

## RADICAL MASTOIDECTOMY

### Disease State

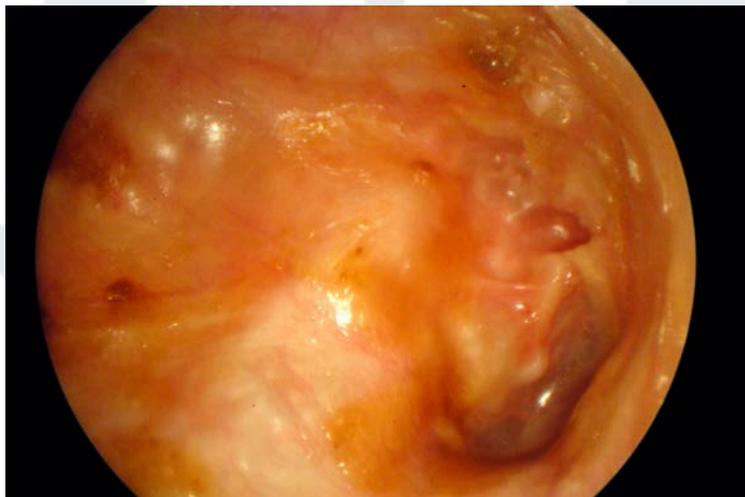
The major middle ear disease faced by otologists is [cholesteatoma](#). This is a situation where the skin of the eardrum has invaded the middle ear, forming a sac of skin that is open into the external ear canal. The sac gradually expands, becoming infected and eroding the surrounding bone of the mastoid process, the stub of bone behind the ear. It presents clinically with hearing loss and a foul-smelling discharge, which is resistant to treatment.

This condition is separate from other chronic ear infections, as it is notorious for major complications ([Collapsed Eardrum](#)), including profound nerve deafness, mastoiditis, facial paralysis, and brain infections. Surgery therefore seeks to eliminate any ongoing risk.

### Surgery

From the late 19<sup>th</sup> century, a main avenue of treatment has employed total excision of the disease and its surrounds, to ensure as far as possible, any further major threat from the condition. This was done by means of radical mastoidectomy ([Trauma](#)).

The surgery is undertaken through an incision behind the ear. The mastoid bone is hollowed out, in part or totally, opening a cavity into the outer ear canal. The eardrum and middle ear mechanisms may also be removed. The canal entrance may be widened to permit cleaning.



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The surgery has three variants. The original ([Radical Mastoidectomy](#)) procedure effectively amputated the entire middle ear back to surrounding structures. This was later modified to retain the eardrum, in order to preserve hearing (modified radical mastoidectomy). In some cases, where the cholesteatoma is small, a limited cavity is created (atticotomy).

## Complications

Radical mastoidectomy surgery has several drawbacks. It alters normal anatomy. Commonly, loss of function results (hearing, ear self-cleaning). Disease often lingers or recurs. Long term maintenance is usually required.

Disruption of the normal anatomy of the ear causes several problems. The Infection-prone lining of the middle ear may be left exposed, causing lingering infection. Destruction of the canal skin interrupts normal cleaning, producing a build-up of dead skin in the ear, which, if left uncleaned, will cause ongoing disease. Loss of the drum and chain causes hearing loss; chronic infection may produce gradual nerve deafness. Perpetual discharge is often offensive and distressing. The required repetitive cleaning is expensive, time consuming and often uncomfortable. Dizziness is common; a large canal entrance may be unsightly. Water sports are commonly inadvisable.



Because of these problems, specialist otologists now commonly avoid this technique, preferring latterly developed methods (intact Canal Wall Mastoidectomy ) that avoid cavity creation.

If a troublesome cavity situation is present however, the problem can now be corrected with a good deal of certainty. Queensland Otolaryngology is a pioneer in world standard corrective surgery (Mastoidectomy Reconstruction), which is designed to permanently eliminate the problem of the troublesome mastoid cavity. Using these techniques, the great majority of open cavity problems are correctable, although repair of hearing depends on factors that may be unavoidable.

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## More Information

- [Cholesteatoma](#)
- [Middle Ear Infections](#)



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