

What is a Cochlear Implant?

A cochlear implant is a device that is surgically implanted into your cochlea. The cochlear is a small snail shaped organ located in your inner ear. In a normal hearing ear, sound waves come into the cochlea and stimulate the tiny nerve endings, called hair cells, within the cochlea. The hair cells send a signal to your brain which you interpret as sound. A hearing aid works by making the sound waves bigger, which can help you hear better when those hair cells have become damaged. Some individuals have significant difficulty hearing, even with appropriately fit hearing aids. A cochlear implant is another option.

A cochlear implant is designed to provide some hearing to individuals who no longer receive good benefit from hearing aids alone. This is achieved by using electrical impulses to stimulate the spiral ganglion cells that are connected to the hair cells in the cochlea. This new signal is sent to the hearing nerve and is interpreted by the brain as sound.

There are two parts required for a cochlear implant to work: the surgically implanted internal device and the external sound processor. The internal device has several components including an electrode array, receiver/stimulator, and magnet. The external sound processor has microphones, magnet, sound processing unit, and battery.

Currently we work with three FDA-approved manufacturers of cochlear implant devices: Advanced Bionics, Med-El, and Cochlear Corporation. All manufacturers have created excellent and durable internal devices that are intended to last a lifetime. As with any type of technology there are strengths for each manufacturer that are constantly evolving. You will meet with representatives of all manufacturers to learn about their devices. Your audiologist or surgeon can make a recommendation of which manufacturer they think is most appropriate for you.

Contact information for each manufacturer:

Advanced Bionics: Nicole Bauer, Nicole.Bauer@advancedbionics.com 661-289-0159

Cochlear Corp: Nicole Grimes, ngrimes@cochlear.com 206-753-9054

Med-EL: Rebecca Ramirez, rebecca.ramirez@medel.com 984-327-7779