

Adult Cochlear Implant Candidacy Protocol Ear & Hearing | Center for Neurosciences

There are a variety of factors to consider when determining if someone is a cochlear implant (CI) candidate. However; most patients have a long-standing history of progressive sensorineural hearing loss in both ears and no longer receive much benefit from conventional hearing aids. During a comprehensive audiologic evaluation, word recognition scores of <60% indicate a patient may be a cochlear implant candidate and should consider a cochlear implant evaluation (CIE).

COCHLEAR IMPLANT EVALUATION, part I

60 MINS

Testing performed in the sound field at 60 dBA at 0 degree azimuth for both speech & noise via recorded materials unless otherwise indicated.

Evaluation of Aural Rehabilitation Status. in the BEST AIDED CONDITION

Verification of hearing aid output

Real-Ear-Measures using evidence-based prescriptive targets

AzBio Sentence Recognition Testing, +5 Signal-to-Noise Ratio (SNR)

Right hearing aid only

Left hearing aid only

Binaural hearing aids

CNC Word and Phoneme Scores, Quiet

Binaural hearing aids

Counseling and review of results

Review Candidacy Criteria

Review results:

Should patient NOT yet meet CI candidacy criteria our audiologist will recommend an appropriate hearing device

Should patient MEET CI candidacy criteria our audiologist will discuss CI basics (see below) and the patient will be scheduled for CIE, part II, and Vestibular Evaluation.

Overview of CI process:

Internal/external devices

Follow-up appointments

Aural rehabilitation

Realistic expectations

Manufacturer review and information provided

Contact/meet with manufacturer reps for detailed information

ALOHA

COCHLEAR IMPLANT EVALUATION, part II

60 MINS

1-3 weeks following CIE, part I

Testing performed in the sound field at 60 dBA at 0 degree azimuth for both speech & noise via recorded materials unless otherwise indicated.

Evaluation of Aural Rehabilitation Status. in the BEST AIDED CONDITION

Verification of hearing aid output

Real-Ear-Measures using evidence-based prescriptive targets

AzBio Sentence Recognition Testing, Quiet

Right hearing aid only

Left hearing aid only

Binaural hearing aids

CNC Word and Phoneme Scores, Quiet

Right hearing aid only

Left hearing aid only

Counseling and device selection

Address patient questions

Review of aural rehabilitation and realistic expectations

Finalize device selection and complete order form

VESTIBULAR EVALUATION

90 MINS

At least 1-week prior to CI surgery

Vestibular evaluation is included in the comprehensive Cochlear Implant Evaluation to assess inner ear balance function. Balance testing does not typically prevent someone from receiving a cochlear implant but can provide information about which ear should be implanted. Please refer to Vestibular Evaluation Protocol for specific testing details.

Cervical Vestibular Evoked Myogenic Potential (cVEMP)

cVEMP is an electrophysiologic test used to determine the function of the saccule and inferior vestibular nerve. Responses are measured from the sternocleidomastoid muscle in the neck. The patient is seated in an upright position and instructed to quickly turn their head opposite to the ear of stimulation in order to engage the sternocleidomastoid muscle upon hearing the 500 Hz tone-burst stimuli.

Videonystagmography (VNG)

VNG is used to evaluate patients with dizziness, vertigo, or balance dysfunction. In this test, eye movements are recorded which gives information about the central and peripheral balance system via the vestibular ocular reflex. It provides an objective assessment of the oculomotor and vestibular systems. VNG testing consists of three parts:

- 1) Oculomotor evaluation
- 2) Positioning/positional evaluation
- 3) Caloric stimulation of the vestibular system

*Petrossectomy/ear canal closure patients OR patients with a history of extensive ear surgery do NOT need vestibular evaluation prior to surgery due to inability to accurately assess caloric function.

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