



## **Cochlear Implant Process Explanation of Evaluation Steps**

### **Phase I**

**1. Initial Audiology Testing and Counseling-** Your first visit will involve extensive testing of your or your child's hearing with tests performed in a sound booth with and without hearing aids. This information combined with the history of hearing loss is used by the audiologist to determine if a cochlear implant is likely to be helpful to you or your child. If so the audiologist will spend time counseling and educating you about cochlear implants so that you understand all that is involved before you decide to proceed with the rest of the process. Time- 2 hours.

**2. Otologic Medical Evaluation-** The Dallas Ear Institute physician will take a full medical history, perform a physical exam, and review the hearing tests performed in step 1. If he agrees that a cochlear implant is the best option the next phase of evaluations will be scheduled. Time- 45 minutes.

### **Phase II**

**1. MRI or CT Scan-** This is required on all patients to evaluate inner ear anatomy and to screen for any brain conditions prior to the placement of the implant. Children usually require sedation or anesthesia for the scan and therefore it is performed in Medical City's radiology department. Adults and older children can have their scan performed in a nearby outpatient facility. Time- 45 minutes.

**2. Genetics Evaluation (Children Only)-** 80% of children born with hearing loss have a genetic cause. Determining the exact gene that has caused the hearing loss is helpful to the physician in understanding the condition. It helps the parents understand how future children can be affected. Dr. Scheuerle will take a detailed family history, perform a physical exam, and possibly obtain genetic blood testing. She will then counsel the parents with these results. Her office is at Medical City Dallas. Time- 1 hour.

**3. Auditory/Verbal Evaluation-** For adults, this assesses (a) the affects of hearing loss on the patient's listening and speaking skills at home, work, educational and in social settings, (b) the possible benefits of a cochlear implant, and (c) the need for hearing therapy or hearing and speech therapy after the cochlear implant is activated.

For infants, children and teens, this evaluation assesses the patient's potential for learning to (a) hear and comprehend spoken language with a cochlear implant and (b) develop speech to use as a primary means of communication. The roles of the parent and the child's educational setting are discussed as they impact benefit from implantation.

For all patients, the purpose of short term or long term therapy is discussed. Adult family members are encouraged to attend the evaluation to learn how to support the patient. Time- 1 to 2 hours.

**4. Neuropsychology Evaluation-**The purpose of pre-operative psychological/neuropsychological screening-

In children/adolescents:

- (a) obtain information regarding overall cognitive, adaptive, emotional and behavioral functioning
- (b) assist in developing a plan to address skills of compliance and independence relevant to cooperation in rehabilitation, as needed
- (c) answer questions, address concerns, and offer emotional/behavioral support, as needed, to enhance pre-operative preparation or post-operative rehabilitation

In adults:

(a) obtain information regarding overall cognitive, adaptive, vocational, and emotional functioning relevant pre-operative concerns

(b) assist the individual and their family in identifying/addressing current stressors and other factors which could influence compliance following implantation.

This evaluation is usually not covered by insurance and requires the patient/parents to pay the evaluation fee of approximately \$150 at the time of the visit. Insurance will not be billed for this evaluation. Time-1 hour.

**5. Videonystagmography (VNG-Balance Testing- Adults Only)-** This test is performed in the Audiology Laboratory of Dallas Ear Institute, Suite A107. It involves a series of balance tests to determine the amount of balance function in each ear. The results of these tests can affect the choice of ear for implantation and help detect certain patients who may be prone to balance difficulties after implant surgery. Time- 1 hour.

**6. Second Phase Audiology Hearing Tests-** There are other sentence and word recognition tests performed in quiet and in the presence of background noise that enable us to better compare your or your child's hearing abilities after cochlear implantation with those prior. Time- 1hour.

**7. Insurance Precertification-** Obtaining approval from your insurance company for cochlear implantation can take several weeks. Debbie Spicer will be hard at work to obtain precertification for the surgery and will keep you up to date on the progress.

**8. General Medical Preoperative Exam by your Primary MD-** If you are age 40 or older or if you are any age but have other medical conditions (high blood pressure, heart conditions, diabetes, etc), you may need to see your primary physician for an exam that includes an EKG, Chest X-ray, and general blood tests before we can schedule your surgery. Your physician's office must fax us these results with a note from the physician stating that you are in reasonable condition to undergo the implant surgery.

### Phase III

**1. Preoperative Appointment, Dallas Ear Institute Physician-** When (and only when) all of the above steps are complete, a surgery date will be scheduled. You will be asked which cochlear implant brand you have selected—this is something that you will decide during the above process. The practice administrator will call and inform you of your estimated out of pocket expenses related to the surgery. The day prior to surgery you will meet with your physician to review all of the information, confirm which ear is to be implanted, and which device has been selected. You will also be given a Pneumococcal vaccine as recommended by the FDA and CDC, unless you know for sure that you have received it in the past. Time 1 hour.

Notify the Auditory-Verbal Therapist of your surgery date and schedule your first therapy session that will follow activation of the implant.

**2. Cochlear Implant surgery-** The surgery takes approximately 1 ½ hours to perform. The majority of patients go home the same day of surgery. Further surgical details will be discussed with your physician and can also be found on our web site at [www.dallascochlear.com](http://www.dallascochlear.com).

**3. One Week Postoperative Check and Initial CI Training-** You will return to see your physician one week after surgery to check the incision for proper healing. You will then see the audiologist who will perform electrical checks on the implant. She will counsel and educate you concerning all of the external components of the cochlear implant system. You will be sent home that day with all of your implant accessories and instructions to learn at home. You or your child **will not** have your cochlear implant turned on at this visit. Time 1 hour.

**4. Activation and Programming, Start AV Therapy-** Cochlear implant activation usually takes place 3 weeks after surgery. That day you or your child will have the processor programmed and leave the office with the implant functioning. This is the beginning of learning to hear with the implant. You will schedule your Auditory-Verbal Therapy to begin sometime after this visit. You will be returning to the audiologist for programming of the implant processor at regular intervals to slowly increase the strength of the implant stimulation. Auditory-Verbal Therapy will take place on a weekly basis with a frequency and duration to be determined by your therapist.