

FACT SHEET

Hybrid Hearing

What is Hybrid Hearing?

Hybrid™ Hearing* is a U.S. Food and Drug Administration (FDA)-approved cochlear implant hearing solution. It combines the amplification of a hearing aid with cochlear implant technology in one device.

For more information on cochlear implants, see the Cochlear Implant Fact Sheet.



Whom does Hybrid Hearing help?

Hybrid Hearing is designed to help those with severe high-frequency hearing loss and mild to moderate low-frequency hearing loss, sometimes named “ski slope” hearing loss. These are typically adults whose hearing aids are no longer enough and who do not yet meet the candidacy criteria for traditional cochlear implants.

Why is Hybrid Hearing significant?

Hybrid Hearing is the first solution to help a unique set of individuals with hearing loss. These people may still be able to hear some sounds, but it has gotten harder to hear conversations in both quiet and noisy situations. They can still hear barks and honks, but can't hear whistles and chirps, which are high-frequency sounds. High-frequency sounds help one distinguish words and detect emotion. Without them, words merge together, making what you do hear jumbled and difficult to understand.

The National Institute on Deafness and Other Communication Disorders (*NIDCD*) estimates that approximately 15 percent of Americans (*26 million people*) between the ages of 20 and 69 have high-frequency hearing loss due to exposure to noise at work or during leisure activities.¹

How can Hybrid Hearing help?

Hybrid Hearing uses the natural hearing one has while providing access to the sound they are missing for improved sound quality and speech understanding. Compared to hearing aids alone, Cochlear™ Nucleus® Hybrid™ Implant System** users reported hearing two times better in quiet and noise, and their overall hearing satisfaction increased 10 times compared to their satisfaction with hearing aids.²

How does Hybrid Hearing work?

At Cochlear, there are two ways to utilize our Hybrid Hearing system:

1. The Cochlear Nucleus Hybrid Implant System, which utilizes the Nucleus Hybrid L24 Implant and the Nucleus Acoustic Component. The Hybrid L24 Implant has a shorter electrode array and is specifically designed to stimulate electronically the higher frequency regions of the cochlea, while lower frequency hearing is preserved for acoustic amplification. This provides the recipients use of the hearing they have and restores access to the hearing they are missing.
2. The FDA has approved the Cochlear Nucleus Acoustic Component's availability for use to all individuals with functional low-frequency hearing regardless of the type of cochlear implant they have. Previous access to the acoustic component was only available to those with the Hybrid L24 Implant. Now, all Cochlear implant customers can obtain the acoustic component if they have functional low frequency hearing.

There are three main components to Hybrid Hearing:

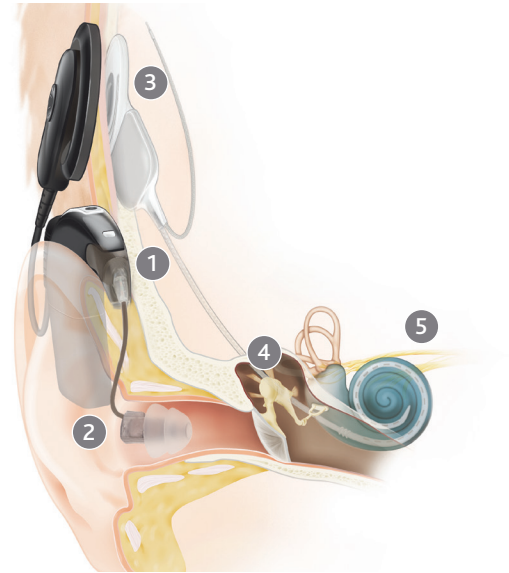
The internal implant, which is the surgically implanted internal device that contains the processing chip, a removable magnet and the electrode array.

The external behind-the-ear sound processor, which contains the processing unit, microphones, battery module and a coil.

The acoustic component, which attaches to the external behind-the-ear sound processor and is inserted into the ear.

HOW THE NUCLEUS HYBRID SYSTEM WORKS:

- 1 Microphones on the Nucleus 6 Sound Processor pick up the sounds you're missing and convert them into digital information.
- 2 At the same time, when using Hybrid Hearing, the acoustic component amplifies the sounds you do hear and sends them through the ear canal in the normal pathway of hearing.
- 3 The missing sound information is transferred through the coil to the Nucleus Hybrid Implant just under the skin.
- 4 The Nucleus Hybrid Implant sends digital sound signals down the electrode into the cochlea.
- 5 The hearing nerve fibers in the cochlea pick up the signals, combine them with the amplified sounds and send them to the brain, which is translated as the sound you hear.



Is Hybrid Hearing covered by insurance?

Many insurance companies cover the Cochlear Nucleus Hybrid Implant System for patients who qualify.

Additional facts about Cochlear's Hybrid Hearing solution:

- The Cochlear Nucleus Hybrid Implant System is the first FDA-approved hearing implant solution to combine acoustic and electric hearing in one device.
- The current Hybrid Hearing wearing option is the Nucleus 6 Sound Processor. For more information on the Nucleus 6 Sound Processor, see the Cochlear Implant fact sheet.

Where do I learn more about Hybrid Hearing?

Visit www.Cochlear.com/US/Hybrid.

1. Hoffman HJ, Ko C-W, Themann CL, Dillon CF, Franks JR. Reducing noise-induced hearing loss (NIHL) in adults to achieve U.S. Healthy People 2010 goals. Abstract. Am J Epidemiol. 2006 Jun (Suppl S);163(11):S122.
 2. FDA Panel Sponsor Executive Summary, Nucleus Hybrid L24 Implant System [Internet]. 2013 November 8 [cited 2014 June 5]. Available from: <http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/MedicalDevices/MedicalDevicesAdvisoryCommittee/EarNoseandThroatDevicesPanel/UCM373793.pdf>
- * The Acoustic Component should only be used when behavioral audiometric thresholds can be obtained and the recipient can provide feedback regarding sound quality.
- ** The Hybrid L24 Implant is approved in the US for adults ages 18 and older.

www.Cochlear.com/US

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