Center for NEUROSCIENCES | EAR & HEARING
Otology | Neurotology | Audiology

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

Activation of the Cochlear Implant (CI) is performed by the Audiologist 2-6 weeks following surgery. While we understand all recipients are very anxious to have the CI activated there are a variety of factors to consider when determining the activation date. For example very frail patients, those who underwent a petrosectomy, or very complex ear patients may require a longer healing period after surgery. The Ear & Hearing team will coordinate to determine your specific activation timeframe to maximize your success with the cochlear implant.

INITIAL ACTIVATION, DAY 1 — 60 MINS

2-6 weeks post-op

Equipment orientation

- Sound processors
- Batteries & charging
- Trouble shooting supplies
- Accessories
- Manuals and other documents

MAPPING and Programming

- Magnet selection
- NRT/tNRI/Telemetry
- Mapping/programming

Counseling

- Practice attaching batteries and placing sound processor on head
- Consistent daily usage except when sleeping or around water
- CEASE use of contralateral hearing aid for the 1st month to encourage neural plasticity of electric hearing
- Importance of aural rehabilitation; provide handout with resources

INITIAL ACTIVATION, DAY 2 — 60 MINS

5-14 days following Day 1

Residual hearing evaluation

- Tympanometry
- Unaided thresholds for pure tone air and bone conduction per Minimum Reporting Standards

CI-aided thresholds

- Determine hearing sensitivity through CI sound processor in sound-field

INITIAL ACTIVATION, DAY 2, continued

MAPPING and Programming

Magnet check
Activation of acoustic component if thresholds <85 dB HL, 125-2000 Hz
Mapping/programming/data logging
Obtain ear mold impression for future fitting if candidate for acoustic component

Counseling

Consistent daily usage except when sleeping or around water
CEASE use of contralateral hearing aid for the 1st month to encourage neural plasticity of electric hearing
Importance of aural rehabilitation; provide handout with resources if needed

1-MONTH FOLLOW-UP 60 MINS

1-month following Day 1of activation

Residual hearing evaluation

Tympanometry
Unaided thresholds for pure tone air and bone conduction per Minimum Reporting Standards

CI-aided thresholds

Determine hearing sensitivity through CI sound processor in sound-field

MAPPING and Programming

Magnet check
Activation of acoustic component if thresholds <85 dB HL, 125-2000 Hz
Mapping/programming/data logging
Obtain ear mold impression for future fitting if candidate for acoustic component

Counseling

Consistent daily usage except when sleeping or around water
RESUME use of contralateral hearing aid for daily listening
Importance of CI-only aural rehabilitation; provide resources handout if needed

3-MONTH FOLLOW-UP 90 MINS

3-months following Day 1 of activation

Residual hearing evaluation

Tympanometry
Unaided thresholds for pure tone air and bone conduction per Minimum Reporting Standards

CI-aided thresholds

Determine hearing sensitivity through CI sound processor

Evaluation of Aural Rehabilitation Status in the BEST AIDED CONDITION

Verification of hearing aid output via Real-Ear-Measures using evidence-based prescriptive targets. Testing performed in the sound field at 60 dBA at 0 degree azimuth for both speech & noise via recorded materials unless otherwise indicated.

Test Battery based on Minimum Reporting Standards:
- AzBio, Quiet, Newly implanted ear only
- CNC, words/phonemes, Quiet, Newly implanted ear only

**Minimum Reporting Standards include individual ear and binaurally aided testing in both Quiet and Noise conditions. The Ear & Hearing Clinic has elected to evaluate ONLY the implanted ear in the Quiet condition during the 3-month appointment.*

MAPPING and Programming

Magnet check
Activation of acoustic component if thresholds <85 dB HL, 125-2000 Hz
Mapping/programming/data logging
Obtain ear mold impression for future fitting if candidate for acoustic component

Counseling

Consistent daily usage except when sleeping or around water
Continue use of contralateral hearing aid during daily listening
Importance of CI-only aural rehabilitation; provide resources handout if needed

6-MONTH FOLLOW-UP — 90 MINS

6-months following Day 1 of activation

Residual hearing evaluation

Tympanometry
Unaided thresholds for pure tone air and bone conduction per Minimum Reporting Standards

CI-aided thresholds

Determine hearing sensitivity through CI sound processor in sound-field

Evaluation of Aural Rehabilitation Status in the BEST AIDED CONDITION

Verification of hearing aid output via Real-Ear-Measures using evidence-based prescriptive targets. Testing performed in the sound field at 60 dBA at 0 degree azimuth for both speech & noise via recorded materials unless otherwise indicated.

Test Battery based on Minimum Reporting Standards:

- AzBio, +5 SNR
  - Right hearing device
  - Left hearing device
  - Binaurally aided
- AzBio, Quiet
  - Right hearing device
  - Left hearing device
  - Binaurally aided
- CNC, words/phonemes, Quiet
  - Right hearing device
  - Left hearing device
  - Binaurally aided

MAPPING and Programming

Magnet check
Activation of acoustic component if thresholds <85 dB HL, 125-2000 Hz
Mapping/programming/data logging
Obtain ear mold impression for future fitting if candidate for acoustic component

Counseling

Consistent daily usage except when sleeping or around water
Continue use of contralateral hearing aid during daily listening
Importance of CI-only aural rehabilitation; provide resources handout if needed

12-MONTH FOLLOW-UP — 90 MINS

12-months following Day 1 of activation

Residual hearing evaluation

Tympanometry
Unaided thresholds for pure tone air and bone conduction per Minimum Reporting Standards

CI-aided thresholds

Determine hearing sensitivity through CI sound processor in sound-field

Evaluation of Aural Rehabilitation Status in the BEST AIDED CONDITION

Verification of hearing aid output via Real-Ear-Measures using evidence-based prescriptive targets. Testing performed in the sound field at 60 dBA at 0 degree azimuth for both speech & noise via recorded materials unless otherwise indicated.

Test Battery based on Minimum Reporting Standards:

- AzBio, +5 SNR
  - Right hearing device
  - Left hearing device
  - Binaurally aided
- AzBio, Quiet
  - Right hearing device
  - Left hearing device
  - Binaurally aided
- CNC, words/phonemes, Quiet
  - Right hearing device
  - Left hearing device
  - Binaurally aided

MAPPING and Programming

Magnet check
Activation of acoustic component if thresholds <85 dB HL, 125-2000 Hz
Mapping/programming/data logging
Obtain ear mold impression for future fitting if candidate for acoustic component

Counseling

Consistent daily usage except when sleeping or around water
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ANNUAL APPOINTMENTS FOR ADULTS 90 MINS

Residual hearing evaluation
- Tympanometry
- Unaided thresholds for pure tone air and bone conduction per Minimum Reporting Standards

CI-aided thresholds
- Determine hearing sensitivity through CI sound processor in sound-field

Evaluation of Aural Rehabilitation Status in the BEST AIDED CONDITION
- Verification of hearing aid output via Real-Ear-Measures using evidence-based prescriptive targets. Testing performed in the sound field at 60 dBA at 0 degree azimuth for both speech & noise via recorded materials unless otherwise indicated.

Test Battery based on Minimum Reporting Standards:
- AzBio, +5 SNR
  - Right hearing device
  - Left hearing device
  - Binaurally aided

AzBio, Quiet
- Right hearing device
- Left hearing device
- Binaurally aided

CNC, words/phonemes, Quiet
- Right hearing device
- Left hearing device
- Binaurally aided

MAPPING and Programming
- Magnet check
- Activation of acoustic component if thresholds <85 dB HL, 125-2000 Hz
- Mapping/programming/data logging
- Obtain ear mold impression for future fitting if candidate for acoustic component

Counseling
- Consistent daily usage except when sleeping or around water
- Continue use of contralateral hearing aid during daily listening
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Minimum Reporting Standards
Cochlear Implant Adult
Ear & Hearing | Center for Neurosciences

Minimum reporting standards for adult cochlear implantation has been endorsed by the Implantable Hearing Devices Committee and the Hearing Committee of the American Academy of Otolaryngology-Head and Neck Surgery. Reporting of the minimal data set is intended to facilitate inter-study comparability and consistency or reporting of adult cochlear implant outcome data.

MINIMUM REPORTING STANDARDS, AUDIOLOGIC

I. Reporting Time Frames:
Pre-operative
2-4 weeks post-operative
3-months (*at CNS we have elected to test the CI ear only at this time frame)
6- months
12-months

II. Air Conduction Thresholds:
125, 250, 500, 1000, 1500, 2000, 4000, 8000 Hz
Threshold listed as 120 dB if No Response is obtained

III. Bone Conduction Thresholds
250, 500, 1000, 1500, 2000, 4000 Hz
*Criteria for Functional Hearing Threshold: < 80 dBHL for 125, 250, 500 Hz

IV. Minimum Speech Test Battery with presentation at 0-degree Azimuth
a. *Test Conditions:*
Left ear
Right ear
Binaural
b. *Test Battery:*
CNC in quiet
AzBio or BKB-Sin, Quiet
AzBio or BKB-Sin, +5 Noise (speech and noise co-located at 0-degree azimuth)

V. Daily Listening Condition
No amplification
Conventional hearing aid
CI only
CI + hearing aid

Thank you for choosing Ear and Hearing | Center for Neurosciences.