**Clinical Presentation**

**Take history**

**Examination**

**Treatment options**
- Oral analgesia for the pain
- Topical agents
- Oral agents
- Consider cleaning ear canal

**Self-care advice**

**When to investigate**
- Consider taking an ear swab to determine the causative organism if:
  - Treatment fails.
  - Otitis externa is recurrent or chronic.
  - Topical treatment cannot be delivered effectively (for example, if the ear canal is occluded due to swelling or debris).
  - The infection has spread beyond the external auditory canal.
  - The condition is severe enough to require oral antibiotics.
  - Take a swab from the medial aspect of the ear canal under visualization to reduce contamination

**Emergency admission to ENT**

**Exclude RED FLAGS**
- Suspicion of necrotising (malignant) otitis externa – emergency referral
- Or significant progression of the otitis externa

**Refer to ENT**
Clinical Presentation

- Pain/ itch + discharge

If one without the other, unlikely to be simple OE

Mastoid tenderness in adults is more often OE than true mastoiditis
Take history

Ask the person about the onset and nature of symptoms, including the:

- **Severity of symptoms**
  - Pain or tenderness on moving the ear (tragus or pinna) or jaw
    - Itch
    - Hearing loss
    - Ear discharge

- **Severity of inflammation** — inflammation is more likely to be severe if there are any of the following:
  - Fever
  - Cellulitis spreading beyond the ear
  - Regional lymphadenopathy
  - Discharge (serous or purulent)
  - Hearing loss (conductive)
  - Red, oedematous ear canal narrowed and obscured by debris
Examination

Examine the ear canal, tympanic membrane, the aurical and cervical nodes. Also examine the surrounding tissue for dermatological conditions.

- It can be difficult to adequately visualize the tympanic membrane in people with otitis externa.
- Have a high index of suspicion for perforated tympanic membrane if history consistent with this.
Exclude RED FLAGS

Criteria for necrotising (malignant) otitis externa:
- If otalgia and headache are more severe than clinical signs would suggest
- Refractory otitis externa
- Severe nocturnal otalgia
- Purulent otorrhoea
- Presence of pseudomonas
- Granulation tissue or exposed bone in ear canal

Typical additional features:
- Diabetes
- Older age
- Cranial nerve involvement e.g. facial nerve palsy
- Positive x-ray
- Immunosuppression e.g. including significant underlining condition

Other indications for emergency referral:
- Cellulitis spreading onto face
- Spreading infection
- Mastoiditis
- Perioral cellulitis
- Perichondritis
Treatment

Provide appropriate self-care advice to aid recovery and to reduce risk of future infection.

- Prescribe or recommend an analgesic for symptomatic relief, if required.
  - Paracetamol or ibuprofen are usually sufficient. Codeine can provide additional analgesia for severe pain.

There are four main types of ear drops used to treat otitis externa:
- Antibiotic ear drops – this can treat an underlying bacterial infection
- Corticosteroid ear drops – this can help to reduce swelling
- Antifungal ear drops – this can treat an underlying fungal infection
- Acidic ear drops – this can help kill bacteria

https://cks.nice.org.uk/otitis-externa#prescribinginfosub (please copy and paste link)

- Topical acetic acid 2% spray is also safe and effective treatment and can be used for mild cases.
- Quinolone containing preparations (for example ciprofloxacin, or ofloxacin) only require twice daily dosing, and can be used in people with a perforated ear drum.
- Topical aminoglycosides are less preferred by some experts because they can cause contact dermatitis, although this is rare after a short course for acute otitis externa [Rosenfeld, 2014].
  - Adverse effects to consider include aminoglycoside-induced ototoxicity in people with a perforated tympanic membrane, aminoglycoside-induced skin sensitization, and fungal superinfection (particularly with long-term use).

- Consider prescribing a topical antibiotic with or without a topical corticosteroid
- Oral antibiotics are rarely indicated.
- Consider seeking specialist advice if an oral antibiotic is thought to be required, including:
  - Cellulitis extending beyond the external ear canal.
  - When the ear canal is occluded by swelling and debris, and a wick cannot be inserted.
  - People with diabetes or compromised immunity, and severe infection or high risk of severe infection, for example with Pseudomonas aeruginosa.
- If an oral antibiotic is to be prescribed in primary care, consider prescribing a 7-day course of flucloxacillin, or clarithromycin (if the person is allergic to penicillin).
Self-care advice

- Give the following self-care advice to people with otitis externa to aid recovery and reduce the risk of future infection:
  - Avoid damage to the external ear canal:
    - Cotton buds or other objects should not be used to clean the ear canal.
    - If earwax is a problem, advise patient to use olive oil drops for two weeks, then if this does not work, sodium bicarbonate drops (over the counter) for 3-5 days providing they do not have a history suggestive of a perforated tympanic membrane (Warn the patient of potential skin irritation). Refer to ear wax pathway.
  - Keep the ears clean and dry by:
    - Using ear plugs and or a tight fighting cap when swimming — people with acute otitis externa should abstain from water sports for at least 7 to 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.
  - Consider using acidifying ear drops or spray (such as EarCalm®) shortly before swimming, after swimming, and at bedtime. These ear drops are available to purchase over the counter at pharmacies.
  - Ensure skin conditions that are associated with the development of otitis externa are well controlled:
    - If the person is allergic or sensitive to ear plugs, hearing aids, or earrings, they should avoid them, or use alternatives if (for example hypoallergenic hearing aids are available).
    - If the person has a chronic skin condition (for example eczema or psoriasis), they should ensure that this is well controlled if possible.
Refer to ENT

Take an ear swab prior to referral, refer to ENT if:
- Suspected cholesteotoma e.g. abnormal attic, painless discharge
- Protracted symptoms resistant to topical therapy
- Chronic on-going infections interfering with hearing aid use