

***Clinical Pharmacy I***  
***Ear Conditions***  
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**A. Ear Wax Impaction**

Ear wax performs a number of important functions, including:

1. mechanical protection of the tympanic membrane,
2. Trapping dirt, repelling water and contributing to a slightly acidic medium that has been reported to exert protection against bacterial and fungal infection.

**Prevalence and Epidemiology**

- 2–6% of the general population suffers from impacted wax.
- Wet or sticky wax is common in Caucasians and African-Americans
- Dry wax is common in Asian populations.
- Patients with congenital anomalies (narrowed ear canal).
- Patients with learning difficulties
- Patients with a hearing aid.
- Elderly are more susceptible due to the decrease in cerumen producing glands resulting in drier and harder ear wax.

**Etiology**

- Skin moves outwards away from the ear drum and out along the ear canal.
- Ears are largely self-cleaning as the ear canal naturally sheds wax from the ear.
- This normal function can be interrupted, usually by misguided attempts to clean ears.
- Wax therefore becomes trapped, hampering its outward migration.

**Clinical Features**

- A history of gradual hearing loss
- Ear discomfort (to variable degrees)
- Itching, tinnitus and dizziness occur infrequently.
- Otoscopic examination should reveal excessive wax.

## Conditions to Eliminate

- Trauma of the ear canal
- Trauma of the ear canal

## Indicative of Referral

| Symptoms/signs   | Possible danger/reason for referral                        |
|--|--|
| Dizziness or tinnitus  | Suggests inner ear problem; requires further investigation |
| Pain originating from the middle ear<br>Fever and general malaise in children                      | Middle ear infection?                                      |
| Associated trauma-related conductive deafness<br>Foreign body in the EAM<br>OTC medication failure | Requires further investigation by doctor                   |

## Management

### 1. *Cerumenolytics*

- Help soften, dislodge and remove impacted ear wax.
- Very safe.
- Local irritation when first administered.
- They might, for a short while, increase deafness and the patient should be warned about this possibility.

### 2. *Oil-based products Cerumol Ear Drops (Arachis – peanut oil, 57.3%)*

- Dose for adults and children is 5 drops into the affected ear 2-3 times a day repeated for up to 3 days.
- In between administration a plug of cotton wool moistened with Cerumol or smeared with petroleum jelly should then be applied to retain the liquid.

### 3. *Cerumol Olive Oil Drops (olive oil 100%)*

- For adults and children, 2-3 drops should be instilled twice a day for up to 7 days.
- Like Cerumol, a cotton wool plug should be gently placed in the ear to retain the liquid.