

Arizona Hearing & Balance Center

Michael J. Fucci, MD

*Specializing in Diseases
Of the Ear, Hearing,
Balance & Skull Base:
Adult & Pediatric*

*Fellowship Trained In
Neurotology & Skull Base
Surgery*

*Board Certified in
Subspecialty of Neurotology
by American Board
of Otolaryngology*

*Board Certified in
Otolaryngology by
American Board of
Otolaryngology*

*American Academy of
Otolaryngology -
Head & Neck Surgery*

American Medical Assoc.

American Neurotology Soc.

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COCHLEAR IMPLANTS: AN OVERVIEW

A cochlear implant is a device that is used for patients who have lost so much hearing that a hearing aid is no longer able to help them. The patient often reports that he/she can hear sound with a hearing aid(s) but cannot understand speech unless they are lipreading at the same time. Cochlear implants are not implanted into individuals who have a hearing loss but do not WANT to wear a hearing aid; a cochlear implant is used when patients do not get reasonable help from the best hearing aids available.

There are several criteria that must be met before a patient is deemed a cochlear implant candidate:

1. Hearing loss that is severe to profound.
2. Hearing loss that does not favorably respond to the use of the best hearing aids available. Standardized tests will be administered to the patient using these hearing aids.
3. Results of either an MRI or a CT scan that suggests that the inner ears would be physically able to receive a cochlear implant.
4. No other medical contraindication for the surgical procedure (it is an outpatient procedure that generally lasts 1-2 hours).
5. REALISTIC EXPECTATIONS after surgery.

A cochlear implant will give a patient improved hearing but it will not restore the hearing to normal. Patients who have been implanted report varying successes with the device. Some are able to talk on the telephone, understand speech without lipreading, and understand music. However, there are many patients who are successful with their cochlear implants that still need to use lipreading and are not able to speak on the telephone or listen to music. Unfortunately, we cannot predict just how well a patient will perform with the cochlear implant prior to implantation. Tinnitus (or head noise) is often bothersome to people who have a severe to profound loss of hearing. The insertion of a cochlear implant should not cause any changes to this head noise. Many patients report that once they are able to use the implanted device and hear sound again, they are not as aware of the noise in their head. A cochlear implant is NOT a treatment for tinnitus. A cochlear implant is a treatment for hearing loss. Therefore, no patient should proceed with a cochlear implant unless he/she is motivated to hear again.

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Once the surgery is completed, the patient must heal for a period of 3-4 weeks before the device can be activated. During the healing process, the patient can go back to his or her usual activities without any changes provided the patient feels well. Most people experience little to no pain following surgery.

Once the 3-4 week healing time is complete, the patient will return to the office for initial activation of the external equipment. This is the time when the patient will detect sound through the implanted device. This is usually an exciting and emotional day.

It can take up to 12 months after surgery for a patient to make good use of the new auditory information; however, most patients make good use of the new information within the first 3-6 months. There are, of course, exceptions; this should be discussed in depth with both the audiologist and the surgeon before surgery is scheduled.

For pediatric patients, it is EXTREMELY important that we establish a plan for speech and auditory therapy BEFORE surgery. If your child is enrolled in public school, they are entitled to speech therapy services as a student in the school. However, the amount of time invested by the school district in helping your child learn to hear and speak is not generally enough. You will need to supplement this with private speech therapy after school. Some insurance companies will pay for this and some will not. We need to answer these questions BEFORE surgery.

There will be many visits to the office to fine-tune the external equipment so please take this into consideration when deciding on an appropriate time to have surgery. Generally initial stimulation will occur 3-4 weeks after surgery with weekly visits thereafter for 3-4 weeks.

From then on, each patient will be scheduled as often as the audiologist feels is appropriate. It can be as often as every week, every month, or in 3 to 6 month intervals. This should be discussed with the audiologist before you decide on a date for surgery. Considerations will need to be made for work schedules, school schedules, and office schedules.