

## **Cochlear Implants Vs. Baha Implants**

Patients are often anxious when they are seeking solutions to their chronic hearing problems. That's why Cochlear, the global leader in implantable hearing solutions, offers several implant options for them to choose from depending on what might work best for them.

Among the many choices patients may be interested in, there are two distinct implants you will come across; the signature Cochlear implants, or Baha implants (also referred to as the Baha System). Though both offer the same end goal of recovered hearing, there are varying differences which will be important in properly assisting the wearer.

Cochlear implants are small, complex electronic devices that can help to provide a sense of sound to a person who is profoundly deaf or severely hard-of-hearing. The implant consists of an external portion that sits behind the ear and a second portion that is surgically placed under the skin.

While traditional hearing aids amplify sound for the wearer, there are many times in which raising the volume in the aid is not enough. People sometimes only hear more distortion, making matters worse.

Cochlear Implants bypass damaged portions of the ear by directly affecting the auditory nerve. Candidates who benefit more from this option have extreme or complete hearing loss and cannot benefit from traditional hearing aids even with the sound turned up.

Because Cochlear Implants can produce clearer sounds, patients will be able to hear more distinct noises in public places, when a phone rings, conversations with families and friends and possibly enjoy music once again. Surgery for Cochlear Implants will take up to two hours to perform, and patients are most likely to go home the same day to test out their new implant.

Each Cochlear implant consists of two pieces, the receiver-stimulator, and the speech processor, both of which work together to help the wearer regain hearing to a point. There is a large learning curve for patients after the procedure is done, simply because there are many things to relearn along the way to fully becoming comfortable with their implant.

When it comes to Baha implants, candidates suffer from different hearing loss issues and are not able to use traditional hearing aids due to conductive hearing loss. This means that unlike candidates for Cochlear implants, Baha implant recipients still have the integrity of their inner ear intact, and only suffer from mixed hearing loss, or single-sided deafness.

Baha implants, also known as the Bone and Anchored Hearing Aid, is another surgically implanted device. Cochlear Implants use air conduction -mimicking how our cochlea functions normally- to push sound directly to the nerve, but Baha implants stimulate those tiny hairs which make up the cochlea and transmits sound through the bones in

our skull. This action bypasses not only the outer ear, but also the middle part of the ear as well.

The hair cells inside the inner ear convert the sound to electrical impulses that travel to the brain allowing the recipient to hear naturally. A Bone Anchored Implant can be surgically placed on a child starting around 5-years of age, however, even infants can successfully use a Bone Anchored Implant by using a soft-band to hold the processor in place.

What is also unique about the Baha system is that it also offers a few more options to choose from, whereas Cochlear implants consist of only two, simple pieces. Baha implants use three components: the implant, magnetic attachment and sound processor. These pieces will function similarly to that of the Cochlear implant, with the addition to choose from add-ons like the revolutionary new Baha 5 SuperPower Sound Processor, Baha 5 Power Sound Processor, or the Baha 5 Sound Processor, all of which provide different levels of amplification depending on the needs and preferences of a patient.

Guiding patients to hearing recovery is of the utmost importance, and understanding what makes these implants different will help empower them on their new journey. Remember that Cochlear implants replace the cochlea by using a nerve conduction method, while Baha implants employs a bone conduction method for hearing.