COCHLEAR IMPLANT SURGERY: ADULTS

Expectations, Risks, Complications and Post-operative Instructions

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

The implants are normally used in a bilaterally severely deaf patient. Whilst most patients opt for a single implant, bilateral implantation carries many benefits, particularly for the younger adult. Implants may also be used when only one ear is deafened, to restore hearing on that side.

A small “C-incision” on the rear of the external ear is used to implant the device. The resultant scar is usually unnoticeable. A small pocket between skull and scalp is created to contain the implant body. An array of electrodes is attached to the implant body, contained in a slim silicone sheath. These are inserted into the “snail shell” of the cochlea, where the electrodes stimulate the endings of the auditory nerve.

The surgery should take about 30-40 minutes in routine cases. Generally the patient remains in hospital overnight. The surgical wound has soluble sutures that do not require removal. Pain is generally slight; likewise unsteadiness. A head bandage is applied for one week to help stabilise the wound. Try not to remove this.

More Information
- Implantable Hearing Technology
- Evolution of Surgical Approaches
- Keyhole Surgery

EXPECTATIONS

As a group, adults who receive a cochlear implant are pleased with the benefit from the device. However, they vary considerably with regards the level of performance and the time and diligence required to achieve optimal outcomes. Typically, face-to-face conversation is mastered to a very good degree, and many 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 normal clear hearing ability.

Good results take perhaps 6-10 weeks adjustment, but other cases take considerably longer, over many months. 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 auditory input may be highly encouraging, but can also be disappointing, discouraging, or even depressing. It takes time and perseverance to adjust and adapt; this is not infrequently stressful. With time and practice, and continued use of the implant, this earlier phase is typically temporary. With re-programming, exercises and familiarity, improvement is slow and steady often over two years, but with great benefit being achieved. Except for rare cases, all our implant users are able to hear spoken language and understand speech better than they did with hearing aids.

SINGLE SIDED DEAFNESS IMPLANTATION

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.

Overall, implantation for single sided deafness is most successful in cases of recent onset deafness. If the deafness has been present for many years, success is less likely, but the problem should be discussed on an individual basis, for optimal assessment and advice. In longer duration cases, alternative bone conduction implants may be a preferable treatment option.

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.

More Information

- Inner Ear Conditions
RISKS AND COMPLICATIONS

Hearing

Generally, cochlear implantation is undertaken only when the hearing in the ear cannot cope despite 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.

Also, although many cases have ringing (tinnitus) in the ears before surgery, this may not be eliminated and can be worse in a minority although this is very unexpected.

Dizziness

Balance upsets are not expected from this surgery, and are usually related to the anaesthetic or due to unrelated central nervous system origins if present. 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.

It is common for the upper ear to feel numb for up to two months.

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 the minimal trauma methods developed at Queensland Otology, this complication has proven very rare in implant surgery. 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 differences may occur.
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 is applied at surgery 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**
Rest well after surgery; recovery varies from person to person.
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. Some intermittent stabbing type pain may be experienced; this fades in a few weeks. Nausea may occur, but advise our staff if you require medicine for this.

**Activities**
- Remain active, within one’s comfort zone. Return to full exercise after a week, if well. Return to work when well recovered.
- “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.
Please let us know at Queensland Otology if you have any concerns or questions, whether before or after.

**Contact Numbers**

Business Hours: (07) 3839 7677

After hours: (07) 3261 9570