

The Cochlear™ Baha® 3 System Fact Sheet

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The Baha 3 System is an implantable bone conduction hearing system, a powerful tool that uses the body's natural ability to conduct sound.

Bone, like air, can conduct sound vibrations. For people with hearing loss, this provides another pathway to perceive sound. Typical hearing aids rely on air conduction and a functioning middle ear. But in cases where the middle ear function is blocked, damaged or occluded, a bone conduction system may be a better option, as it bypasses the outer and middle ear altogether. Instead, a bone conduction system sends sound around the damaged or problematic area, naturally stimulating the cochlea through bone conduction.

Once the cochlea receives these sound vibrations, the organ "hears" in the same manner as through air conduction; the sound is converted into neural signals and is transferred to the brain, allowing perception of sound.

Bone conduction implants often are good options for people with conductive hearing loss, a combination of conductive and sensorineural hearing loss (known as "mixed hearing loss") or single-sided deafness (SSD). Conductive hearing loss can be caused by factors such as: middle ear infections, head injury that damages the middle ear, congenital malformation of the ear, diseases such as otosclerosis (abnormal bone growth in the middle ear), cholesteatoma (abnormal skin growth in the middle ear behind the eardrum), and middle ear masses and tumors. SSD occurs when there is very little or no hearing in one ear, while the other ear functions normally. It can be caused by sudden deafness (rapid hearing loss of unknown cause, possibly the result of viral infection), tumors on the hearing nerve, head injuries, ototoxicity or Meniere's disease.

The Cochlear Baha 3 System overcomes these disadvantages with a simple design that combines three components:

- A sound processor that picks up sound vibrations
- A small titanium implant that transfers the sound vibrations to the functioning cochlea
- An abutment which attaches the sound processor to the implant and transfers sound vibrations from the processor to the implant

In a straightforward surgical procedure, the implant is placed behind the non-functioning ear. After approximately three months for adults or six months for children, it bonds with the bone around it – forming a permanent structure with the living bone in a process called osseointegration. Once osseointegration is achieved, the sound processor is attached to the abutment, enabling the recipient to hear with the Baha 3 System fully in place for the first time.

For more information about the Cochlear Baha 3 System, visit www.CochlearAmericas.com
