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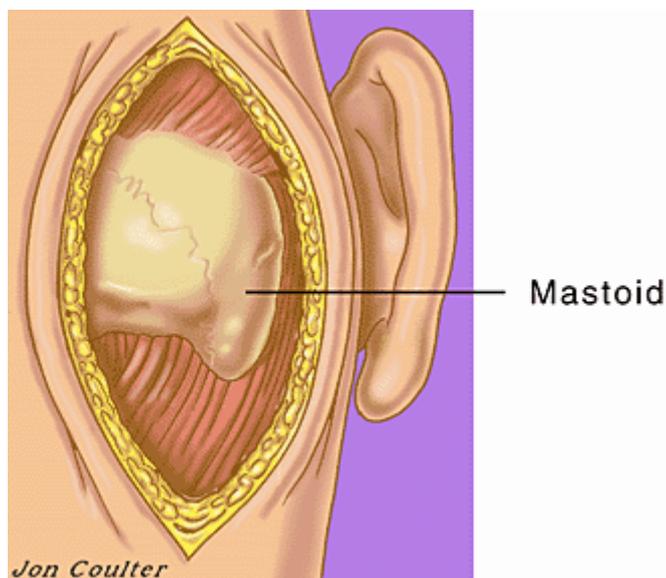
## MASTOID SURGERY

### Definition

Mastoidectomy is a surgical procedure to remove an infected portion of the mastoid bone when medical treatment is not effective.

### What is the Mastoid Bone?

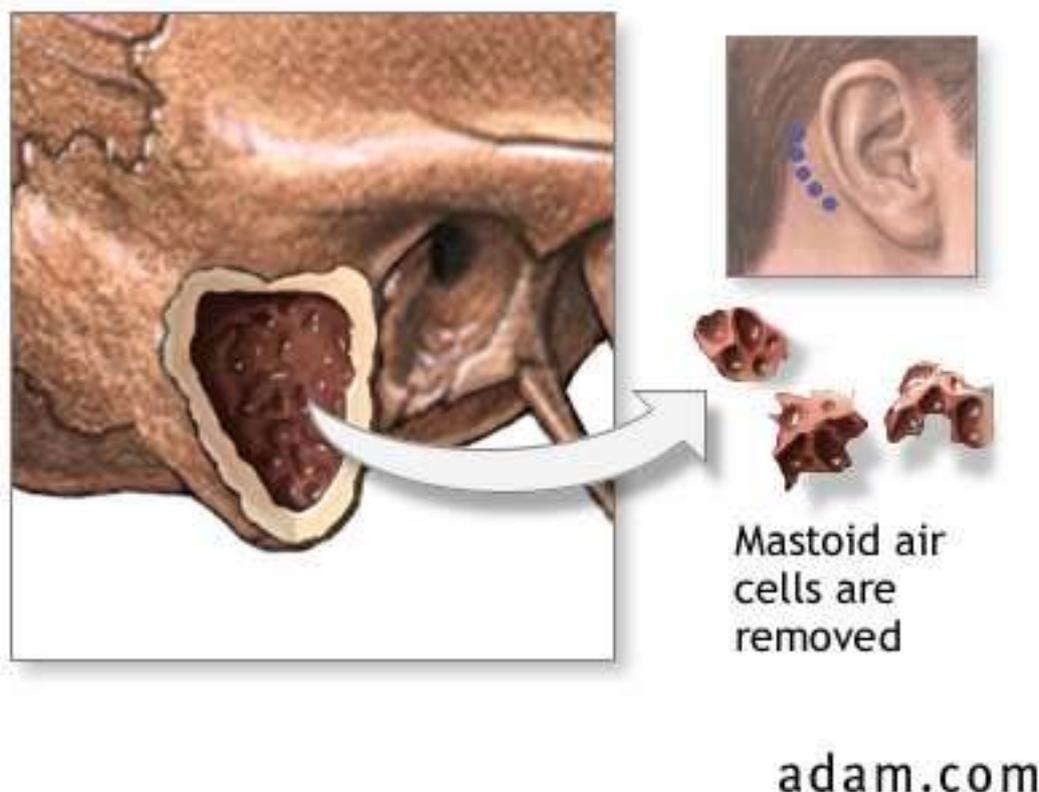
The mastoid bone is the bone behind the ear. It has a series of air cells that are connected to the middle ear. Infections of the ear can sometimes spread to the mastoid bone.



### Purpose

Mastoidectomy is performed to remove infected air cells within the mastoid bone caused by **mastoiditis**, ear infection, or an inflammatory disease of the middle ear (cholesteatoma). The cells are open spaces containing air that are located throughout the mastoid bone. They are connected to a cavity in the upper part of the bone, which is in turn connected to the middle ear. As a result, infections in the middle ear can sometimes spread through the mastoid bone. When antibiotics can't clear this infection, it may be necessary to remove the infected air cells by surgery. Mastoidectomies are also performed sometimes to repair paralyzed facial nerves.

## Types of Mastoidectomy



There are several different types of mastoidectomy:

- **Simple or Cortical Mastoidectomy.** The operation is performed through the ear or through a cut (incision) behind the ear. The surgeon opens the mastoid bone and removes the infected air cells.
- **Combined Approach Tympanomastoidectomy**  
In addition to the above steps any disease in the middle ear is removed and the ear drum is repaired. The wall between the mastoid bone and the outer and middle ear is preserved. The patient usually requires a 'second look' operation a year after the first surgery to make sure the inflammation in the middle ear and mastoid 'cholesteatoma' has not come back.
- **Modified Radical Mastoidectomy.**  
Disease in the mastoid bone is removed. In addition, the wall between the mastoid bone and the outer and middle ear is removed. After the operation, the patient has a small cavity in the mastoid bone which can be inspected by the ENT Surgeon looking inside through the ear canal in clinic.

The procedure usually takes between two and three hours.

### What Happens Before the Operation?

Your consultant will explain the operation in more detail, discuss any worries you may have and ask you to sign a consent form. You will also have a hearing test 'audiogram' before your surgery. You may be asked to attend a clinic to assess your fitness for a general anaesthetic. Before the operation, you should not have anything to eat or drink for the time mentioned in the letter you receive from the hospital. It is important to follow these instructions otherwise the operation may need to be delayed or even cancelled. An anaesthetist will also visit you on the day of the surgery to explain about the anaesthetic.

### What Happens After The Operation?

- A head bandage may be used and it will be removed the morning after surgery

- Any stitches that need to come out will be removed after a week
- A dressing will be left in the ear canal for two to three weeks.
- You will be able to go home on the same day or the day after the operation, but you will need to rest at home for about two weeks.
- An outpatient appointment will be sent to you in the post to see your surgeon after your operation.

## **What symptoms can I Expect After the Operation?**

### **Pain**

- A headache around the ear is normal and you will need pain relief for up to 2 weeks. This will be supplied to you on leaving hospital.

### **Discharge from the ear canal**

- Some discharge, often blood stained, is common in the first few days but then dries up.

### **Hearing**

- This will be muffled because of the packing in the ear and tinnitus is sometimes worsened temporarily.

### **Balance**

- This is sometimes disturbed but only for a few days.

### **The ear**

- This may stick out a little more and will also feel numb for a few weeks.

### What Are the Post-Operative Instructions?

- You are advised to stay off work or school for 2 weeks.
- Keep the ear and scar dry when washing. Cotton wool smeared in Vaseline is an effective ear plug. Avoid swimming until given the all clear.
- Change the cotton wool in the ear if it becomes dirty but be careful not to pull the dressing out with it – get someone to help. If some of the dressing is pulled out cut off the bit hanging out.
- Minimise pressure changes in the ear - avoid vigorous nose blowing, sneeze with mouth open and don't fly.
- Complete any course of antibiotics you are given.

### Are there any Complications?

**Failure of operation** – placing a graft under the ear drum relies on it being incorporated into the body. Sometimes this does not happen and the repair fails leaving a persisting hole in the ear drum. The operation can be repeated if necessary. Repairing the three bones of the hearing mechanism may be unsuccessful leaving a persisting hearing loss. A hearing aid may still be considered.

**Hearing** – some hearing loss may occur from the disturbance to the bones of hearing in the middle ear. Very rarely, disturbance to the inner ear can cause complete deafness that is irreversible (only on the operated side). Tinnitus occasionally is worsened by the operation.

**Balance disturbance** – immediately after the operation some unsteadiness may occur. Persisting dizziness is rare.

**Infection** – can occur at the site of the skin cut or in the middle ear causing increased pain, discharge, swelling and fever; seek attention if you are concerned this may be developing.

**Taste disturbance** – occasionally this is noticed usually only temporarily.

**Facial weakness** – disturbance to the facial nerve occurs extremely rarely in this type of surgery and would cause weakness of the muscles of the face on the side of the operation. It may be either temporary or permanent.

### Any Further Questions?

The team involved in your care have written this information sheet to make your admission and care as smooth as possible. However, it does not cover every aspect of your care and the staff will always be happy to answer any other questions or points of concern. If you have any questions about this operation, please record them below (to ensure you do not forget them) and ask them at your next ENT appointment. Alternatively you may contact your Consultant via his/her secretary.

**The patient should tell the doctor if any of the following symptoms occur:**

- Bright red blood on the dressing.
- Stiff neck or disorientation. These may be signs of **meningitis**.
- Facial **paralysis**, drooping mouth, or problems swallowing.

### Key Terms

#### **Cholesteatoma**

A rare but chronic inflammatory disease in which skin cells and debris collect in the middle ear, usually as a result of an ear infection.

#### **Mastoid bone**

The prominent bone behind the ear that projects from the temporal bone of the skull.

#### **Mastoiditis**

An inflammation of the bone behind the ear (the mastoid bone) caused by an infection spreading from the middle ear to the cavity in the mastoid bone.