

MERGE with the WORLD



Leaders in Cochlear Implant Programmes

Supported by:











WELCOME to SpHear Cochlear

We are known for being one of the leading Cochlear Implant Programs in the country

We have one of the largest series of successful cochlear implant recipients. We are the only team in North India that has the expertise to provide every type pf hearing implant (Cochlear Implant, Auditory Brainstem Implant, Hybrid Implant, Middle Ear Implant & Bone Conduction Implants).

We are the first team in the country to perform Cochlear's Paediatric ABI, Cochlear's Hybrid Implant & Middle Ear Implant for Ear Atresia

We have built an active and credible academic reputation with numerous presentations at National and International Conferences.

SpHear Cochlear is supported by a large and experienced team of professionals. We follow a multi-disciplinary approach in managing families. Our team is adept at handling complex situations.

KNOW your Leader



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Dr (Prof.) Ameet Kishore,MBBS, FRCS (UK)

is the lead cochlear implant surgeon. Dr Kishore
has 25 years experience in the field of ENT and Cochlear
Implantation. He has had extensive training and experience
in the UK and Europe for 15 years and is fellowship
trained in Paediatric ENT & Otology – Neurotology.
He is a Sr Consultant in ENT, Neuro-Otology &
Lead Cochlear Implant Surgeon at Apollo Hospital, Delhi
and the Director of Adventis ENT & Cochlear Implant
Clinic. He has numerous publications and book chapters to
his credit. He has presented widely nationally & internationally.
He is a mentor surgeon for cochlear implants across
the country. He has held the post of secretary of
cochlear implant group of india (CIGI). He is one
of the founding trustees of the I Can Hear
Foundation (ICHF).

Ms Neevita Narayan

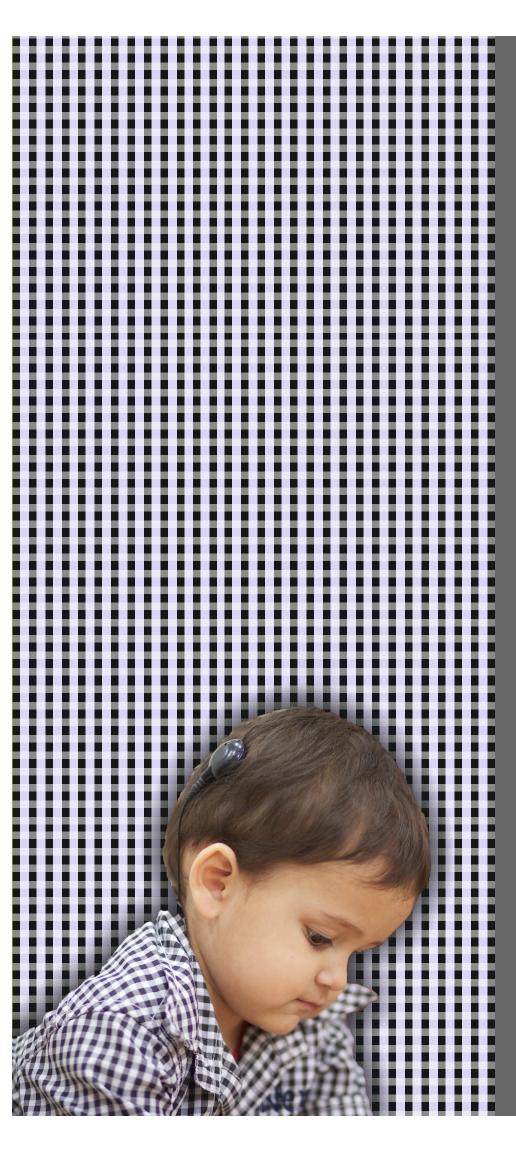
Bsc (AIIMS), MBA

is the Founder, Director & Lead Audiologist of SpHear Speech & Hearing Clinic - One of the leading Cochlear Implant Centres in the country today. She has over 20 years experience in the field of Audiology & Cochlear Implants. She has experience of setting up Audiology & Cochlear Implant programmes at the Indraprastha Apollo Hospitals, Delhi, P. D. Hinduja Hospital, Mumbai & Moolchand Hospital, Delhi. She has trained numerous Audiologists across South Asia in Cochlear Implants by conducting training workshops and presentations both nationally and internationally. She has played a key role in many international multi-centric studies based out of India. She has carried out various research projects in the filed of cochlear implants which have been presented and bagged awards at national & international conferences. She is invited faculty for leading speech & hearing colleges of the country. She is one of the founding trustees of the I Can Hear Foundation (ICHF).

KNOW your Leader



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When hearing aids are no longer ENOUGH!

While the majority of people who suffer from hearing loss may be helped with hearing aids, for some, hearing aids do not provide the benefits they need. Why is this?

Simply stated, hearing aids only amplify sounds. For people with a moderate – to – profound hearing loss, even the most advanced hearing aids may not work because making sounds louder does not make them clearer.

You may be able to hear sounds with hearing aids, but understanding speech and other sounds may still be very difficult.

Using a hearing aid can be likened to listening to a loud, badly tuned radio program. You experience only fragments of the program, and that too, at full volume and in some cases they may even not provide audibility. In such cases, a cochlear implant may be the best option.

Cochlear implants differ from hearing aids in two important ways:

- 1. Hearing aids simply amplify sounds. A cochlear implant, on the other hand, transforms speech and other sounds into electrical energy that is used to stimulate the hearing nerve in the inner ear.
- 2. Cochlear implants have both internal and external components. The implant system consists of an external speech processor and headset (worn behind the ear) and an internal, surgically implanted receiver/stimulator package with an electrode array.

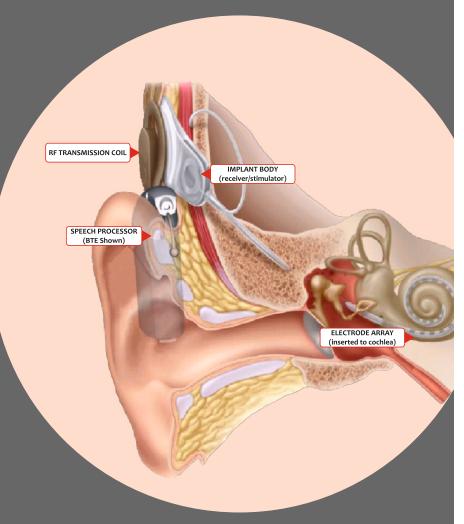
What is a cochlear implant?

A cochlear implant is an electronic device that can restore useful hearing and provide improved communication abilities for persons who have severe to profound sensorineural hearing loss (nerve deafness) and who cannot benefit from hearing aids.

How does the cochlear implant work?

For people who are cochlear implant candidates, the outer ear and the middle ear function normally. However, in the inner ear (cochlea), the tiny hair cells are damaged or missing and do not generate electrical pulses to be sent to the hearing centres of the brain. Therefore, the brain does not perceive the sound.

The cochlear implant attempts to replace the function of the hair cells with electrical stimulation. Sounds are picked up by the microphone of the speech processor. The speech processor analyses and codes sounds into electrical pulses. These pulses are sent to the surgically implanted receiver/stimulator package and through to the electrode array, which stimulates the residual nerve fibres in the cochlea. The hearing nerve then sends these electrical pulses to the brain and which are finally interpreted as sound.



Who can benefit from Cochlear Implants?

Any adult or child with bilateral (both ears) severe to profound sensorineural (nerve) hearing loss who obtains little or no benefit from hearing aids would be considered a candidate for a cochlear implant.

Such deafness may be acquired following infection (such as meningitis), toxic effect of ototoxic drugs, trauma or age associated hearing loss.

Children and Cochlear Implants

Some children may be born with deafness. Such congenital hearing impairment is not uncommon. In fact 2 to 3 out of every 1000 live births are born with significant hearing loss. Such children need to be identified at the earliest. This ensures that appropriate measures are undertaken to rehabilitate their hearing loss at a time when language skills can most easily be acquired. Many of these children may eventually require a cochlear implant.

Studies have shown that children who receive a cochlear implant before the age of two, possess spoken language skills equal to or closely ranked with their hearing peers. A delay in language development could have a severe impact on a child's ability to read and write.

Is your Child a candidate?

Was your child born with a moderate – to – profound hearing loss in both ears?

YES NO

Does your child fail to respond to your voice even while wearing hearing aids?

YES NO

Has your child experienced a hearing loss after learning how to speak?

YES NO

Is your child no longer progressing with speech and communication skills?

YES NO

Does your child depend heavily on lip – reading?

YES NO

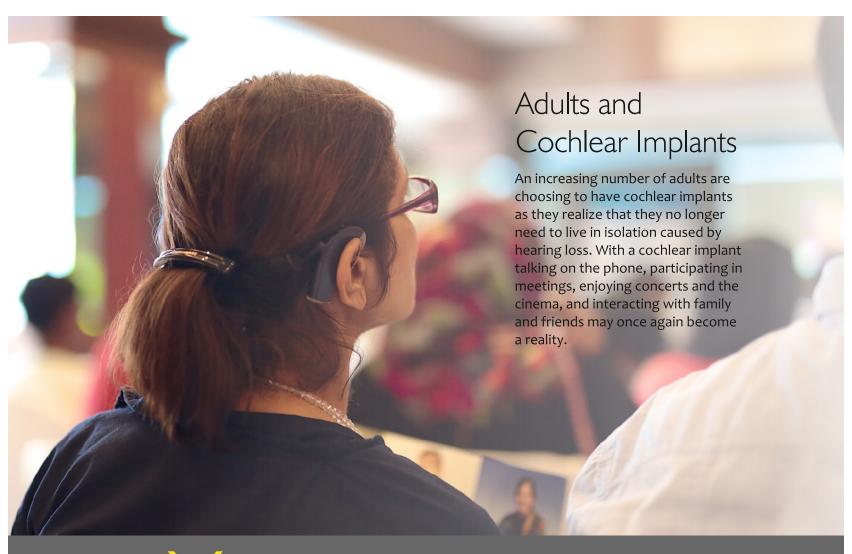
Is your child exhausted at the end of the school day because communication requires such a high degree of concentration?

YES NO

As parents, are you highly motivated to work with your child to help them develop age appropriate language and communication skills?

YES NO

If you answered "yes" to several of these questions, you child may be a candidate for a cochlear implant. If you'd like to know more about the viability of a cochlear implant, you should discuss your child's options with our cochlear implant clinic.



Are YOU a candidate?

Do you have to ask people to repeat themselves in one – on – one conversations, even in a quiet room?

YES NO

Do you only understand relatives and close friends on the telephone?

YES NO

Do you depend on lip – reading to understand a conversation?

YES NO

While dining with friends in a restaurant, do you have difficulty following the conversation?

YES NO

Do you avoid social activities because you can't hear what is being discussed and are afraid you will not respond correctly?

YES NO

Do you watch only captioned television programs?

YES NO

Can you no longer hear birds singing?

YES NO

If you answered "yes" to several of these questions, you may be a candidate for a cochlear implant. To find out more about the viability of a cochlear implant you should discuss your options with our cochlear implant clinic.



What are the benefits of a cochlear implant?

Cochlear implant systems can offer a wide range of benefits including hearing speech, environmental sounds and music.

Nearly all cochlear implant users hear environmental sounds, keeping them in touch with their surroundings, including traffic, sirens, alarms etc.

Virtually all recipients hear speech sounds through their cochlear implant. It usually takes some time to begin to understand these sounds especially for children. Hearing the speech of others as well as their own voice helps CI recipients to tune their speaking abilities.

Many people are able to use the CI system so effectively that they can understand speech without lip – reading and can have interactive conversations over standard and mobile phones.

Infants and children

Children born with a profound hearing loss who received a cochlear implant at a young age may learn to listen and speak, going on to obtain age appropriate language skills. Your child may be able to attend a mainstream school and enjoy success in further education, employment and community life. Studies have shown that children implanted before the age of two achieved spoken language skills equal to, or closely ranked with their hearing peers.

Adults

For many adults, suffering a hearing loss is just part of getting older. While hearing aids can be effective, there may come a time when a hearing aid just isn't enough.

A study of people using cochlear implants showed an average sentence understanding of 80% after three months of using a cochlear implant and 90% after six months. This compares to only a 10% understanding when using hearing aids.

Talking on the phone, reading to your grandchildren and taking part in community activities or social events may once again be possible with a cochlear implant.

One Cochlear Implant or Two?

Our brain uses information received from both ear to help us hear well. Binaural hearing is term used to describe this. Bilateral implantation is becoming a more common practice as hearing professionals worldwide recognize the benefits of binaural hearing.

The benefits of binaural hearing include:

- 1. The ability to localize from where a sound is coming. This is very important from a safety perspective.
- 2. A better understanding in noisy environments as selective listening is achieved more easily.

- 3. Better sound quality as you are hearing in both ears. This greater range provides a better sense of sound balance and quality.
- 4. An increased ability to distinguish between sounds.
- 5. Keeping both ears active. When the hearing nerve in one ear is not used for an extended period of time it tends to lose its ability to understand.
- 6. A less tiring and more enjoyable listening experience.
- 7. A sense of balance. When people hear from just one side they can feel that they have a 'dead side', which can be a strange sensation.





Before the cochlear implant Surgery

There are various factors that need to be taken into consideration prior to cochlear implantation. Patients who may be candidates for cochlear implantation would meet with the audiologist and ENT (Hearing implant) Surgeon of the team and the team would help you decide the best options for the candidate.

- 1. Complete audiological and speech therapist assessment and trial with hearing aids. We need to know the severity of the hearing loss, level of speech and language and the degree of benefit one gets with any current hearing aids. We may often ask for input from other professionals such as developmental paediatrics, neurology, psychology etc.
- 2. Imaging CT and MRI scanning of the ears and brain. We need to see the structure of the ears and the condition of the inner ear and hearing nerves.
- 3. Routine preoperative blood tests for anaesthesia. Patients would also be seen by a physician or paediatrician (in the cases of children) to ensure they are fit for general anaesthesia. All candidates need to be vaccinated (against H.influenza, Pneumococcus and Meningococcus) to reduce the risk of infections.
- 4. Deciding the choice of implant
 We have expertise in implanting all
 makes and models of implants. There
 are a few companies that manufacture
 cochlear implants. Some offer different
 models depending on levels of technology
 used in the type of internal implant or
 the external processor.



The cochlear implant Surgery

Hospital stay is likely to be a maximum of two days. We would normally admit on the day of the operation provided all the preoperative tests are satisfactory

Cochlear implant surgery lasts about one to two hours and is performed while the patient is under general anaesthesia. The electrode array is inserted into the cochlea. The receiver/stimulator is secured to the skull. Typically, patients remain in the hospital for two nights. They have a bandage on their head which is removed after four days. Patients return to school or work as soon as they feel well enough to do so, usually within a week of surgery.

Switching ON the implant

Activation of the implant takes place approximately two to three weeks after implantation, allowing enough time for the incision to heal properly. Following this the implant is 'programmed' or 'mapped'. Mapping is done on a regular basis during postoperative rehabilitation to fine-tune the processor and get the best performance as the patient gets used to hearing with the implant.

Postoperative Mapping and (Re)Habilitation

Following activation of the implant, the candidate would need regular mapping or programming of the implant and speech (auditory-verbal) therapy - these can be carried out at a place close to home and we would help by liaising with the local centre to make sure they have the appropriate facilities for this. Some of our outstation patients stay in Delhi for a period after the operation so that the initial mapping and therapy is done here and then they continue the same at home.

(Re)Habilitation is an essential part for those who have undergone Cochlear Implantation. All patients need Auditory Verbal Therapy (AVT). In Auditory Verbal Therapy, the emphasis is laid on making the child listen and speak normally, rather than on lip reading and visual cues. Learning to listen takes time and requires concerted efforts from the patient, the family and the person providing habilitation services. Thus the implant can offer a wide range of benefits, including hearing speech, environmental sounds and music.

Costs

These depend on what investigations are needed, the type of implant chosen and the type of room desired during hospitalisation. We can inform you of these once we have more information from your end.



Your ability to communicate is a priceless gift. Hearing loss isolates you from contact with other people and is generally most noticed by others around you. Detecting and treating hearing loss early is a significant step towards improving the quality of life.

Our aim is to restore your quality of life through better hearing while our mission is to improve the hearing of people through excellence in client care.

Our cochlear and hearing implant programme offers implantation for all types of cochlear and other ear/hearing implants (such as Auditory Brainstem Implant, Bone Conduction Implant and Vibrant Soundbridge Middle Ear Implant).

We are committed to helping you understand your hearing loss and to prescribe and maintain the best solution for your needs and lifestyle.

Direct your enquiries to:

SpHear Cochlear (Cochlear Implant Service)

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