

Adult cochlear implant program

About the Flinders Medical Centre Cochlear Implant Program

The Flinders Medical Centre is a large public hospital, located only 12km from the Adelaide city centre. The only public, adult cochlear implant program in South Australia is based at FMC. It is here, in 1985, that the first cochlear implantation in South Australia took place. Many adults in South Australia have since benefited from receiving a cochlear implant.

What is a cochlear implant?

A cochlear implant (Bionic Ear) is an artificial hearing device designed to produce useful hearing sensations by electrically stimulating nerves inside the cochlea (inner ear). The cochlear implant has both external and internal components.

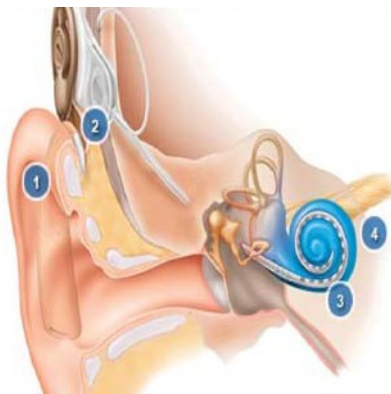
External components

The speech processor is worn either at ear level or body level and looks similar to a hearing aid. This connects to the transmitting coil.

Internal components

At the time of surgery, the cochlear implant package is placed under the skin, behind the ear, with the electrode array inserted into the cochlea.

All of these components are shown in this diagram:



Hearing with a cochlear implant

The following descriptions correspond with the numbers in the diagram.

1. The speech processor works by picking up speech and other sounds through a microphone and converts the sound to digital signals.
2. The processor sends this information to the transmitting coil, which rests against the skin on the skull, via a magnet (there is another magnet in the internal component).
3. The coil passes the digital signal through the skin to the implant, which transforms the signal into electrical pulses along the electrode array inside the cochlear.
4. These impulses are sent to the auditory (hearing) nerve and then on to the brain where the information is perceived as sound.

Who is a potential cochlear implant candidate?

The cochlear implant is only appropriate for people who receive minimal or no benefit from conventional hearing aids. These individuals will have a severe to profound sensorineural (inner ear) hearing loss.

Before we can offer advice on the suitability of a cochlear implant for you as an adult, the following issues need to be considered:

- > You must be 18 years of age or older at the time of surgery (paediatric cochlear implantation is done at the Women's & Children's Hospital)
- > You must have little or no hearing in both ears
- > You must gain little or no benefit from your hearing aids
- > You must have good verbal communication skills
- > Your ears must be free of infection
- > Your cochlea must be properly formed and your auditory nerve must be intact
- > You must be medically suitable to undergo an operation
- > You must be motivated to use the device
- > You and your family must have realistic expectations of the risks, benefits and limitations of the cochlear implant

As a potential implant candidate, it is important to realise that selection is a two-way process. Whilst the cochlear implant team conducts assessments, including audiological assessments and medical examinations by an Ear, Nose and Throat surgeon, you should also evaluate whether a cochlear implant is right for you.

The Cochlear Implant Team at Flinders

Ear Nose and Throat Surgeons

- Dr. Robert Morrissey
- Dr. Sharad Chawla

Cochlear Implant Audiologists

- Kathleen Holland
- Brenna Eckert
- David May

Clinic Administration

- Sandra Caskey

How to refer to our program

We accept all referrals for potential candidates. This includes receiving them from Audiologists, General Practitioners and Ear, Nose and Throat specialists. You can also refer yourself.

Please direct your referrals to:

Cochlear Implant Clinic
Department of Speech Pathology and Audiology
Flinders Medical Centre
Level 6
Flinders Drive, Bedford Park, SA 5042

Phone: (08) 8204.4366

Fax: (08) 8204.8941

Relay Service: 133 677

Mobile (SMS only): 0434 606 802

Email: audiology.fmc@health.sa.gov.au

We encourage you to contact us should you have any further questions about our program.

For more information

Department of Speech Pathology and Audiology
Flinders Medical Centre
Bedford Park
South Australia 5042
Telephone: 08 8204 4366
www.flinders.sa.gov.au

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