

# INTACT CANAL WALL MASTOIDECTOMY

## Risks, Complications and Post-operative Instructions

The middle ear is normally aerated by means of the Eustachian tube from the rear of the nose. For several reasons the tube may be dysfunctional, causing a partial vacuum in the middle ear as the air within dissolves into the bloodstream.

The resultant tension on the eardrum causes this to gradually stretch then collapse inwardly. The tensile strength of the drum dissipates and an invaginating sac develops into the middle ear and mastoid. Failure of the normal self-cleaning mechanisms fills the sac with infected dead skin that progressively erodes the structures of the ear. Severe and dangerous complications frequently result. Surgery is essential to remove this disease, to avoid complications and to recover function (hearing and self-cleaning).

Traditionally, cholesteatoma was removed by clearing the contents of the middle ear and mastoid completely, using an “open cavity” or radical mastoidectomy approach, but this method was troubled by unacceptable complication rates and the need for ongoing care.

The alternative is intact canal wall mastoidectomy surgery, in which the structure of the ear is retained during removal of disease. The surgery requires expert hands to avoid the problems of residual disease or recurrence of cholesteatoma formation. Second stage surgery is required in some cases to ensure the absence of disease, and precise repairs are needed to avoid recurrent disease.

The intact canal technique offers the best chance of a disease-free and hearing ear, although the extent of damage due to disease or tubal dysfunction may limit the latter.

The operation is undertaken through an incision behind the ear. The disease is cleared from the middle ear and mastoid and then the hearing (drum and ossicular chain) and canal wall are repaired. The drum is stiffened with fine cartilage grafts to prevent recurrent disease. The canal wall is sealed with durable biomaterials. Surgery normally takes 60-90 minutes.

Fine dressings are placed in the external canal to stabilise drum repairs.

### More information

- [Middle Ear Surgery](#)
- [Intact Canal Wall](#)

#### “Silverton Place”

101 Wickham Terrace  
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#### Other Locations

Beenleigh Sunnybank Mt Ommaney Caboolture

## RISKS AND COMPLICATIONS

The main concerns with this technique are the possibility of disease specks being left in the ear, and the redevelopment of the original disease. If doubt re the former exists, either second stage surgery or MRI scanning is recommended to check for this disease a year later. Recurrent disease can usually be prevented with precise repairs, but some problems may recur.

### Hearing

Together with disease removal, the surgery normally aims for the best possible hearing outcome, but this is sometimes not achieved, due to the extent of disease or other factors, especially ongoing tubal dysfunction. Also although many cases have ringing (tinnitus) in the ears before surgery, this may not be eliminated and can be worse in a minority.

Generally, the hearing takes perhaps 1-2 months to fully recover, if hearing repair surgery has been performed. Gurgling, crackling, echoing or hollow sounds during this period are indicative of a good outcome.

### Dizziness

Balance upsets after tympano-mastoid surgery are rare, but in some cases of more advanced disease the balance organs are traumatised during removal of disease or similar actions in the course of the surgery. Fortunately this generally fades, perhaps over a two month course.

### Facial Nerve Paralysis

Even in expert hands paralysis of the side of the face may occur for a variety of reasons in ear surgery, in perhaps every 1-1000 cases. Chronic ear surgery not uncommonly encounters the nerve in a diseased state, requiring extra vigilance on the part of the surgeon. 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.

### Drum Perforation

Generally in intact canal wall cases drum healing is uneventful, but perforation may occur requiring limited revision surgery to overcome the problem that is fortunately relatively rare.

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## Taste Disturbance

The chorda tympani is the nerve that provides taste sensation to the side of the tongue. It passes across the field of surgery in many ear disease cases and not uncommonly is bruised or cut in the course of the procedure. Taste disturbance occurs in about 10% of cases and this may last for up to 12 months, a few remaining permanent, sometimes with slight dryness of the mouth,

## 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.

If an incision has been made behind the ear, it is common for the upper ear to feel numb for up to two months, before fading

Uncommonly, a collection of blood may form under a wound behind the ear. This may cause more noticeable swelling and discomfort.

Please notify us at **07 38397677** if you have concerns.

## POSTOPERATIVE INSTRUCTIONS

### Surgical wound site

A head bandage applied after surgery will be removed before discharge from hospital. Keep the wound dry for a week, at which time you will have an appointment to have the sutures removed. The site may be washed thereafter. Normally a degree of swelling may cause the ear to be more prominent. This fades over two weeks.

### External canal site

The ear bowl and canal will have dressings that may become moist from slight bloodstained discharge. Replace the ear bowl dressings as necessary, but leave the canal dressings unmolested until their removal, usually 2-3 weeks after surgery. Until removal of the dressings, avoid heavy exercise, to reduce perspiration moisture within the canal. Removal of dressings is usually brief and pain-free.

Also avoid forced nose blowing or occluded sneezing, as this may dislodge graft material in the ear. Aircraft flight should be avoided for one month.

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## 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. If an incision has been performed behind the ear, some intermittent stabbing type pain may be experienced and which fades in a few weeks. Nausea is less common, but advise our staff if you require medicine for this.

Bruising is common, around the ear and in the neck.

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.

## Activities

- Rest well after surgery; recovery varies from person to person.
- Return to work when well; this is normally after a few days, unless dizziness or other problems intervene.
- The ear canal dressings are removed at 2-3 weeks after surgery, and the ear reviewed after that. Audiology is undertaken at two months. Subsequent reviews occur on an individual basis.

Our goal in ear reconstruction 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 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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