

Some people are profoundly or totally deaf and hearing aids are no use to them. Often this is due to the cells in the cochlea being damaged. Cochlea implants are electronic devices that can help profoundly deaf people to hear. These devices have to be surgically implanted and connected to the person's auditory nerve.

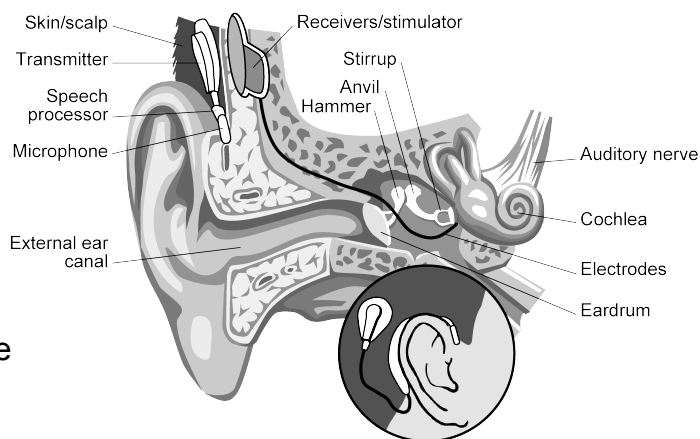
## THE COCHLEA IMPLANT

The implant is made up of these parts:

**Electrodes** which are surgically connected to the auditory nerve.

**Microphone** worn on the ear to pick up sound and a **speech processor** to change the sound into electrical pulses.

**Transmitter** attached to the outside of the head and a **receiver** implanted under the skin that is connected to the **electrodes**.



## WHAT DOES THE COCHLEA IMPLANT DO?

It makes a deaf person's brain be able to detect sounds such as other people's voices. It only gives the 'sensation of sound', not complete hearing.

It takes some time for the person to learn what the sounds are after they have the implant.

## COST OF COCHLEA IMPLANTS

The device itself costs about £16,500. However patients need assessment, implantation and rehabilitation (training to use the implant). This means the total cost for the first year is about £27,000. The implants last about 30 years and it is estimated the total cost is about £45,000.

Children's implants can cost up to £60,000 over 30 years.

In England, the NHS does pay for some cochlea implants.

## THE FUTURE OF COCHLEA IMPLANTS

### Smaller and smaller

The first implants were quite large and they had a pack that had to be kept in the users' pocket. Now most implants are small enough to be worn behind the ear like a hearing aid. The technology is developing to make them even smaller.