

Otic disorders

Non-Prescription Drugs and Parapharmaceuticals

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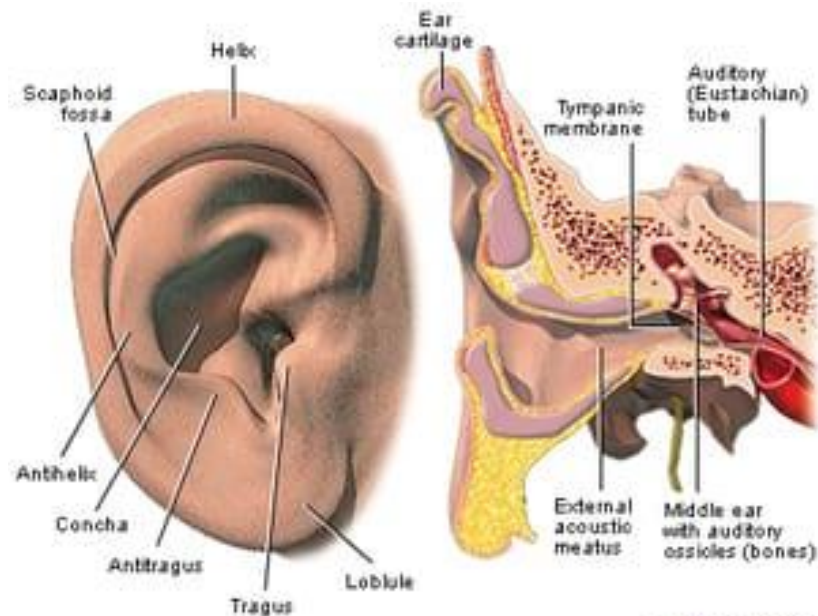
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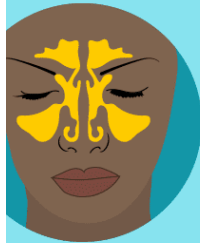
Common ear problems

- Ear problems offer little scope for pharmacists to advise on treatment, as patients' descriptions of their symptoms and their own self-diagnoses may be misleading.

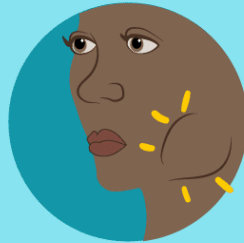
Medical examination is usually necessary for accurate diagnosis.



What Causes Ear Pain?



Sinusitis



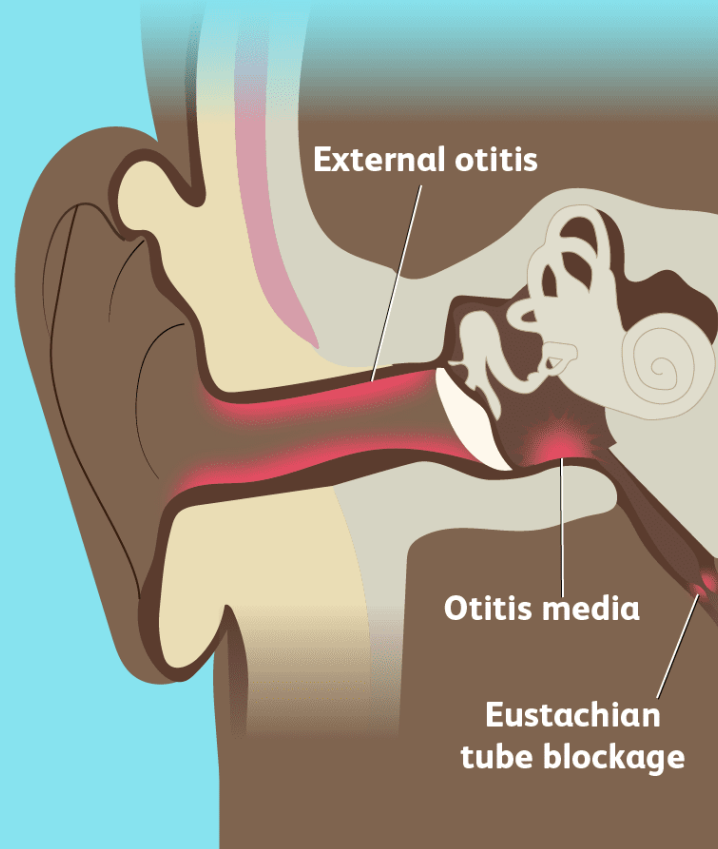
Dental problems



Ear skin problems



Earwax blockage



Protection of the ear

- **Hair: trap foreign material in a waxy network**
- **Cerumen (ear wax):** traps foreign bodies, Contains antimicrobials such as lysozymes
- **Skin of normal healthy ext auditory canal:** waxy water-resistant with pH 5-7.2 that prevents pathologic bacterial and fungal growth

What you need to know

- Earwax
- Otitis externa (OE)
- Otitis media
- One or both ears affected?
- Symptoms – pain, itching
- Is there any hearing loss?

Earwax

- Earwax is a normal physiological substance in the ear canal.
- Excessive build-up of hard earwax can develop in some people. **Cotton wool buds should never be poked into the ear to clean or clear it as wax is pushed further in and it is possible to damage the eardrum.**
- the commonest causes of temporary deafness. It may also cause a discomfort and a sensation that the ear is blocked. Rarely, it can cause dizziness and nausea.

Non-pharmacologic therapy

The recommended non-pharmacologic method is to use a wet wrung-out washcloth draped over a finger. Making this procedure daily can prevent impacted cerumen. However, this is not effective once the cerumen becomes impacted.

Self-care management of excessive cerumen

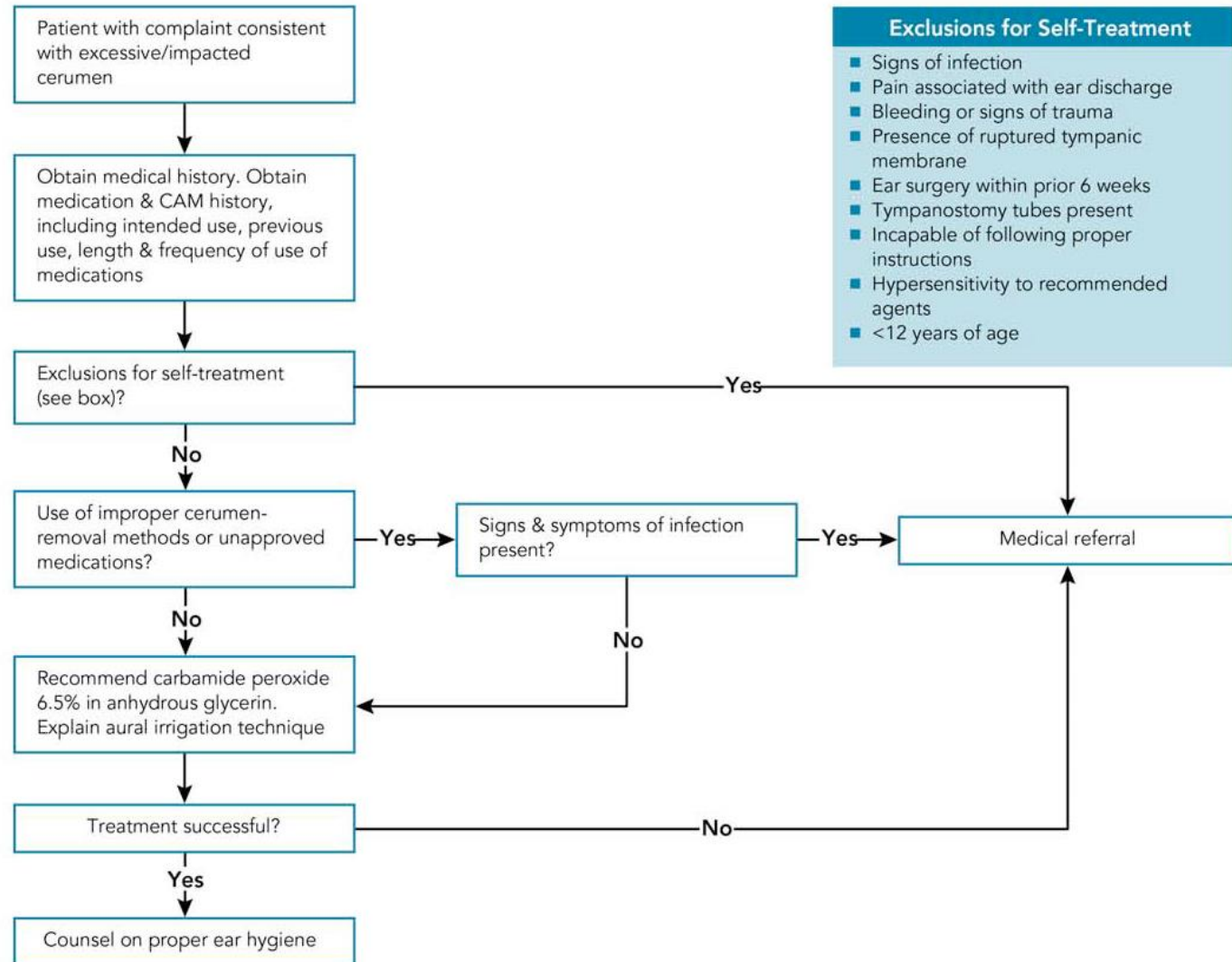


FIGURE 30-2 Self-care of excessive/impacted cerumen. Key: CAM, complementary and alternative medicine.

Management

- **Ear drops**

The ear can often be unblocked by using ear drops, which soften wax and sometimes allow it to run out. **Ideally** the ear should be examined prior to use.

- If this is not adequate to clear the problem, the ear drops will have softened the wax, enabling ear irrigation at the GP surgery
- Constituents of cerumenolytic products include fixed and volatile oils, glycerol, docusate

Constituents of cerumenolytic ear drops

- Fixed and volatile oils: as wax contains a high proportion of oily components, it is logical to assume that it can be dissolved.
- olive oil or almond oil to soften wax before removal.
- Olive oil or almond oil drops can be used three to four times daily for 3–5 days (do not prescribe almond oil ear drops to anyone who is allergic to almonds).
- Docusate sodium is a surface active agent that increases water penetration into the wax plug.
- Sodium Bicarbonate Ear Drops contains 5% sodium bicarbonate and 30% glycerol in water

cerumenolytic ear drops

- **Carbamide peroxide** 6.5% in anhydrous glycerin
- is safe and effective in softening and removing excessive earwax in adults and children 12 year and older.
- Has weak antibacterial effect.
- Used twice daily up to 4 days .
- Adverse effects : pain , irritation , redness and dizziness.
- If adverse effects develop or symptoms persist after 4 days , the patient should see a primary care provider for evaluation

cerumenolytic ear drops

Docusate sodium

- An emollient and softening agent
- More expensive agent and can cause more superficial erythema.

Techniques are recommended for the most effective use of ear drops

- It is best to have another person instil the ear drops.
- Before use, the drops should be warmed slightly by holding in the hands for a few minutes.
- The patient should lay their head on a flat surface such as a table, with the affected ear uppermost.
- The auricle (pinna) should be lifted upwards and backwards in adults, or downwards and backwards in children, to straighten the ear canal. The requisite number of drops should be instilled

Techniques are recommended for the most effective use of ear drops

- Stay like this for 2–3 min to allow the drops to soak into the ear and the earwax.
- Warn the person that instilling ear drops may cause transient hearing loss, discomfort, dizziness and irritation of the skin.
- *Prevention. In people with recurrent problems due to earwax, regular use of ear drops may be helpful to prevent build-up of wax. Some people recommend once weekly.*

Techniques are recommended for the most effective use of ear drops

- *Ear irrigation. If any wax remains despite this treatment, referral to the doctor or nurse is advisable.*
- An electronic ear irrigator is used, which directs a regulated pressurised flow of water at body temperature into the ear.
- The use of drops for 3–5 days to soften the wax prior to this is recommended to make the procedure more effective.

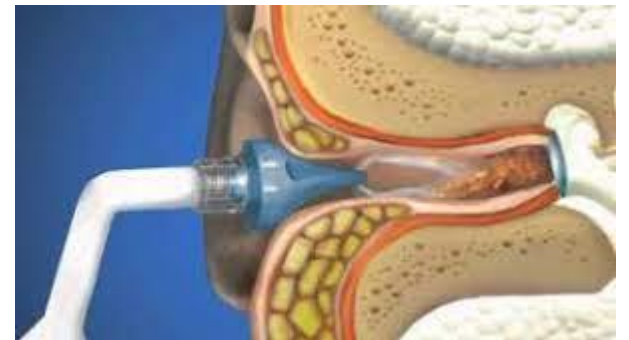
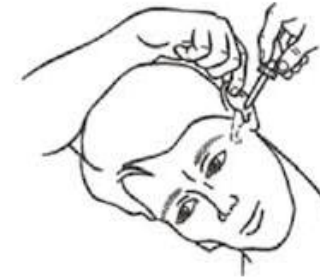


TABLE 30-1 Guidelines for Administering Eardrops

1. Wash your hands with soap and warm water; then dry them thoroughly.
2. Carefully wash and dry the outside of the ear, taking care not to get water in the ear canal.
3. Warm eardrops to body temperature by holding the container in the palm of your hand for a few minutes. Do not warm the container in hot water. Hot eardrops can cause ear pain, nausea, and dizziness.
4. If the label indicates, shake the container.
5. Tilt your head (or have the patient tilt his or her head) to the side, as shown in drawing A. Or lie down with the affected ear up, as shown in drawing B. Use gentle restraint, if necessary, for an infant or a young child.
6. Open the container carefully. Position the dropper tip near, but not inside, the ear canal opening. Do not allow the dropper to touch the ear, because it could become contaminated or injure the ear. Eardrop bottles must be kept clean.
7. Pull your ear (or the patient's ear) backward and upward to open the ear canal (see drawing A). If the patient is a child younger than 3 years old, pull the ear backward and downward (see drawing B).
8. Place the proper dose or number of drops into the ear canal. Replace the cap on the container.
9. Gently press the small, flat skin flap (tragus) over the ear canal opening to force out air bubbles and push the drops down the ear canal.
10. Stay (or keep the patient) in the same position for the length of time indicated in the product instructions. If the patient is a child who cannot stay still, the primary care provider may tell you to place a clean piece of cotton gently into the child's ear to prevent the medication from draining out. Use a piece large enough to remove easily, and do not leave it in the ear longer than an hour.
11. Repeat the procedure for the other ear, if needed.
12. Gently wipe excess medication off the outside of the ear, using caution to avoid getting moisture in the ear canal.
13. Wash your hands.



A



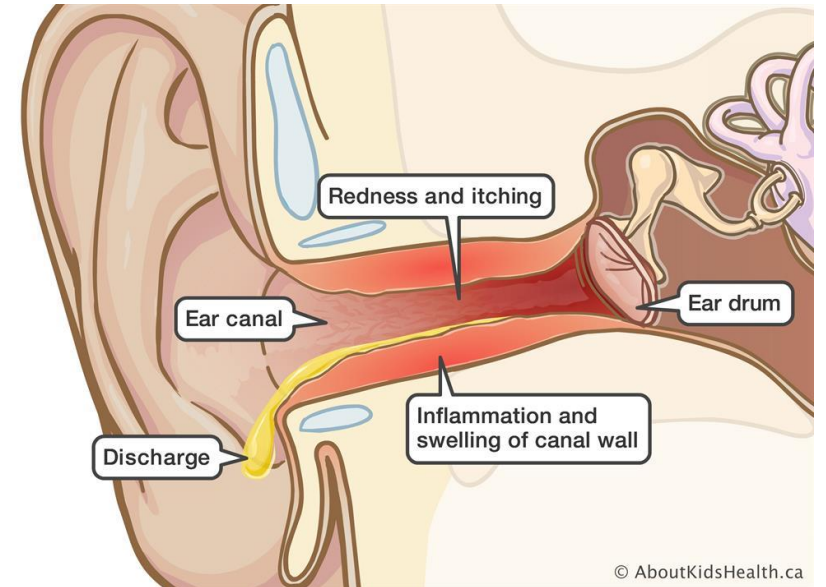
B

Source: APhA Special Report: Medication Administration Problem Solving in Ambulatory Care. Washington, DC: American Pharmaceutical Association; 1994:9.

Illness	<h2 style="margin: 0;">Earwax</h2> <p style="margin: 0;">Earwax is produced inside ears to keep them clean and free of germs. It usually passes out of the ears harmlessly, but sometimes too much can build up and block the ears.</p>
Advice to patients	<p style="margin: 0;">A build-up of earwax is a common problem that can often be treated using eardrops bought over the counter. These can help soften the earwax so that it falls out naturally.</p>
Exceptions	<p style="margin: 0;">Perforated ear drum</p>
Examples of medicines available to purchase OTC	<ul style="list-style-type: none"> • Olive oil drops (General Sales List GSL) • Arachis oil/chlorobutanol hemihydrate drops, for example Cerumol® (Pharmacy only P) • Docusate sodium 0.5% drops, for example Waxsol® (Pharmacy only P) • Acetic acid 2%, for example Ear Calm® Spray (not licensed for wax removal, may help if ears itch after wax removal, however significant itching may indicate infection and this should be confirmed and treated by the GP)
OTC restrictions⁵	<ul style="list-style-type: none"> • No restrictions

Otitis externa

- **Otitis externa (OE)** involves inflammation and infection of the skin in the ear Canal.
- OE can be precipitated by ear trauma (scratching, foreign bodies and use of cotton buds), swimming (especially in dirty or polluted water), chemicals (hairspray, hair dyes, shampoo and skin conditions (eczema, seborrhoeic dermatitis and psoriasis)).



Otitis externa

- ***Symptoms***
- The symptoms of OE are usually pain, itchiness and discharge. A boil (furuncle) can cause intense pain because of pressure in the confined skin and cartilage of the ear canal.
- Referral to the doctor may be necessary for accurate diagnosis



Management

- A good history is essential, including questions about any previous OE and recent foreign travel (association with swimming pools).

- **Hydrocortisone cream**

Mild eczematous otitis externa affecting the pinna can be treated with hydrocortisone cream.

Management

- **Acetic acid**

Acetic acid has antibacterial activity and is reported to be active against *Haemophilus*, *Pseudomonas*, *Candida* and *Trichomonas* species. A 2% solution of acetic acid For mild infective otitis externa.

- There may be associated cellulitis; if so systemic antibiotics should be started and *flucloxacillin would be the treatment of choice.*

Self-care advice

- Avoid damage to the external ear canal.
- Ensure skin conditions that are associated with the development of otitis externa are well controlled
- If earwax is a problem, the person should seek professional advice and have it removed safely to avoid damaging the ear canal.
- Cotton buds or other objects should not be used to clean the ear canal.

Self-care advice

- Keep the ears clean and dry by:
 - Using ear plugs and or a tight fitting cap when swimming – people with an acute episode of otitis externa should abstain from water sports for at least 7–10 days
 - Using a hair dryer (at the lowest heat setting) to dry the ear canal after hair washing, bathing or swimming.
 - Keeping shampoo, soap and water out of the ear when bathing and showering

Otitis media

Otitis media is an infection of the middle ear compartment. The middle ear lies between the outer ear canal and the inner ear.

- A viral cold, especially in children, can lead to blockage of the Eustachian tube and fluid formation within the middle ear. This causes symptoms of pressure and pain.
- Sometimes the fluid can then be secondarily infected by a bacterial infection.
- Usually the best treatment is pain relief with *ibuprofen* or *paracetamol*.
- Children under 2 years, or where there is discharge from the ear, should be referred to the GP practice.
- If the pain persists for more than a few days, or if the child is unwell (e.g. high fever, very restless or listless, vomiting), then the child should be seen by a doctor.

TABLE 30-5 Treatment of Common Otic Disorders

Disorder	Etiology	Treatment
Otic pruritus	Contact dermatitis, seborrhea, psoriasis, infection (external otitis), excessive dryness related to decreased sebum production	Excessive dryness: 1–2 drops of mineral oil; avoid application of alcohol, insertion of foreign objects; medical referral if severe; see also Chapters 34 and 35.
Hearing loss	Foreign objects, water trapped in canal, infection, upper respiratory tract congestion, neoplasms, tympanic membrane perforation (abrupt), excessive pressure in ear canal, excessive cerumen, excessive noise, medications	Medical referral unless hearing loss is related to excessive water or impacted cerumen
Dizziness	Inner ear lesions, otitis media, rapid change in pressure on the tympanic membrane, migraine headache, ototoxic drugs, postural hypotension, cardiac disease, neoplasms, irrigation of ear canal with very hot or cold water, motion sickness	Medical referral unless related to motion sickness
Tinnitus	Hearing disorders, blockage of EAC, exposure to high noise levels, acoustic trauma, systemic diseases, drug toxicities (salicylate, quinidine, aminoglycosides, and other antibiotics)	Check for impacted cerumen; discontinuation of offending drug; medical referral for all other causes (OTC medications are ineffective)
Foreign body	Insects, beads, seeds, small batteries, or other objects	Medical referral; mineral oil can quickly suffocate the insect until removed by a clinician; moisture causes seeds to swell, making removal more difficult