

## WHAT IS A COCHLEAR IMPLANT?

A **cochlear implant** is an electronic device that is implanted into the inner ear (the cochlea) and is used to restore hearing in patients who no longer benefit from traditional hearing aids or have hearing loss in just one ear.

#### How does a cochlear implant work?

A cochlear implant is made up of equipment worn on the outside of the ear and equipment surgically placed inside the ear. During surgery, an incision is made behind the ear and the internal device is secured under the skin with the electrode array delicately threaded into the cochlea. The electrodes stimulate the hearing nerve which sends the auditory signal to the brain. The external equipment (sound processor) picks up sound and sends it across the skin to the internal device.

- 1. External Hardware (includes microphone, speech processor, coil/cable and battery)
- 2. Internal Receiver
- 3. Electrode Array
- 4. Hearing Nerve
- 5. Brain

# OUR TEAM

#### Chester F. Griffiths, MD

PNI CO-FOUNDER - DIRECTOR, EYE, EAR & SKULL BASE CENTER; HEAD & NECK SURGERY AND ENDOSCOPIC SKULL BASE SURGERY Dr. Griffiths, MD, FACS, is board certified in Otolaryngology, Head and Neck Surgery and Facial Plastic and Reconstructive Surgery.

#### Courtney Voelker, MD, PhD MEDICAL DIRECTOR - EAR, ENT SURGERY

Dr. Voelker is a Rhodes Scholar and board certified neurotologist. She is Director of Otology/Neurotology – Lateral Skull Base Surger and the Director of the Cochlear Implant Program at Pacific Neuroscience Institute.

## Rebecca Lewis, AuD

AUDIOLOGY DIRECTOR - AUDIOLOGY

Dr. Rebecca Lewis is the Audiology Director of the Adult & Pediatric Cochlear Implant Program at Pacific Neuroscience Institute.

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# PACIFIC NEUROSCIENCE INSTITUTE®





# COCHLEAR IMPLANT PROGRAM



# MISSION

"Our community-based cochlear implant program strives to advance our patients' quality of life, improve their ability to communicate with loved ones, and enhance their cognitive well-being. Our interdisciplinary cochlear implant team at PNI treats patients across the lifespan (from infancy to older adults) using evidenced-based practices, innovation, and a compassionate approach to care."

Hearing loss is one of the leading causes of overall disability worldwide. Globally, approximately **466** million adults and children (**6%**) have disabling hearing loss. This is projected to rise to **630** million by **2030**. Hearing loss has a substantial impact on people's quality of life.

## Effects of untreated hearing loss on aging:

- Quality of Life
- Cognitive Decline
- Depression
- Falls

## Hypertension Diabetes Osteoporosis

Heart Health

# Cochlear Implant

## WHO IS A COCHLER IMPLANT CANDIDATE?

Cochlear implants are recommended when an individual cannot hear well with hearing aids or if they have significant hearing loss in just one ear. We serve patients across the lifespan, from infancy to older adults. Cochlear implant criteria has expanded over the past years! Shockingly only **5%** of patients who would benefit from a cochlear implant receive them.

## Adult candidacy includes:

- Hearing preservation for hybrid candidates
- Single Sided Deafness/Unilateral profound hearing loss
- Asymmetric Hearing Loss
- Limited benefit from well fit hearing aids

#### Pediatric candidacy includes:

- Children who have limited progress in their language development with properly fit hearing aids and children with unilateral profound sensorineural hearing loss (SNHL) or asymmetric SNHL
- FDA has approved CI for babies of at least 9 months old with bilateral profound SNHL, however we can implant at earlier ages

## WHY CHOOSE PNI FOR YOUR HEARING HEALTH CARE?

Pacific Neuroscience Institute's team of experts help with hearing, communication disorders, and balance disorders using a multidisciplinary and compassionate approach to care. Our innovative team delivers individualized treatment plans for our patients.

## 6 Pillars of Excellence:

- Experience and Expertise
- Collaborative Care
- Accessible Care
- Support
- Innovation
- Second Opinions