



Which one to use, Hearing Aids or Cochlear Implants?

A hearing problem can occur due to impairment anywhere in the ear or the hearing pathway up to the brain. Some of these problems can be cured by medicines and/or surgery. However, there are other types of hearing loss that require an individual to wear hearing devices, such as hearing aids and cochlear implants.

What is a hearing aid?

Both hearing aids and hearing aids for kids are small, electronic devices specifically designed to amplify sounds going into the ear. Ideally, these devices are prescribed by hearing healthcare professionals following a hearing evaluation. Hearing aids work best for children and people who have mild to moderate sensorineural hearing loss.

Today, all digital hearing aids contain at least one microphone, a computer chip to amplify and process sound, a speaker and a battery. The amplified sound is sent directly to the inner ear for translation into electrical impulses which the auditory nerve transmits to the brain.

Hearing aids can be classified into two main types, in-the-ear (ITE) and behind-the-ear (BTE) models, each of which is available in a variety of styles, shapes, sizes and colors.

Functioning of hearing aid

Once a person buys a hearing aid recommended by an audiologist, the audiologist will program the hearing aid and provide information about the use and care of the device. The person may have to visit the audiologist twice or thrice to get the hearing aid programming optimized for his listening needs. The audiologist will tell the person regarding the extent of benefit that a hearing aid can provide. It takes a few weeks to get adjusted to the new hearing aid. If good care is taken, the device will last for more than two years.

One should be informed that each person gets different extents of benefits from hearing aids. The benefit derived from a hearing aid depends on the nature of hearing loss, hearing aid, and many other factors. One should also remember that a person with hearing loss will have to get the hearing and hearing aid assessed by an audiologist once a year.

Explaining cochlear implants

A cochlear implant is a small, complex electronic device that can help to provide a sense of sound to a person who has severe to profound hearing loss. The implant consists of an external portion that sits behind the ear and a second portion that is surgically placed under the skin. An implant has a microphone, speech processor, transmitter and receiver/stimulator, and an electrode array.

How does a Cochlear Implant work?

A team of professionals such as an ENT doctor, audiologist, speech language pathologist, radiologist, hearing, speech and language therapist are involved in the cochlear implantation. Once a person with severe to profound hearing loss/ single sided deafness is tested and found to be a suitable candidate for a cochlear implant, he/ she has to undergo surgery by an experienced ENT doctor. The team will weigh various factors before the implantation and counsel the concerned persons regarding the device, expected benefits, risks involved (if any), and the need for continued support.

After a couple of weeks after the surgery, the audiologist will switch-on the device and program the device at regular intervals. The audiologist will also provide instructions about the use, care and maintenance of the device along with the need for therapy in order to acquire listening, speech and language skills. The need for sustained training, in case of young children, is emphasized here. Without such training, use of expensive hearing devices shall go waste.

AIISH is here to hear

At AIISH, the healthcare professional will evaluate your hearing and determine which hearing device, if any, is right for you. If you aren't hearing your best, schedule an appointment to have your hearing evaluated. If you are diagnosed with hearing loss, the healthcare professional will work with you to find the right hearing device for your hearing loss, lifestyle and budget.

Conclusion

Both hearing aids and cochlear implants help people with hearing loss to communicate better. Hearing aids do not require surgery and are best suited for people with less severe hearing loss and fair speech understanding. While, cochlear implants require surgery and are best suited for people with more severe hearing loss and poor speech understanding.

- Dr. P. Manjula

Professor of Audiology

All India Institute of Speech & Hearing

Mysuru - 570 006, Karnataka