PRESS INFORMATION

The importance of preserving residual hearing

Hearing preservation for cochlear implant (CI) users
A CI system helps to restore the sense of hearing for individuals with severe to profound sensorineural hearing loss. However, CI candidates often have some degree of measurable intact hearing. This hearing is referred to as residual hearing. Preserving residual hearing, however minimal it may be, is essential for all CI users.

In young children in particular, who may face multiple implantations throughout a lifetime, it is important to take advantage of intact delicate structures within the cochlea, enabling them to benefit from future therapies and technologies.

Flexible electrodes for better results in hearing
In cochlear implantation, a millimetre-thin electrode array is surgically inserted into the cochlea. The contacts on the electrode array stimulate different frequency ranges inside the cochlea. Given the importance of residual hearing, the focus at MED-EL has always been on developing the most flexible and soft electrode arrays available, enabling the surgeon to use minimal insertion force when placing the electrode into the cochlea. This gentle insertion ensures the sensitive neural structures can be protected.

Apart from preserving the cochlear structures, the electrode array should also cover the largest possible area inside the cochlea to allow users to perceive a wider spectrum of sound. Only long, soft and flexible electrode arrays can be inserted entirely from the base to the apical region, thereby achieving complete cochlear coverage while minimizing damage at the same time.

Complete cochlear coverage allows for the perception of up to 250 pitches of sound. Since MED-EL offers the widest range in the industry of different electrodes, the surgeon can select the ideal electrode array depending on the user’s anatomical build.

Hearing preservation for EAS (Electric Acoustic Simulation) users
Individuals living with partial deafness usually have some measurable residual hearing, especially in the low frequencies. Partial deafness is defined as a mild to moderate hearing loss in the low frequencies sloping to a profound hearing loss in the higher frequencies. These individuals are often excellent candidates for an EAS system, which combines two technologies: a CI for the high frequencies and acoustic amplification for the low frequencies.
Preserving residual hearing is vitally important for EAS candidates as it enables them to use the parts of their inner ear that are still functioning. Although CIs are remarkable for their ability to provide hearing, being able to additionally use residual hearing enables the user to experience outstanding sound quality, now and in the future.

About MED-EL
MED-EL Medical Electronics, a leader in implantable hearing solutions, is driven by a mission to overcome hearing loss as a barrier to communication. The Austrian-based, privately owned business was co-founded by industry pioneers Ingeborg and Erwin Hochmair, whose ground-breaking research led to the development of the world’s first micro-electronic multi-channel cochlear implant (CI), which was successfully implanted in 1977 and was the basis for what is known as the modern CI today. This laid the foundation for the successful growth of the company in 1990, when they hired their first employees. To date, MED-EL has grown to more than 2,000 employees and 33 locations worldwide.

The company offers the widest range of implantable and non-implantable solutions to treat all types of hearing loss, enabling people in 123 countries enjoy the gift of hearing with the help of a MED-EL device. MED-EL’s hearing solutions include cochlear and middle ear implant systems, a combined Electric Acoustic Stimulation hearing implant system, auditory brainstem implants as well as surgical and non-surgical bone conduction devices. www.medel.com

Responsible for the content
MED-EL Elektromedizinische Geräte Gesellschaft m.b.H.
Fürstenweg 77a
6020 Innsbruck
Österreich
Tel.: +43 (0)577 88
office@medel.com
Register-Nr. FN 48608h
UST.-ID-NUMMER: ATU 31722507

CEO
Doz. DI Dr DDr med. h.c. Ingeborg Hochmair

Press office
MED-EL Medical Electronics
Fürstenweg 77a
A - 6020 Innsbruck
T: +43 (0) 577 885-182
E: press@medel.com
www.medel.com