Bone Anchored Hearing Implant Protocol
Ear & Hearing | Center for Neurosciences

Conventional hearing aids pass sound waves through the air while a bone anchored hearing implant passes sounds by vibration through the skull and on to the inner ear. Patients with single sided deafness (SSD), conductive hearing loss, or mixed hearing loss may be a candidate for a bone anchored hearing implant (BAHI).

BONE ANCHORED HEARING IMPLANT SIMULATION 30 MINS

**Counseling**
- Review audiogram
- Discuss hearing loss and the need for hearing rehabilitation
- Counsel on expected listening difficulties and appropriate expectations
- Review aural rehabilitation options:
  - Conventional hearing aids
  - CROS hearing system
  - Bone Anchored Hearing Implant
- Overview of how BAHI works:
  - Sound processor transfers acoustic sound waves into mechanical vibration
  - Discuss Surgical vs. Non-surgical options: Softband or SoundArc
- Discuss surgical options:
  - Titanium post implanted in mastoid region behind ear
  - Osseointegration required (8 weeks between surgery and activation)
  - Coupling of BAHI Processor to Implant: Direct connect (abutment) or magnet

**Device Simulation and Assessment**
Patient is given the opportunity to listen to each BAHI device in office (Oticon Medical and Cochlear Americas) via external listening post.

- Device Selection, factors to consider:
  - Sound quality preference between manufacturers
  - Lifestyle demands for direct connect vs magnet coupling
  - Device accessories and compatibility
- Discuss follow-up appointment schedule and Audiology fee
- Inventory of patient’s listening needs: COSI – assess initial ability
- Completion of order form should patient elect to proceed

BONE ANCHORED HEARING IMPLANT ACTIVATION 60 MINS

8-weeks following surgery to allow for osseointegration

**Device Programming**
- Select correct configuration in software
- Direct bone-conduction threshold evaluation through BAHI in-situ
BONE ANCHORED HEARING IMPLANT ACTIVATION continued...

Volume Control
Programs
Feedback management

Device orientation
Parts of sound processor
Battery
  Battery size, life, where to purchase
  Ingestion dangers
Coupling
  Connect: abutment - cleaning
  Attract: magnet strength is IMPORTANT, and must be tight enough for good retention
  Lowest strength with the best retention possible to avoid skin breakdown issues
  Check magnet site at home to ensure no pain or redness; return to clinic if concerned
Softwear pads: improves comfort and increases dB transmission
Softband: tightness of band IMPORTANT (2 fingers under band)
SoundArc: shape and tightness of wire IMPORTANT
Safety line: Use until confident with device retention

Storage and Care
  Turn off when not in use
  Dry-aid kit if processor submerged under water
  Use dry cloth to clean; no cleansers necessary

MRI & TSA
MRI: all external pieces must be removed: processor + external magnet
  Internal device can undergo static magnetic field of up to 1.5 Tesla
TSA: System may activate airport security metal detectors – show medical device card

Troubleshooting
Listening post
Softband/SoundArc tightness
Feedback
Battery

User Manuals and Support Resources
Review manuals, resources, and warranties

Practice connecting sound processor to abutement or magnet
Top of processor at 12 o’clock,
Attach/detach: roll together & apart
Battery: insert/remove
Program/Volume buttons

Wireless Accessories: Pairing and streaming Apps and MFi
Usage/Wearing Schedule
Consistent, daily use during all waking hours, except when sleeping or around water
Better to work up to full-time use over 2-3 weeks vs inconsistent use or magnet issues

MAGNET CHECK
1-week following activation 15 MINS

If patient elects to proceed with the magnet coupling option, a magnet check appointment will be scheduled 1-week after initial activation to verify that the magnet strength is appropriate and adequate.

1-MONTH FOLLOW-UP
1-month following BAHI fitting 30 MINS

Counseling
Successes and challenges
Troubleshooting

Validation of BAHI
Subjective: COSI – assess final ability
Objective: Speech performance gap:
- Aided CNC 50-word list in sound field at 60dBA
- Unaided CNC 50-word list in sound field at 60dBA
- Contralateral ear in the “plug & muff” condition

Following the 1-month appointment we recommend at least annual visits to evaluate the performance of the Bone Anchored Hearing Implant. These visits are not covered by insurance and are on a self-pay basis. Please note, audiologic evaluations are typically covered by insurance.

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