using," says Michael Chorost, 42, an educator, technology expert, and writer from San Francisco, California, USA.

4. Should I get a cochlear implant in both of my ears? People with hearing loss in both ears sometimes get a cochlear implant in both of their ears at the same time. This is called "simultaneous implantation," and it's done to achieve bilateral hearing (hearing in both ears). Bilateral hearing is the way normal hearing works, and it offers several advantages over unilateral hearing (hearing with one ear), including better sound localization (the ability to better locate the direction from which sound is coming) and improved hearing in noisy environments. Many recipients need, or choose to get, only one cochlear implant. Others choose to get a second implant at a later date (sequential implantation), after first experiencing life with one implant for awhile.

To find out if bilateral hearing is an option for you or your child, contact the Bionic Ear Association at [866.844.HEAR \(4327\)](tel:866.844.HEAR).

5. If I get a cochlear implant, can I still wear my hearing aid? Yes. Many people choose to continue to wear a hearing aid in the non-implanted ear. Continuing to use your hearing aid in the other ear may help you hear better in noisy environments and assist you in localizing sound.

6. What is the surgery like? Cochlear implant surgery is relatively simple and minimally invasive. In most cases, surgery can be done on an outpatient basis. The actual operation generally takes two to four hours, with additional

time in the preparation and recovery areas, because the surgery is done under general anesthesia.

During the surgery, the doctor first makes an incision in the skin behind the ear to access the area where the implant will be placed and where the implant electrode will be inserted. Typically, a small area of hair is shaved away from the incision site. The doctor makes a place for the implant on the bone under the incision. Then, the electrode is inserted into the tiny cochlea. The doctor finishes by closing the incision and applying a bandage. Most people recover quickly from the surgery, and many are surprised by how little postoperative pain there is.

7. What happens after surgery? Depending on your situation and your doctor's preference, you may go home the same day or spend the night in the hospital. You should be provided with post-surgery guidelines, including bathing and bandage treatment instructions, medication procedures, and possible activity restrictions. Adults often return to work or typical daily activities within a few days after surgery. You will likely experience the post-surgery roller coaster of "hurry up and wait." Activation of the cochlear implant typically takes place three to five weeks after surgery, depending on how you heal. Then, once it's turned on, the steady, rich flow of sound to your brain will begin.

Usually, initial stimulation of your cochlear implant will take place in your audiologist's office. First, your audiologist will test the implant with a computer to make sure it is working correctly. Next, the audiologist will create a customized set of listening programs for your implant's external processor. This initial session—the process is known as programming—will vary for different cochlear implant centers. Follow-up programming and training sessions 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 check-ups.

8. Cochlear implant technology seems to advance rapidly—should I wait for newer technology? Young children need immediate access to sound to develop strong speech and language skills. So time is of the essence, and professionals typically recommend implantation as early as possible. Many adults wish they had not waited so long after they became deaf to experience the life-changing benefits of cochlear implants. In this age of rapidly advancing technology, there's usually something new coming down the pipeline. That is why it is important, when choosing cochlear implants, to consider the technological capability for upgrades without additional surgery. Therefore, you can enjoy tomorrow's advanced technology in an implant you choose today.

9. How well will I hear with cochlear implants? The details of each person's hearing loss are different, and so is every person's unique journey to better hearing. The hearing potential of you or your child with cochlear implants is dependent upon a number of biological factors, including:

- How old you or your child was when hearing loss began
- How long you or your child has been hearing impaired
- How old you or your child is when you get implanted
- The medical health of your or your child's inner ear
- Other medical conditions that could affect you or your child's hearing

It's important to understand that better hearing through cochlear implants is a process, not an instant fix. Just as those with normal hearing had to learn to hear as children, so too must you or your child learn to hear again—or for the first time—with cochlear implants. Every person who receives cochlear implants should expect to make continual progress. How much progress, and how rapidly, you or your child progresses depends on three factors: (1) the technology used, (2) individual biology, and (3) the education and rehabilitation effort after implantation. Your results will be uniquely yours, so it is important to choose a cochlear implant that best meets your needs.

THE NEXT STEPS of your journey

Learn more about how Harmony can change your life or the life of your child. To help you learn more, AB has created the Bionic Ear Association (BEA), a support network of recipients, parents, and professionals who offer assistance by providing you and your loved ones with information, education, and guidance. The process is easy, and we'll make it even easier by helping you with each and every step.

To get started, simply:

1. **Discover if you are a candidate** by checking with a qualified audiologist and your insurance company. To locate a center near you, and/or to find support for insurance authorization, contact the BEA at **866.844.HEAR (4327)** or visit their website at **www.BionicEar.com** for a list of clinics worldwide.
2. **Learn more about life with cochlear implants by connecting with a recipient.** Contact the BEA at **866.844.HEAR (4327)** today and request a personal mentor or connect online at **www.BionicEar.com**.
3. **Ask for a FREE DVD and brochure, *Getting Ready for a Bionic Ear*.** AB believes the more you know, the more comfortable you will feel. That's why it developed this informative DVD that explains the surgical process, what to do to prepare yourself, and what to expect in the recovery process and during initial stimulation. For a copy of this free DVD, contact the BEA by calling **866.844.HEAR (4327)**, visiting the BEA's website at **www.BionicEar.com**, or sending an email to **hear@AdvancedBionics.com**.

Call the Bionic Ear Association at **866.844.HEAR (4372)** or email the BEA at **hear@AdvancedBionics.com**



MAKE a CONNECTION

One of the best resources for learning more about what to expect on your journey to better hearing is a person who's gone through the process and can relate to what you're going through now. Through the BEA's mentoring program, you can directly connect with another cochlear implant recipient or parent who can assist you in navigating the process of choosing and living with cochlear implants.

- **Call the Bionic Ear Association Hotline (866.844.HEAR)**
The BEA hotline is staffed by experienced cochlear implant audiologists who can answer your questions, provide support, and connect you with a recipient volunteer to be your personal mentor.
- **Connect with a Mentor Online (www.BionicEar.com)**
Read the stories and profiles of many Bionic Ear recipients who volunteer as personal mentors. From these profiles, you can select one or more mentors who you feel might best understand your own experience. Once you've identified a mentor, or mentors, it's easy to initiate an online communication.
- **Join the Hearing Journey Online Community (www.HearingJourney.com)**
Share your own experience with other recipients and candidates.
- **Find a BEA Chapter or Local Seminar/Event (www.BionicEar.com)**
You can meet recipients in your region who will help you learn more about life with a bionic ear. Make new friends with whom you can share your journey.

It's EASY to CONTACT the Bionic Ear Association

Want to learn more about life with a cochlear implant or the Harmony HiResolution Bionic Ear System by AB?

Just complete this postage-paid card and drop it into any mailbox. A representative from the Bionic Ear Association will contact you.

Name: _____

Address: _____

City: _____

State/Zip Code: _____

Country: _____

Email Address: _____

Telephone: _____



GLUE AREA