



**SCOTTISH  
COCHLEAR IMPLANT  
PROGRAMME**

# **Local Anaesthetic Cochlear Implantation**

Information about having a  
cochlear implant under local  
anaesthetic

**Lyndsay Fraser, Consultant ENT Surgeon  
Elizabeth Neale, Consultant Anaesthetist**

# What is a local anesthetic cochlear implant?

Most cochlear implant surgery is done under a general anaesthetic (where the patient is fully asleep). The surgery can however also be done under a local anaesthetic, where the patient is awake but the skin around and behind the ear is numbed with some injected medication.

## What does it involve?

- The procedure takes between 1.5 to 2 hours in the operating theatre.
- You will have a nurse sat opposite you keeping you comfy at all times and communicating to you with written instructions.
- You'll be lying on your back with head turned away from the operated side. We can prop you up a bit if needed on the theatre table and will spend time getting you comfy.
- Your ear and body will be covered over with a large sterile drape but your face will be free on the opposite side.



## SCOTTISH COCHLEAR IMPLANT PROGRAMME

- The surgeon will inject a lot of numbing medication behind and around your ear at the start. This will be uncomfortable but only lasts a few minutes. You should not feel pain after this but will be aware of a drilling sensation. Continuous drilling will happen at various points throughout the procedure. The local anaesthetic can be topped up a little once the operation starts if you feel sore at any point.
- We do not routinely give sedation to avoid patients falling asleep and waking up suddenly during the operation.
- You will need to keep still for most of the operation but we can let you have short breaks where you can have a bit of a wriggle on table. There will be some critical parts where the surgeon will ask you to keep very still.
- Some patients feel very dizzy or sick during the operation and medication can be given to you through a drip if this happens to counteract the sensation.



## What are the benefits?

For some patients with lots of other medical problems, local anaesthetic cochlear implant surgery can be safer than having a general anaesthetic. The pre-operative team will let you know if they think this will be a better option for you. Some patients also prefer the idea of local anaesthetic and choose this option for their procedure.

## What are the drawbacks?

Local anaesthetic cochlear implantation is not for the faint-hearted and requires a very determined patient. If you are an anxious personality, it is probably not the right choice for you. Many patients don't like the thought of having to lie still for up to 2 hours, the discomfort of the initial numbing injections, the potential for feeling sick or dizzy or the sensation of being able to feel the continuous rumble of the drill.

Additionally the facial nerve is a large nerve that moves one half of the face. It runs very near the surgical route to the inner



ear and can occasionally be damaged by the surgery. Facial weakness is a rare complication of cochlear implant surgery (one in a hundred, 1 in 100).

This complication mainly occurs in those with unusual or unexpected anatomy. Under general anaesthetic, we are able to use a monitor to detect when we are close to the nerve. We cannot use this when patients are having local anaesthetic. This puts the nerve at slightly higher theoretical risk of damage.

## Who is not suitable for local anaesthetic

Patients with the following conditions are unlikely to be suitable:

- Visual impairment. Good communication during surgery is vital and instructions will be relayed via written communication
- Cannot read English
- Cognitive impairment
- Anxiety/ needle phobia



## SCOTTISH COCHLEAR IMPLANT PROGRAMME

- Unable to lie still for 1.5 to 2 hours
- Limited ability to turn their head to side
- Tremor of head or body
- Altered ear anatomy on CT scan (this will usually be decided by your surgeon)

General Anaesthetic	Local Anaesthetic
 Asleep for procedure	 May be safer for you than having a general anaesthetic if you have significant medical problems
 Safe for most patients	 Minimal recovery time
 Can use facial nerve monitor	 May get your operation sooner as no need to wait for further tests or information to determine if having a general anaesthetic is safe for you
 Less safe than having procedure under local anaesthetic if you have significant medical problems	 Awake for procedure
 Risk of sore throat, dental damage, shivering, nausea and vomiting, and becoming confused (delirium)	 Need to lie still for 1.5-2 hours
	 Small theoretical increase of facial nerve damage as unable to monitor the facial nerve



**SCOTTISH  
COCHLEAR IMPLANT  
PROGRAMME**

## Questions?

If you are keen on local anaesthetic cochlear implantation or if you have any questions, let the pre-op or cochlear implant team know and you can discuss things in more detail with the surgical team at your appointment.

**Address:**

Raj Singh Cochlear Implant Unit  
Crosshouse Hospital  
Kilmarnock Road  
Crosshouse  
KA2 0BE

**Phone:** (01563) 827323

**Email:** [cochlear.implant@aaaht.scot.nhs.uk](mailto:cochlear.implant@aaaht.scot.nhs.uk)

**Text:** 07824 598277