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MACARTHUR ENT

Cholesteatoma

What it is, how it is treated, and what to expect after surgery

Please read first – this is general information, not advice about your own situation

- This sheet is a **summary of the published medical literature**. The figures quoted are averages from studies of groups of patients.
- It is **not specific to your condition**. The findings in your ear, your hearing, your general health and your preferences all change which options suit you and what your individual risks are.
- Your ENT surgeon will discuss your own examination, tests and options with you. Please bring any questions to your appointment.

What is a cholesteatoma?

A cholesteatoma is a collection of skin that grows in the wrong place – inside the middle ear (the space behind the eardrum) and the mastoid bone behind the ear. It is **not a cancer** and does not spread to other parts of the body. However, it slowly enlarges and can erode the tiny bones of hearing, the bone around the balance organ and facial nerve, and, rarely, the thin bone separating the ear from the brain. It can occur in adults and children.

Most cholesteatomas are “acquired”: a pocket forms in the eardrum, often because of long-standing poor ventilation of the middle ear (Eustachian tube dysfunction) or repeated infection. Skin that would normally shed out of the ear becomes trapped in the pocket and builds up.

Symptoms

- Ear discharge that keeps coming back, often smelly, and does not fully clear with antibiotic drops
- Gradual hearing loss in the affected ear
- A feeling of fullness or pressure in the ear
- Occasional dizziness or imbalance
- Rarely, weakness of one side of the face or a change in taste
- In children, symptoms can be subtle, and cholesteatoma is sometimes found on a routine ear check

How is it diagnosed?

Cholesteatoma is usually diagnosed by examining the ear with a microscope or endoscope. Scans help show how far it has spread and plan surgery:

- **CT scan** of the temporal bone shows the bony anatomy and any erosion, but cannot always tell cholesteatoma apart from fluid or scar tissue.
- **Specialised MRI** (non-echo-planar diffusion-weighted imaging, “non-EPI DWI”) makes cholesteatoma appear bright. It uses no radiation and can detect deposits as small as about 2–3 mm. It is used when the diagnosis is uncertain and to check for disease that has come back after surgery.

Treatment options

Surgery is the only effective treatment – there is no medicine that removes a cholesteatoma. Drops and ear cleaning can settle infection before surgery. The aims of surgery are, in order: a safe, dry ear free of disease; then preserving or improving hearing where possible.

Approach	What it involves	Main trade-offs
Canal wall up mastoidectomy	The bony wall of the ear canal is kept, so the ear looks and works much like a normal ear afterwards.	Higher chance of disease being left behind or coming back; often needs a second look (by MRI or surgery).
Canal wall down mastoidectomy	Part of the ear canal wall is removed to create one open cavity that is easy to inspect.	Lower chance of recurrence, but the cavity needs cleaning in clinic, and water precautions and hearing aid fitting can be harder.
Mastoid obliteration	An add-on step that fills the mastoid with bone paté or other material and rebuilds the canal.	Appears to lower recurrence and reduce long-term discharge compared with an open cavity.
Endoscopic (keyhole) ear surgery	A narrow telescope is used through the ear canal, instead of or as well as an incision behind the ear.	Better view of hidden corners of the middle ear; associated with lower rates of residual disease in comparative studies. Suited to disease that has not spread far into the mastoid.

If the hearing bones have been eroded, they may be reconstructed at the same operation or at a planned second stage.

Checking for disease that comes back

Because a small amount of cholesteatoma can be missed or regrow, patients have traditionally had a planned "second-look" operation about 6–18 months later. With modern non-EPI DWI MRI, many centres now use **MRI surveillance** instead, and reserve repeat surgery for patients whose scan shows a suspicious area. It has been estimated that this can reduce the proportion of patients needing a second operation from about 50–60% to around 10%.

How often does it come back?

- **Canal wall up:** residual or recurrent disease is reported in roughly 9–61% across studies, depending on the extent of disease, follow-up length and technique.
- **Canal wall down:** roughly 0–17%, generally lower than canal wall up.
- Mastoid obliteration and endoscopic assistance have both been associated with lower rates than traditional techniques alone.
- Recurrence can appear years later. In one large review, the rate rose from about 7% at 1 year to about 39% by 15 years – which is why long-term follow-up matters.

Possible complications

Cholesteatoma surgery is generally safe, and serious complications are uncommon. Reported risks include:

Complication	What the literature reports
Facial nerve weakness	Uncommon. Temporary weakness is reported in under 1% to a few percent of operations; permanent weakness is rare.
Inner ear (sensorineural) hearing loss	Reported in a small minority of patients, usually mild; severe loss is rare.
Taste change	The taste nerve (chorda tympani) runs through the middle ear and may be stretched or divided. Change in taste is usually temporary.
Dizziness	New dizziness is reported in about 1 in 10 patients in some series, usually settling over days to weeks.
Other	Wound infection, a new hole in the eardrum, narrowing of the ear canal and, rarely, spinal fluid leak.

Recovery

- Most people go home the same day or after one night in hospital.
- A dressing or dissolving pack is usually left in the ear canal for 1–3 weeks.
- Keep water out of the ear until you are told the ear has healed – usually several weeks.
- Most people return to work or school within 1–2 weeks. Healing of the eardrum and any hearing change can take 2–3 months to become clear.

Long-term follow-up

- Regular ear checks in clinic – more often in the first 1–2 years
- Hearing tests to track hearing over time
- MRI surveillance at intervals set by your surgeon, sometimes instead of a second-look operation

Contact the rooms promptly if you notice

At any stage of follow-up, these can be signs of infection or returning disease.

- New ear discharge, bleeding or increasing pain
- A change in hearing, new dizziness or facial weakness

Remember

- The numbers on this sheet summarise the published literature and describe groups of patients, not you as an individual. Your own risks and the best option for you will be discussed at your consultation.
- Appointments: Macarthur ENT, Gregory Hills and Campbelltown – (02) 4625 1682 · macarthurent.com.au. A GP referral is needed for a Medicare rebate.