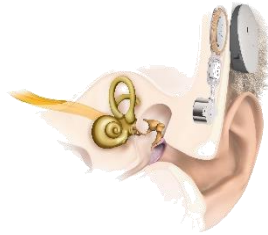


Bone-Anchored Hearing Aid (BAHA) System

What is Bone-Anchored Hearing Aid?

A BAHA is a type of hearing aid which uses transmission of sound through bone to provide better hearing for certain types/degrees of hearing loss.



How does a BAHA work?

A BAHA uses the body's natural ability to conduct sounds by bypassing the outer and/or middle ear and sending sound vibrations directly to the inner ear through the skull bone.

In patients with single-sided deafness, the Baha sends the sound vibrations through the skull bone from the deaf side to the inner ear of the normal hearing side.

A BAHA can be worn one of two ways:

- Using a non-surgical wearing option.
- With a part that is surgically implanted.

Who are candidates for a BAHA?

Children and adults with any of the following:

- 🔍 Conductive/mixed hearing loss that may be caused by:
 - ▼ Congenital malformations of the external ear and/or the middle ear such as absent or narrow ear canal, malformed or absent pinna or ossicular chain malformation.
 - ▼ Chronic ear infections and/or ear drainage which prevents a person from wearing traditional hearing aids.

- 🔍 Single-sided deafness (severe to profound sensorineural hearing loss in one ear).



What are the components of a BAHA system?

External sound processor

Detects sounds and transforms them into vibrations. Sound processors provide different levels of power for different levels of hearing loss.



- Surgical option:
 - Connection between sound processor and implant (magnetic or abutment connection): receives the vibrations and transfers them to the internal implant.
 - Internal implant: transfers the vibrations directly to the inner ear.
- Non-surgical wearing options: Softband, headband, or SoundArc to fix the BAHA sound processor on the head.



When can BAHA surgery be performed?

Early access to sound is crucial. However, the decision of surgical implantation is based on several factors, including the thickness and quality of the skull bone as well as the candidate's age. According to studies, children should be five years of age or older in order to qualify for surgery.

Does my child need to wait until they are five years old to use a BAHA?

No, for children who are below five years, when surgery is contraindicated, or you do not prefer your child to undergo surgery, he/she should be fit with the BAHA as soon as possible, and continue using it with one of the non-surgical wearing options. Early

intervention is crucial for speech and language development.

If you are an adult and are not interested in BAHA surgery or if surgery is contraindicated, the audiologist will discuss other non-surgical amplification options that may be suitable for your hearing loss.



How is surgery performed?

It is a relatively simple surgical procedure done in the operating room which takes approximately one hour under general or local anesthesia.

It can be performed using one-stage or two-stage surgery.

One-stage syrgert

- Recommended for patients with good bone quality and thickness greater than 3 mm.

Two-stage surgery

- Recommended for patients with compromised or soft bone, bone thickness less than 3 mm, or patient with special-needs (e.g. intellectually or physically challenged).
- The timing of the second stage of surgery depends on the thickness and quality of the bone encountered at the first stage.

When is the BAHA processor fit after surgery?



Once the implant site has healed. This may take 3 to 12 weeks, depending on the type of BAHA system.

Will a BAHA user be able to hear as soon as the processor is fit?

Yes, a Baha user should be able to hear once the external device is attached and programmed based on his/her hearing loss. This also applies to those who use a non-surgical wearing option.

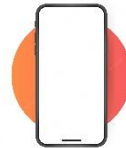
Can a BAHA implant recipient get an MRI scan?

Most BAHA systems are approved for MRI testing up to at least 1.5 Tesla. Check with the audiologist which BAHA system you have.



Can a BAHA be connected to other devices wirelessly?

Currently, most newer Baha systems are compatible with smartphones, allowing for direct wireless streaming of phone calls and music, as well as changing programs and volume.



Does a BAHA require care and maintenance?

Yes, daily care and maintenance is required. Special tools will be provided by the audiologist once the processor is fit. The Baha user and his/her family will be trained on how to use and care for it.

Although the BAHA processor is splash-proof, it is not waterproof.

BAHA users may keep their processors on while playing sports, but will need to remove them when swimming and showering.

Many studies have documented the following:

- Using a BAHA system results in improved quality of life in all aspects.
- BAHA use can provide patient benefit and satisfaction in different listening situations: speech perception in quiet conditions, during

conversation with one person in noisy surroundings or with several people in a group.

- The most common indication for BAHA use among the pediatric age group is congenital narrowing of the ear canal which had the highest satisfaction among all users.
- A BAHA does not restore binaural hearing in single-sided deafness, and therefore, sound localization is not improved sufficiently.

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