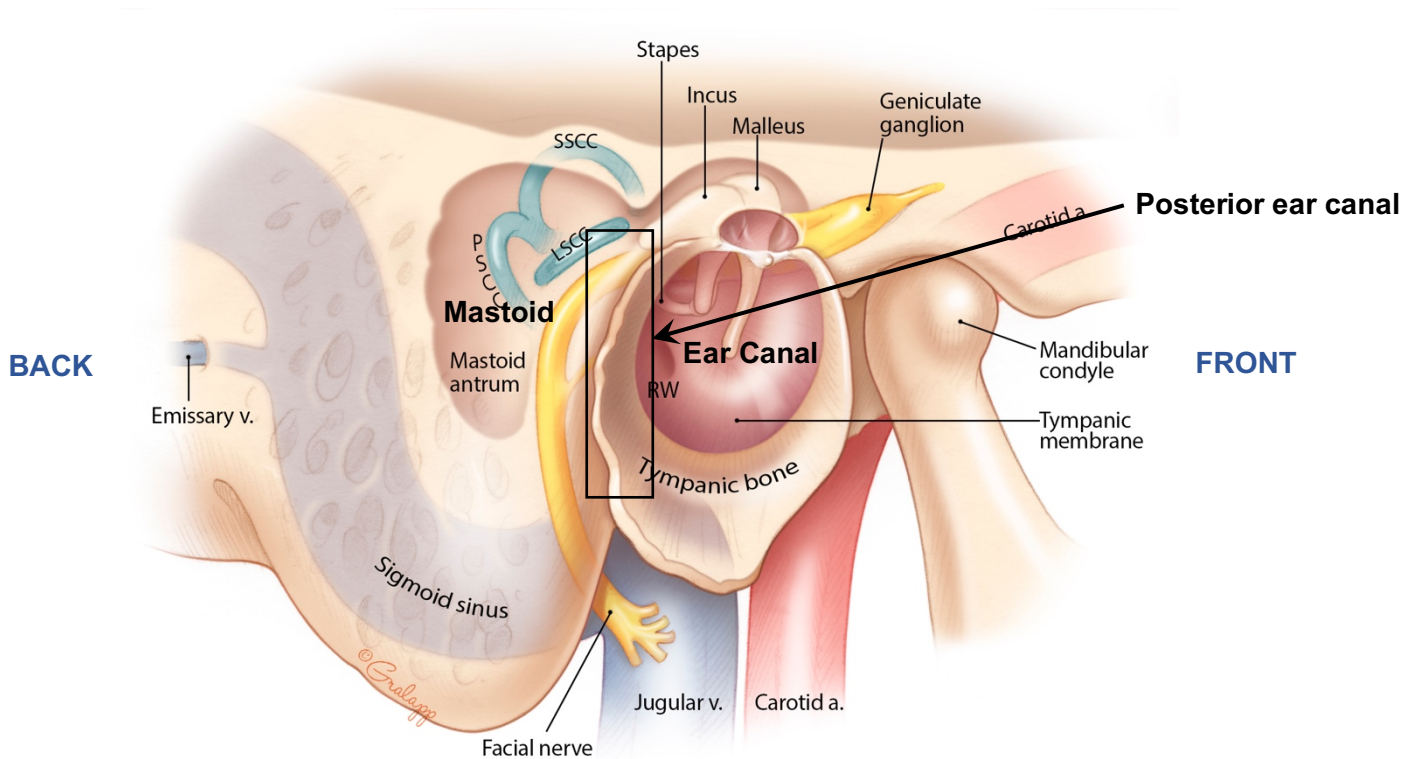


## Canal-Wall Up (Intact Canal Wall) vs Canal-Wall Down Mastoidectomy

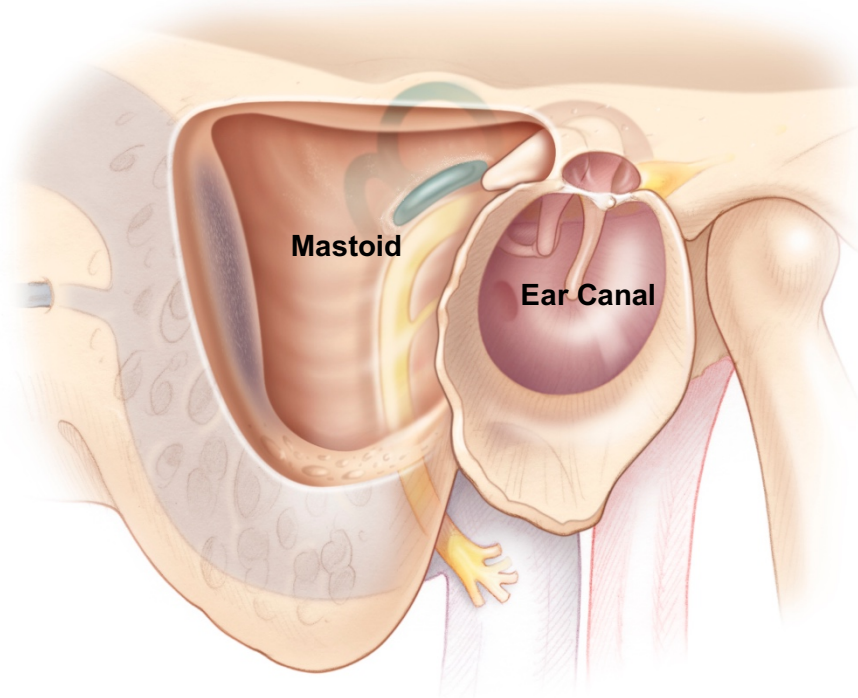
Your ear surgeon may have discussed the differences between a canal-wall up versus a canal-wall down mastoidectomy. These types of surgeries are often performed for cholesteatoma removal, but may be needed for other ear problems as well. The “canal wall” refers to the posterior (back part) of the ear canal. This is a bony partition that divides the mastoid bone and the ear canal.

### Side view of the ear showing the ear canal and mastoid

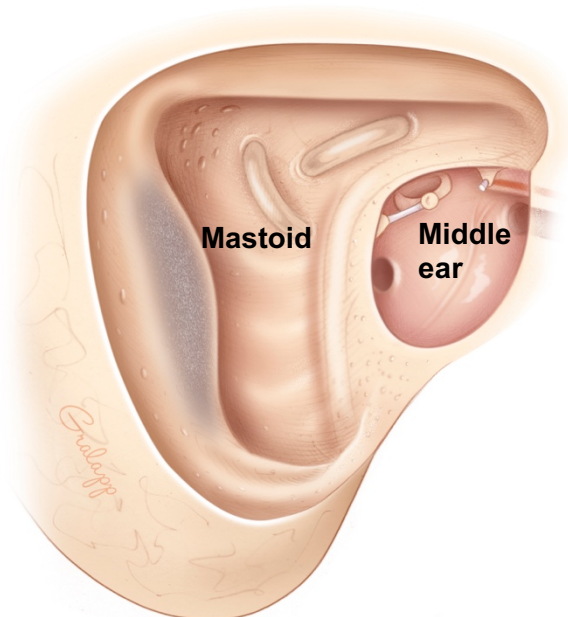


A canal-wall up mastoidectomy preserves the posterior ear canal keeping the mastoid and ear canal as separate compartments. A canal-wall down mastoidectomy removes this bony partition creating a common space between the mastoid and the ear canal and middle ear.

**A drawing showing what a canal wall up mastoidectomy would look like. Notice the mastoid bone is removed, but the posterior canal wall is saved, preserving the bony partition between the mastoid and ear canal**



**A drawing showing what a canal-wall down mastoidectomy would look like. Removing the posterior ear canal creates a common cavity between the mastoid and middle ear/ear canal. Notice some of the middle ear bones are removed in this surgery.**



Many cholesteatomas can be removed using the canal-wall up mastoidectomy approach, but more extensive cholesteatomas may need to be removed using the canal-wall down mastoidectomy approach. There are advantages and disadvantages to each of the approaches.

### **Canal wall-up mastoidectomy**

Advantages:

- Physiologic/normal positioning of the tympanic membrane.
- Adequate middle ear space to allow the middle ear bones to work properly.
- No need for frequent mastoid cavity cleanings (see below).
- As long as there is no tympanic membrane perforation, the ear can get wet without increased risk of infection.

Disadvantages:

- The posterior ear canal can limit wide visualization of cholesteatoma. Because of this, additional surgery may be needed either to re-examine the ear (also known as a 'second-look tympanomastoidectomy'), or to remove cholesteatoma that has grown back.

### **Canal wall-down mastoidectomy**

Advantages:

- Removing the posterior ear canal allows for better visualization of the cholesteatoma and facilitates its removal. Thus, revision surgery and recurrent cholesteatoma are not as common as they are in canal-wall up mastoidectomy.
- Residual cholesteatoma can be typically removed in the clinic.

Disadvantages:

- Because there is a larger cavity in the ear, the ear fills up with debris and cerumen frequently. Patients with a canal-wall down mastoidectomy will need ear cleanings (mastoid cavity debridement) every 6-9 months indefinitely by an ENT.
- Patients are advised to keep the ear dry (custom ear molds for swimming) since getting the ear wet can increase the risk of infection.
- Altered tympanic membrane and middle ear space, which may impact hearing.

Your surgeon at Atlanta Otology will recommend the type of approach that is best for you. There are various reasons to choose one type of approach versus another, and your situation may need a particular approach. If there are any questions about the information in this hand-out, please reach out to our clinic to set up an appointment with one of our providers.