

## Introduction

Electric devise (cochlear implant) is surgically implanted into the patient's cochlear and act as a replacement ear to bypass the damaged (cochlear) system : This procedure is considered for bilateral severe to profound sensorineural hearing loss in adults and children > 12 months old or when appropriately fitted hearing aid could only offer limited benefit.

## The Operation / Procedure

1. Open the mastoid bone behind the ear.
2. Implant the receiver and electrode bands.
3. Hook up the transmitter headpiece and speech processor after 4-6 week when the wound is healed.

## Preoperative Preparation

1. Admit 1 day before or on same day of this “elective” operation
2. Anaesthetic assessment before operation. Inform your doctors about drug allergy, regular medications or other medical conditions e.g. diabetes mellitus, heart disease, hypertension and any regular medication, including herbs and dietary supplement.
3. Keep fast for 6 to 8 hours before operation
4. Empty bladder and change to operation clothes before transfer to operating room

## Postoperative Instruction

### A. General

1. Mild throat discomfort or pain because of intubation.
2. Mild discomfort or pain over the operation site. Inform nurse or doctor if pain severe.
3. Nausea or vomiting are common; inform nurses if symptoms severe.
4. Inform nurses if more analgesics are required.
5. Can mobilize and get out of bed 6 hours after operation.

### B. Wound care

1. May discharge home one or two days after the procedure.
2. Skull x-ray to assess the position of electrode.
3. Wound normally heals one week after the procedure.

### C. Diet

Resume diet, usually 4 hours after anaesthesia, and when taking sips of water well.

### D. Follow up procedure

1. Arrange for implant hook up and fitting of external part of the device few weeks after the procedure
2. Over the next few months the audiologist will make adjustments to the speech processor to make you hear better.

## Common Risks and Complications (not all possible complications are listed)

### A. Anesthesia related complications

1. Cardiovascular : myocardial infarction or ischaemia, stroke, deep vein thrombosis, pulmonary embolism, etc.
2. Respiratory : atelectasis, pneumonia, asthmatic attack, exacerbation of chronic obstructive airway disease.
3. Allergic reaction and shock.

### B. Procedure related complications

1. Wound and implant infection
2. Bleeding and haematoma
3. Loss of residual hearing in the implanted ear
4. Transitory balance problem
5. Numbness around the ear
6. Tinnitus

## Uncommon Risks with Serious Consequences

1. Facial nerve injury
2. Meningitis
3. Change in taste
4. Flap necrosis
5. CSF/perilymph leakage
6. Delayed abscess formation
7. Electrode migration and implant extrusion
8. Failure of implant or electrode
9. Death due to serious complications

## Conditions that Would Not be Benefited by the Procedure

Deafness due to acoustic nerve or central auditory pathway lesions

## Alternative Treatment

Hearing aid or other means of communication

## Consequences of No Treatment

Speech deterioration; auditory brain centre degeneration or loss of ability to acquire speech

## Things to take on discharge

1. Continuing evaluation of hearing status and adjustment of speech processor if needed.
2. Contact your doctor or a nearby Accident & Emergency Department if you find increasing discharge, pain and or redness around the wound.
3. Take analgesics prescribed by your doctor if required.
4. Resume daily activity gradually.

## Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor. Evangel Hospital reserves the right to amend this leaflet without prior notice. We welcome suggestions or enquiries on the information provided in this leaflet. Please contact our Healthcare professionals so that we could follow up and make improvement.

## Reference

Hospital Authority: "Cochlear Implant" (2023)

Smart Patient: [http://www.ekg.org.hk/pilic/public/ENT\\_PILIC/ENT\\_CochlearImplant\\_0137\\_engchi.pdf](http://www.ekg.org.hk/pilic/public/ENT_PILIC/ENT_CochlearImplant_0137_engchi.pdf) (06-07-2023)