Checking Cochlear Implants
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A cochlear implant is a sophisticated device which electrically stimulates the nerve of hearing. Cochlear implants can help people who are too deaf to benefit from ordinary acoustic hearing aids.

There are three main manufacturers of Cochlear Implants in the UK: Advanced Bionics, Cochlear and Med-El. Each manufacturer has at least one body-worn speech processor and an ear-level speech processor. All the processors have external parts, which can be removed as the patient wishes. Internal parts are implanted during surgery. The checking procedure for each model is different but some basic principles remain the same.

Cochlear Implants need to be working well all the time. The external parts of the device need to be tuned at the Cochlear Implant Centre to suit the individual and this can take a considerable amount of time with a child. It is important to ensure that the speech processor is functioning effectively so the child receives a clear signal at all times and can learn to listen. Young children or inexperienced listeners often cannot identify if something is wrong.

Cochlear Implant equipment should be checked when it is put on and at regular intervals, or at any time when the user is not responding to sound in his/her usual manner.

This is not a comprehensive guide to checking and troubleshooting. Please follow the manufacturer’s instructions and/or refer to the Cochlear Implant Centre.

The internal device
The internal device can only be checked at a Cochlear Implant Centre.

The external device
The external parts include:
- speech processor
- leads
- microphone
- transmitting coil/headpiece

Some processors incorporate visual and audible signals when there is a problem eg if the battery is low, if the lead comes unplugged or if the map or programme has a fault or has been damaged by static electricity. Refer to manufacturer’s guidelines for further information.

Daily Checks to ensure the Cochlear Implant is working correctly:

A Battery
- change battery according to Cochlear Implant Centre recommendations
- ensure that the battery is charged
- make sure the battery is the correct way round.

B Visual check
- check the external casing of the processor and microphone for cracks, missing switches or other damage
- ensure that the leads are not worn, split or bent
- make sure that the coil is not cracked
- buttons/switches/controls should be on settings as recommended by the Cochlear Implant Centre
- all parts must be plugged in correctly.
C Signal check
The signal check shows that the coil is transmitting sounds from the microphone and processor to the internal device. This may be done by one or more of these methods:

- placing the coil on the body worn speech processor and checking for the appropriate light or symbol
- using a hand-held signal check/test plate and checking for the appropriate light
- checking a series of lights or display on the processor
- lights or bars flash in time to sound.

D Listening check
Most manufacturers can supply a device for checking the microphone. Contact the Cochlear Implant Centre for further information.

Listen for any change in the quality of the sound.

If a fault is found, change the leads or transmitting coil in a systematic way. If you still feel there is a problem contact the Cochlear Implant Centre giving them as much information as possible.

*Please contact the Centre if the child does not appear to be hearing sounds as usual or is finding some sounds uncomfortable, even if no obvious fault can be found, as the programme or map may need to be changed.*