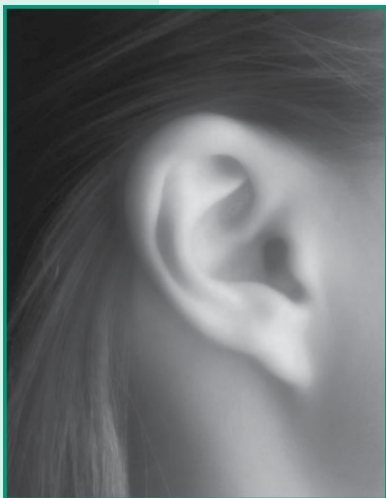


Patient Guide

Cochlear Implant

Information on Candidacy,
Surgery, and Rehabilitation



EAR, NOSE & THROAT
ASSOCIATES, P.C.

Cochlear Implant

What is a Cochlear Implant?

A cochlear implant is a surgically implanted device that delivers electrical stimulation to the hearing nerve in response to sound. This device is used for individuals with a severe hearing impairment who are unable to obtain adequate speech understanding from the use of properly fitted hearing aids.

Cochlear implants consist of both internal and external components. The surgically implanted components include the **implant** which is embedded in the bony tissue under the skin behind the ear, and the **electrode array** which connects to it and is inserted into the snail-like inner ear structure known as the **cochlea**. Along with the internal components, the patient wears an **external headpiece** that magnetically couples to the implant behind the ear, and a **speech processor** that connects to the headpiece via a transmission cord. Speech processors are available in both body-worn and ear-level styles. Body-worn speech processors are approximately the size of a pager and can be worn in a pocket, on a belt, or concealed under clothing. Ear-level processors are similar in appearance to a behind-the-ear style hearing aid and are popular among adult implant users due to their lightweight design and cosmetic appeal.



Ear-level speech processor
Courtesy of Cochlear Corporation®



Body-worn speech processor
Courtesy of Cochlear Corporation®

Ear, Nose, & Throat Cochlear Implant Program

Cochlear implants are FDA approved for both adults and children. The FDA has established a set of guidelines for determining cochlear implant candidacy for both of these populations. For this reason, patients who are considering cochlear implantation are required to go through a medical evaluation with the surgeon, an audiological evaluation, a radiological assessment, and in some cases, a speech and language evaluation.

Medical Evaluation

An initial consultation with the surgeon is the first step in the process to determine candidacy. The surgeon will look into possible medical contraindications for surgery, such as ear infection(s), before recommending that the patient continue in the candidacy assessment process. This is also an opportunity for patients to discuss their medical questions regarding the surgery.

Audiological Evaluation

After a patient has been medically cleared for cochlear implantation, an appointment is scheduled with an audiologist who specializes in working with cochlear implant recipients. Patients should bring their hearing aids to this appointment (loaner hearing aids are available if this is not possible). A series of tests are performed to determine how much benefit for speech comprehension (without lip reading) patients are receiving from their current hearing aids. A trial with a new set of hearing aids may be recommended before proceeding with implantation. For individuals who are appropriate candidates for surgery, the evaluation is followed by extensive counseling

regarding the specifics of the cochlear implant program including risk factors, device choices, and expectations.

Radiological Assessment

Before surgery, patients are required to obtain a high resolution CT scan of the temporal bones. This allows the surgeon to view the status of the inner ear prior to surgery.

Speech and Language Evaluation

This part of the process may be completed before or after implantation. For adult patients, this may or may not be necessary. Some implant recipients choose to work with a speech-language pathologist for additional training after their implant has been turned on. This can be beneficial for patients who have had limited experience with sound prior to surgery.

Surgery

Cochlear implant surgery typically takes 2-3 hours. Patients are kept in the hospital overnight and released the next day. Following surgery, patients may be off work for up to two weeks. The wound is checked in the office 7 to 14 days after surgery.

Rehabilitation

Rehabilitation after surgery is mainly handled by the audiologist. The initial visit following surgery is scheduled approximately four to six weeks postoperatively. At this appointment, the patient is fitted with the external equipment for the cochlear implant (headpiece, speech processor(s), battery charger, and other accessories) and the implant is **activated** for the first time. Prior to this

visit, the implant is non-functioning. The waiting period is necessary to allow the incision site to heal and for the swelling to diminish.

During the activation appointment and follow-up appointments with the audiologist, the patient's speech processor is connected to a computer and is set to allow a comfortable amount of stimulation to the hearing nerve in response to sound. The patient is required to do a lot of listening and responding to various levels of stimulation (similar to hearing test) in order to find the most comfortable settings for their listening needs. The program in which these settings are stored is called a MAP. Several MAP's are created as tolerance to stimulation levels change over time.

Evaluations are scheduled at three, six, and twelve months postoperatively to monitor progress in speech understanding as the patient adjusts to using their cochlear implant. After the first year of rehabilitation, patients come in annually for adjustment of their speech processor settings and for reevaluation.

Cost/Insurance

Cochlear implantation involves costly equipment as well as surgery and extensive followup care. Insurance coverage for cochlear implant surgery and related services varies depending on individual insurance policies. Ear, Nose, & Throat Associates, P.C. will work closely with any patients considering this procedure to obtain maximum insurance benefits.

Please direct questions and inquiries regarding the Cochlear Implant Program to the Audiology Department at **(260) 426-8117, ext. 1628**

A Team Approach

Michael J. Disher, M.D., is Medical Director of the Cochlear Implant Program. Dr. Disher is a board-certified otolaryngologist who has completed fellowships in otology, neurotology, and skull-base surgery at the University of Michigan. He was an assistant professor in the Department of Otolaryngology-Head & Neck Surgery at the University of Michigan prior to joining Ear, Nose, & Throat Associates, P.C. in 1996. Dr. Disher brings his experience in cochlear implantation from the University of Michigan where he performed many cochlear implant surgeries.

Shelley Zern, M.A., CCC-A, is the Audiology coordinator of the Cochlear Implant Program. Mrs. Zern is a licensed audiologist with clinical experience in both medical and private-practice settings. She has received specialized training in both diagnostic and rehabilitative aspects of cochlear implantation and has been involved with the program since its start in 2000.

Lisa Weber, M.A., CCC-A, is a licensed audiologist who has participated in the Cochlear Implant Program since 2000. Her clinical experience has been primarily in the medical setting. Mrs. Weber is a graduate of Indiana University where she became interested in cochlear implantation during her studies there.

Mary Beth Burton, M.A., CCC-A, is a licensed audiologist who joined the Cochlear Implant Program in August, 2004. She completed her clinical fellowship at the University of Michigan's Cochlear Implant Program where she enjoyed working with both pediatric and adult implant recipients.

Our Office Locations

With a variety of office and clinic locations throughout the region, we are here to meet your needs.

Dupont Medical Park

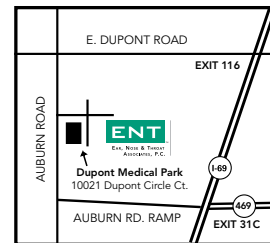
(CT Scanner location)
10021 Dupont Circle Ct.
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888-881-4368 x1628

Apple Glen Crossing

1306 Apple Glen Blvd.
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260-459-6924
800-555-5402

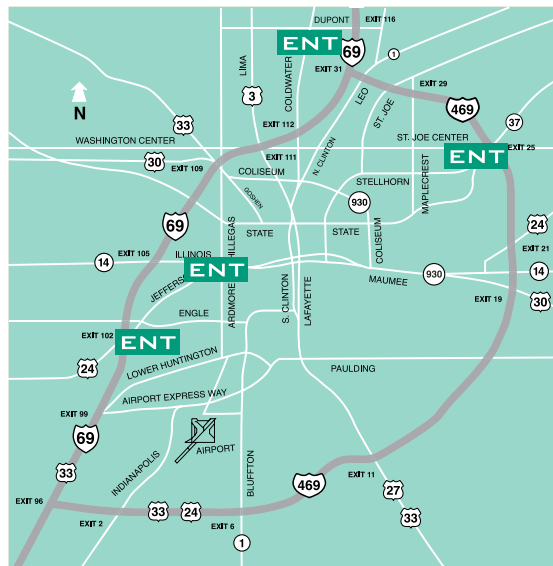
Lutheran Medical Park

7926 W. Jefferson Blvd.
Fort Wayne, IN 46804
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888-881-4368 x1628



Chapel Ridge Shoppes

5411 Meijer Drive
Fort Wayne, IN 46835
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To Schedule an Appointment,
Call (260) 426-8117 ext 1628 or
1-888-881-4368 ext 1628.

Ear Nose & Throat Associates, PC

Ear, Nose and Throat Associates, PC is a medical practice of board-certified physicians and surgeons specializing in otolaryngology and neurotology medical care and surgery. Whether we are treating children or adults, our approach is one of care and concern for the patient. Our staff of licensed clinicians and experienced office professionals remains committed to you and your health.



Board-certified Physicians

John R. Thomas, MD
Thomas W. Dumas, MD
H. Saylor Daugherty, MD
William M. Culp, MD
David W. Stein, MD
Mohan K. Rao, MD
Michael J. Disher, MD
Douglas A. Nuckols, MD
Thomas W. Herendeen, MD
Deepkaran K. Reddy, MD
Adam R. Kaiser, MD

Clinics

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LaGrange, Indiana
Auburn, Indiana
Columbia City, Indiana
Decatur, Indiana
Kendallville, Indiana
New Haven, Indiana
Warsaw, Indiana
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Nurse Practitioners:

Valerie Stucky, RN, FNP, MSN
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