



Cochlear Implant Information: The Assessment Procedure



South Wales Auditory Implant Service
Satisfaction Questionnaire

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implant service website and other resources.

South Wales Auditory
Implant Service



British Cochlear
Implant Group

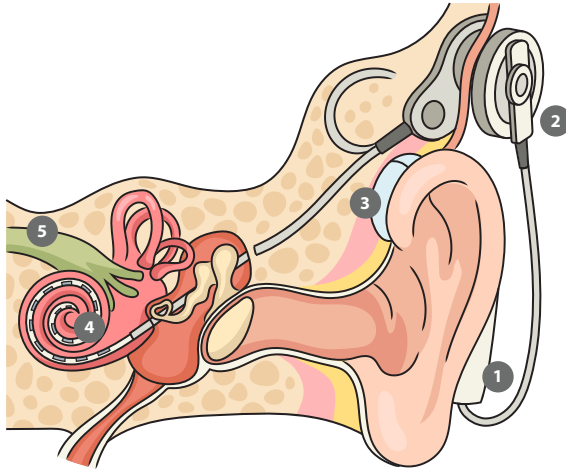


What is a Cochlear implant?

Cochlear implants are offered to people with "severe to profound deafness [which] is defined as hearing only sounds that are louder than 80 dB HL (pure-tone audiometric threshold equal to or greater than 80 dB HL) at 2 or more frequencies (500 Hz, 1,000 Hz, 2,000 Hz, 3,000 Hz and 4,000 Hz) bilaterally without acoustic hearing aids." (NICE Guidelines, 2019).

A cochlear implant works by changing sound into electrical signals and has two parts. The two parts are called the processor and the implant. The processor is worn on the ear like a hearing aid and has a plastic coil that can stay on the head. The implant also has a coil and is placed under the skin along with a flexible cable that goes inside the cochlear. The two coils stay on the head using magnets.

How does a cochlear implant work?



1. Sounds are picked up by a microphone on the processor which changes the sound into electrical signals.
2. The signals are sent to the coil on the head which travels across the skin by radio waves.
3. The signal arrives to the coil under the skin and is sent to the implant.
4. These electrical signals are delivered to different points of the implant called electrodes.
5. The electrodes excite the nerve fibres in the cochlear which then send the information to the brain to understand sound.

A cochlear implant only helps you to hear sounds when it is worn. It does not give normal hearing. When the processor is not worn, you will not be able to hear anything from the implanted ear.

There are no guarantees that a cochlear implant will improve your hearing abilities as everyone's progress and expectations are different.

Outcomes can depend on the following:

- Duration of deafness
- Reason for deafness
- Continued use of hearing aids even if they don't appear to benefit you
- Attendance to the clinic for all appointments for tuning and rehabilitation
- Continued use of the processor and ability and willingness to follow homework instructions
- Candidates' expectations

Who can have a cochlear implant?

- Babies who have been born deaf
- Children who are losing their hearing or have lost a lot of their hearing.
- Adults who have lost their hearing to an extent that hearing aids are no longer useful
- Usually, adults have only ONE implant. Two implants can be issued depending on the vision of the adult.

Who do I come and talk to?

You will be invited to come and talk with the Team, who are made up of doctors, audiologists, hearing therapist and rehabilitationists. Each professional plays a unique role in the assessment process. You will have the opportunity to ask any questions you may have about cochlear implants.

How does the cochlear implant team decide if I can have a cochlear implant?

The multidisciplinary team consisting of an audiologist, rehabilitationists and doctors in conjunction with you and your support network will decide if you are suitable for a cochlear implant. We follow NICE guidelines to determine whether a hearing aid is enough to help you to hear sounds or if a cochlear implant will be needed.

If the team decide that a cochlear implant is not suitable for you, then you will be advised to continue using hearing aids. If you are not suitable for a cochlear implant, the rehabilitationist will provide you with access to appropriate services to help manage your hearing loss.

If the team decide that you are suitable for a cochlear implant, then you will be offered this when you come back to clinic. This process is explained on page 8-9.

The Cochlear Implant Team

Cochlear implantation requires a wide variety of skills, therefore the team consists of a range of professionals. We work closely as a team and with local professionals, whilst also recognising that the most important part of the team is the candidate and family themselves.

Mr Graham Roblin - Consultant ENT Surgeon

Mr Andrew Hall - Consultant ENT Surgeon

Mr Rhodri Jones - Consultant ENT Surgeon

Dr Deepak Rajenderkumar

Consultant Audiovestibular Medicine

Heidi Williams

Clinical Lead, Coordinator & Clinical Scientist
of the Adult implant service

Lorraine Lewis - Director of Audiology

Rhian Hughes - Principal Audiologist

Eirwen Jones - Chief Audiologist

Steven Jacques - Chief Audiologist

Vanessa Sadler - Speech and Language Therapist

Gemma Saxelby - Rehabilitationist/Chief Audiologist

Hannah Winters - Rehabilitationist/Chief Audiologist

Tracy Hughes - Cochlear Implant Administrator

Referral

You have been referred to see if you meet the criteria for a Cochlear Implant. The assessment procedure by the South Wales Auditory Implant Service can take between 3 and 9 months. This amount of time is necessary to determine if you would benefit from a Cochlear Implant. The steps below provide an example of what to expect from the assessment process up until the time where you are due for your surgery:

Step One – Referral stage

A referral is sent to our service from your GP, ENT consultant or local audiology department requesting an assessment of your suitability for a cochlear implant. A member of the cochlear implant team will review this referral and send an appointment letter or if we believe you are not suitable, we will write back to the person who referred you to explain why.



Step Two – Assessment stage

We will assess if you are within criteria for a cochlear implant and discuss your expectations. Not everyone will be suitable for a cochlear implant and if you are not, we will explain the reasons why. If you are suitable, we would discuss the risks of surgery, the next steps in the process and provide you with opportunities to meet with other cochlear implant users.

Step Three – Consultant appointment

The consultant will take a medical history and may ask for scans to be performed at a later date such as MRI and CT scans.



Step Four – Multidisciplinary team meeting

This is where shared decision making between you, the surgical team and the audiology team will take place to make final decisions about the most suitable options for you i.e. which ear to implant, what make and model of implant and the colour of the processor. On this day, you will also be provided with a meningitis vaccine form, and you will see pre-op assessment services.



Step Five – Surgery

A date for your surgery will be sent to you usually via email or text. Once a date has been confirmed, the surgical team will send you all of the information you require prior to your surgery date.

Audiological Assessment

Before being referred to the Cochlear Implant Programme you will have been diagnosed with a severe or profound hearing loss. Our Audiologists will perform hearing tests with and without your hearing aids. You may be fitted with suitable new hearing aids which you need to wear for 3 months prior to assessment. You may need to return for further testing to reassess your hearing. From these tests we can determine if hearing aids are providing sufficient benefit for you to hear speech sounds or if a cochlear implant would provide more benefit.

Medical evaluation

Our ENT Consultant will consider your medical history and cause of hearing loss. They will also explain what is involved in the operation and the potential risks. They will arrange for CT/MRI scans to check the condition of your cochlea and auditory nerve. These will be evaluated by the ENT surgeon. We may request information from other medical professionals.

Rehabilitation Support

During this assessment process, we will provide information about the cochlear implant procedure and provide support to you as a family. The decision about cochlear implantation is a joint family and team decision.

We aim to help you make optimum use of your implant and processor. We help you improve your listening and communication skills, and help you acclimatise to new sounds which you will be hearing with your implant and processor.

Meeting other implanted adults

Professionals can give you a lot of information, but it is extremely beneficial to talk with other people who have been through a similar experience of cochlear implantation. We always offer this opportunity before implantation.



Advanced Bionics
Meet User



Cochlear
Meet User



Medel
Meet User

Expectations and support

We have to ensure that you are aware of the limitations of a Cochlear Implant and have appropriate expectations for the future. Not all implantees gain the benefit that they or you might hope for and therefore reassurance and support from family and friends is very important.

Not all implant users can use the telephone, enjoy music or watch the television without subtitles. The success of an implant can vary for many reasons. For example, the cause of the hearing loss, how long they have been deaf, use of hearing aids, general health and well-being, use of processor and commitment to the rehabilitation programme.

Support from family and friends to complete tasks at home is very valuable and can often speed up progress.

You will always be profoundly deaf. We will only select a candidate for the Cochlear Implant procedure if we feel you will gain more benefit from an implant than from continuing to be a hearing aid user. All factors are considered when making a final assessment as provided by the British Cochlear Implant Group.

If you are selected for an implant, we will be fully committed to your future progress and developing a close working relationship with you and your family/friends.