UPPER RESPIRATORY TRACT INFECTIONS
Otitis Externa – Acute and Chronic
(CKS Otitis Externa)

Inflammation of the skin and sub dermis of the external ear canal, also known as 'swimmer's ear' or 'tropical ear'.
Acute otitis externa - inflammation of less than 6 weeks duration, typically caused by bacterial infection.
Chronic otitis externa - inflammation of longer than 3 months, typically caused by fungal infection.
Malignant otitis externa - potentially life-threatening progressive infection which may spread to cause osteomyelitis of the temporal bone and adjacent structures. Often caused by Pseudomonas aeruginosa.

Only consider ear swab for bacterial or fungal sensitivity if there is:
- Treatment failure or severe, recurrent, or chronic otitis externa.
- Ear canal occlusion due to swelling and debris, causing difficulty using topical treatments.
- Suspected spread of infection beyond external ear canal.

Reinforce self-care advice initially (Patient.info or NHS Ear Infections)
To aid recovery and reduce risk of future infection advise patient to:
- Avoid damage to external ear canal:
  - If ear wax is a problem the patient should seek advice about removing it.
  - Cotton buds or other objects should not be used to clean the ear canal.
- Keep the ears clean and dry by:
  - Keep shampoo, soap, and water out of the ear when bathing and showering - use ear plugs or cotton wool (with petroleum jelly).
  - Avoid swimming/water sports for at least 7–10 days during treatment.
  - Use ear plugs and/or a tight-fighting cap when swimming to prevent recurrence.
  - Use a hair dryer (lowest heat setting) to dry the ear canal after hair washing, bathing, or swimming.
- If allergic or has contact sensitivity to eardrops (e.g., neomycin), ear plugs, hearing aids, or earrings, avoid use, or use alternatives where available.
- Use analgesia such as paracetamol or ibuprofen for symptom and pain relief.
- Use **over-the-counter** acetic acid 2% ear drops or spray (≥ 12 years) morning, evening, and after swimming, showering, or bathing, for a maximum of 7 days.

Consider cleaning, or referring to ENT for cleaning, the external auditory canal ('aural toilet'), to enable topical treatments to be applied effectively.

Treatment of acute otitis externa
Reinforce self-care advice, including use of OTC acetic acid 2% ear drops or spray and consider 'aural toilet'.
Consider prescribing a topical antibiotic preparation **with or without** a topical corticosteroid for 7–14 days:
- Drug choice is guided by ototoxicity, cost, dosing frequency, and if the tympanic membrane is intact.
- Aminoglycoside ear drops are potentially toxic and should not be used in the presence of a perforation plus discharge for >10 days, without being reassessed. If there is a discharge an underlying perforation is likely and should be excluded. In many cases there is no underlying perforation and ear drops can be used for longer. If there is a history of recurrent discharge an underlying cholesteatoma should be excluded.
- An additional topical corticosteroid preparation may be of benefit if there is significant inflammation, erythema, and oedema in the ear canal.

Oral antibiotics are only indicated when there is evidence of spreading cellulitis (Cellulitis - Acute), signs of systemic infection or the patient is at increased risk of severe infection (immunocompromised, diabetic).
Arrange follow up to reassess if:
- Symptoms not improving within 48–72 hours or not fully resolved after 2 weeks of starting initial treatment.
- Symptoms are severe and/or there is cellulitis spreading beyond the external ear canal.
- The person is immunocompromised and at risk of severe infection.
- Ear wax impaction or stenosis of the ear canal which prevents the tympanic membrane being visualised.

Otitis externa not responding to treatment, with persistent pain after 5-7 days, refer urgently to an ENT specialist. Diabetic and immunocompromised patients are particularly susceptible to aggressive destruction of cartilage caused by Pseudomonas aeruginosa (Malignant Otitis Externa). If suspected, refer urgently to an ENT specialist.

Treatment of chronic otitis externa

Reinforce self-care advice, consider 'aural toilet' and/or arrange an ear swab for bacterial and fungal microscopy.

If suspected fungal infection, consider:

- Topical antifungal preparation (Fungal Ear Infection Patient leaflet)
- Clioquinol and a corticosteroid topical ear drop (both anti-fungal and anti-bacterial properties)
- Over-the-counter acetic acid 2% ear drops or spray (off label-indication, ≥12 years) for a maximum of 7 days.

If suspected bacterial infection treat as per acute otitis externa.

If no obvious bacterial or fungal infection, consider:

- Topical corticosteroid preparation.
- If symptoms persist despite topical corticosteroid, consider trial of topical anti-fungal.

Topical preparations:

Drug	Dosage	Duration	Comments
First Line			
Acetic Acid 2% spray or drops **(Available OTC)**	One spray at least three times a day. Maximum 2-3 hourly (≥12 years)	7 days	**As effective as topical antibiotics in mild otitis externa.**
SECOND LINE			
Corticosteroid preparations			
Prednisolone Sodium Phosphate 0.5% drops	2-3 drops every 2-3 hours. (Adult and child)	7 days	Reduce frequency when relief obtained
Betamethasone 0.1% drops	2-3 drops every 2-4 hours. (Adult)	7 days	Reduce frequency when relief obtained
Combined corticosteroid and antibiotic preparations			
Dexamethasone with Neomycin 0.5% and acetic acid 2% **(Otomize®)**	One spray three times a day. (Adult and children ≥2 years)	7 days	Contraindicated in perforated tympanic membrane and patent grommet as contains an aminoglycoside - unless advised by a specialist for treatment of obvious infection.
Dexamethasone with framycetin 0.5% and gramicidin 0.005% **(Sofradex®)**	2-3 drops every 3-4 hours. (Adult and child)	7 days	Contraindicated in perforated tympanic membrane and patent grommet as contains an aminoglycoside - unless advised by a specialist for treatment of obvious infection.
Hydrocortisone Acetate 1% with Gentamicin 0.3% **(Note - high cost)**	2-4 drops 4-5 times a day including a dose at bedtime. (Adult and child)	7 days	Contraindicated in perforated tympanic membrane and patent grommet as contains an aminoglycoside - unless advised by a specialist for treatment of obvious infection.
Antifungal preparations			
Clotrimazole 1% solution **(Available OTC)**	2-3 drops two to three times a day. (Adult and child)	For at least 14 days after infection resolution	Prescribe as solution, no specific ear drop preparation available.
Combined corticosteroid and antibiotic/antifungal preparations			
Flumetasone pivalate 0.02% + clioquinol 1%	2-3 drops twice a day. (Adult and children ≥2 years)	7-10 days	Previously branded as Locorten Vioform®
Antibiotic preparations			
Ciprofloxacin 0.2% (**Cetraxal®** UDV drops) *On specialist advice only*	Instil contents of ONE ampoule twice a day. (Adults and children ≥1year)	7 days	Previously used eye drops, now available as licensed ear drops 0.2%.

Oral antibiotics – only if signs of spreading cellulitis.

Antibiotic[1]	Dosage and duration
Flucloxacillin	See Cellulitis guideline for doses (APC Cellulitis)
In penicillin allergy	
Clarithromycin[4]	
Doxycycline[2]	
Erythromycin[3,4]	

[1] See BNF for appropriate use and dosing in specific populations, for example, hepatic impairment or renal impairment, and in pregnancy and breastfeeding.
[2] Doxycycline is not suitable for pregnant women
[3] Erythromycin is preferred in women who are pregnant.
[4] Withhold statins whilst on clarithromycin/erythromycin course.