

PAEDIATRIC COCHLEAR IMPLANT SURGERY

Expectations, Risks, Complications and Post-operative Instructions

GENERAL

Implantation of a cochlear implant is undertaken to overcome deafness on the implanted side. In children, implantation may be undertaken only on one side, or in both ears, simultaneously or on separate occasions.

The implants are normally used in the bilaterally severely deaf patient, but may be used when only one ear is deafened, to restore hearing on that side. This is done particularly if the better ear has unstable, or rapidly deteriorating hearing.

For congenitally profoundly bilaterally deaf children, it is desirable to implant bilaterally and simultaneously at six months age, as this stimulates near normal brain development that is the essential component of successful implantation.

A small "C-incision" on the rear of the external ear is used to implant the device. The resultant scar is usually unnoticeable. In the usual case, surgery in one ear may take as little as a half hour, both in little over an hour. An overnight stay in hospital is advisable, largely for comfort after surgery.

More Information

- [Implantable Hearing Technology](#)
- [Evolution of Surgical Approaches](#)
- [Keyhole Surgery](#)

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Other Locations

Beenleigh Sunnybank Mt Ommaney Caboolture

EXPECTATIONS

As a group, children derive great benefit from the device. However, they vary considerably with regards the level of performance and the time and diligence required to achieve optimal outcomes. Successful implantation requires accurate assessment of the child's clinical situation before surgery to identify any aspects that may interfere with a successful outcome. The most satisfactory results are gained when the family is fully informed of any such problems before the event such that the expectations are appropriate. We hope that the manner in which the implantation proceeds will meet with the full approval of all concerned.

Typically, if concurrent problems do not intervene, an early implanted child will master listening and speech to near normal levels and in the usual time frame, and should manage well with telephone conversation. Almost all manage much better with the implant than what was possible with hearing aids.

However, difficulties may persist in group conversation and noisy environment conditions. The implants improve hearing very substantially but do not lead to the level of normal clear hearing ability. Some support at school is often necessary. Also, if other adverse influences are present, e.g. general health aspects, these may unavoidably cause lesser outcomes.

Good results take time – a year or two - to produce best hearing and speech. Careful habilitation (auditory-verbal or other therapy) is essential, especially with maximal family input. The rate and extent of improvement is not predictable; some are “naturals”, others require diligence with the auditory exercises that optimise the outcomes.

The initial speech development may be highly encouraging, but can also be disappointing, discouraging, or even depressing. It takes time and perseverance; this is not infrequently stressful for the family. With time and practice, and continued use of the implant, this earlier phase is typically temporary. With re-programming, and family encouragement, improvement is steady, with great benefit being achieved. Except for cases with evident other issue, the very great majority implant users are able to hear spoken language and understand speech much better than with hearing aids.

Single side implantation for one-sided profound deafness may also be offered. In these cases the implant delivers better communication on the implanted side, plus additional benefits of stereo, all-round awareness, direction-finding, and enhanced hearing in noisy surrounds.

Our team is committed to work with you to achieve the best results possible. With our efforts and yours, we expect best benefit from one of medicine's great advances. Please feel free to discuss any questions or concerns with us. We are here to help out in any way we can.

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RISKS AND COMPLICATIONS

Hearing

Generally, cochlear implantation is undertaken only when the hearing in the ear cannot cope with the best possible hearing aids. The residual hearing is lost in most cases in the course of implantation, but the benefit of the implant greatly outweighs the loss of the limited remaining ability. In some cases retention of remaining hearing is possible with specially modified implants, but these are a small minority.

Ringing in the ears (tinnitus) is not often mentioned by children before or after surgery, but some older children may notice changes, rarely troublesome.

Dizziness

Balance upsets are not expected from this surgery in children, as infants are very supple and rapidly recover from any balance upsets. However a few exceptions may experience some balance disturbance. Fortunately this fades and rarely cause longer term difficulties. Please contact us should you have any concerns in this respect

Facial Nerve Paralysis

Even in expert hands paralysis of the side of the face may occur for a variety of reasons in ear surgery, but is rare in this surgery. Paralysis may last several months and then recover completely or partially. Temporary paralysis may also occur from local anaesthetic injection, lasting a few hours and then recovering. Eye irritation from these incidents may require an ophthalmologist's care.

Infection, Pain

The nature of surgery predisposes to general surgical risks but fortunately the ear is generally not troubled by these problems to a severe or prolonged extent.

Children normally exhibit little discomfort after this surgery. The least-trauma techniques developed at Queensland Otolaryngology minimise any discomfort.

Uncommonly, a collection of blood may form under the wound. This may cause more noticeable swelling and discomfort. Please notify us at **07 38397677** if you have concerns.

i. Implant-related Problems

Any foreign device sited in the body may incur infection, but using our minimal trauma methods, this complication has not occurred in our children. Likewise, problems resulting from movement of implants or their electrical arrays are also very uncommon events that rarely incur revision surgery. With bilateral implants, every effort is made to ensure symmetrical results, but minor level differences may occur.

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Implants include somewhat delicate electronics. Minor malfunctions or problems related to trauma are recorded, but again, without major concern except in a very few cases. Manufacturing defects also occur, but are generally promptly corrected upon detection by the supplier and under warranty.

POSTOPERATIVE INSTRUCTIONS

Surgical wound site

A head bandage applied at surgery will be removed a week after discharge from hospital. Try to prevent removal of the bandage. Keep the site dry for a week, at which time you will be seen to check the wound. The sutures are soluble and do not require removal. The site may be washed thereafter. Normally a degree of swelling may cause the ear to be more prominent. This fades over two weeks.

Antibiotics will be prescribed and provided prior to discharge. Take these as directed on the packet. Sometimes diarrhoea may occur; consult your pharmacist re medicine for this, but continue the antibiotics and take probiotics to help settle matters.

Pain, Discomfort

Analgesics will be given both in hospital and supplied at discharge. Pain after ear surgery is normally limited, but if concerned contact us for advice. Nausea may occur, but advise our staff if you require medicine for this.

Activities

- Rest well after surgery; recovery varies from person to person.
- Restrain excessive activity for one week. Thereafter, avoid contact sports that may result in a sharp blow to the implant, which, although rare, may cause electronic problems.
- “Switch-on” is generally done 1-2 weeks after surgery. The hearing benefits are generally immediately evident, but you may take a little time to become accustomed to the new situation.

Our goal with the surgery is to deliver the best results with the greatest certainty and minimal distress. But in surgery there are no guarantees of success. If you have had a lesser result after surgery, we will do our best to treat the problem, hopefully overcoming this.

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Please let us know at Queensland Otolaryngology if you have any concerns or questions, whether before or after:

Contact Numbers

Business Hours: (07) 3839 7677

After hours: (07) 3261 9570



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