Otitis media (acute): antimicrobial prescribing

**Non-antimicrobial treatments**
- Offer regular doses of paracetamol or ibuprofen for pain. Use the right dose for the age or weight of the child at the right time, and use maximum doses for severe pain.
- Consider eardrops containing an anaesthetic and an analgesic for pain if an immediate antibiotic is not given, and there is no eardrum perforation or otorrhoea.
- Evidence suggests that decongestants or antihistamines do not help symptoms.

**Evidence on antibiotics**
- Antibiotics make little difference to the number of children whose symptoms improve.
- Antibiotics make little difference to the number of children with recurrent infections, short-term hearing loss or perforated eardrum.
- Complications (such as mastoiditis) are rare with or without antibiotics.
- Possible adverse effects include diarrhoea and nausea.

**Groups who may be more likely to benefit from antibiotics**
- Children and young people with acute otitis media and otorrhoea (discharge following eardrum perforation).
- Children under 2 years with acute otitis media in both ears.

**March 2022**

---

**Otitis media (acute): antimicrobial prescribing**

**Evidence suggests that**
- do not help symptoms.

**If the child or young person:**
- is systemically very unwell, or
- has symptoms and signs of a more serious illness or condition, or
- has high risk of complications.

**Otorrhoea (discharge after eardrum perforation) in any child or young person**

**Under 2 years with infection in both ears?**

**Advise:**
- acute otitis media lasts about 3 days but can last up to 1 week.

**No**

- Offer regular doses of paracetamol or ibuprofen for pain.
- Consider eardrops containing an anaesthetic and an analgesic for pain.
- Consider no antibiotic or a back-up antibiotic prescription.

**Yes**

- Offer regular doses of paracetamol or ibuprofen for pain.
- Consider no antibiotic, a back-up antibiotic prescription or an immediate antibiotic.
- If an immediate antibiotic is not given, and there is no eardrum perforation or otorrhoea, consider eardrops containing an anaesthetic and an analgesic for pain.

**When no antibiotic given, advise:**
- antibiotic is not needed.
- seeking medical help if symptoms worsen rapidly or significantly, do not start to improve after 3 days or the child or young person becomes very unwell.

**With a back-up antibiotic prescription, advise:**
- antibiotic is not needed immediately.
- use prescription if no improvement in 3 days or symptoms worsen.
- seeking medical help if symptoms worsen rapidly or significantly, or the child or young person becomes very unwell.

**With an immediate antibiotic prescription, advise:**
- seeking medical help if symptoms worsen rapidly or significantly, or the child or young person becomes very unwell.

**Offer regular doses of paracetamol or ibuprofen for pain**

**Refer to hospital if:**
- severe systemic infection, or
- complications like mastoiditis.

**Consider no antibiotic or a back-up antibiotic prescription**

**Consider eardrops containing an anaesthetic and an analgesic for pain**

**Consider no antibiotic, a back-up antibiotic prescription or an immediate antibiotic**

**If an immediate antibiotic is not given, and there is no eardrum perforation or otorrhoea, consider eardrops containing an anaesthetic and an analgesic for pain**

**Reassess at any time if symptoms worsen rapidly or significantly, taking account of:**
- other possible diagnoses.
- any symptoms or signs suggesting a more serious illness or condition.
- previous antibiotic use, which may lead to resistant organisms.

**Advise:**
- acute otitis media lasts about 3 days but can last up to 1 week.

---

**Non-antimicrobial treatments**

- Offer regular doses of paracetamol or ibuprofen for pain. Use the right dose for the age or weight of the child at the right time, and use maximum doses for severe pain.
- Consider eardrops containing an anaesthetic and an analgesic for pain if an immediate antibiotic is not given, and there is no eardrum perforation or otorrhoea.
- Evidence suggests that decongestants or antihistamines do not help symptoms.

**Evidence on antibiotics**

- Antibiotics make little difference to the number of children whose symptoms improve.
- Antibiotics make little difference to the number of children with recurrent infections, short-term hearing loss or perforated eardrum.
- Complications (such as mastoiditis) are rare with or without antibiotics.
- Possible adverse effects include diarrhoea and nausea.

**Groups who may be more likely to benefit from antibiotics**

- Children and young people with acute otitis media and otorrhoea (discharge following eardrum perforation).
- Children under 2 years with acute otitis media in both ears.
### Otitis media (acute): antimicrobial prescribing

#### Choice of treatment: children and young people under 18 years

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Dosage and course length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eardrops containing an anaesthetic and an analgesic</td>
<td>Apply 4 drops two or three times a day for up to 7 days. Use only if an immediate oral antibiotic prescription is not given, and there is no eardrum perforation or otorrhoea.</td>
</tr>
<tr>
<td><strong>First choice oral antibiotic</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Phenazone 40 mg/g with lidocaine 10 mg/g | 1 to 11 months: 125 mg three times a day for 5 to 7 days  
1 to 4 years: 250 mg three times a day for 5 to 7 days  
5 to 17 years: 500 mg three times a day for 5 to 7 days |
| **Alternative first choice oral antibiotic for penicillin allergy or intolerance (for people who are not pregnant)** |                                                                                         |
| Clarithromycin                 | 1 month to 11 years:  
Under 8 kg: 7.5 mg/kg twice a day for 5 to 7 days  
8 to 11 kg: 12.5 mg twice a day for 5 to 7 days  
12 to 19 kg: 125 mg twice a day for 5 to 7 days  
20 to 29 kg: 187.5 mg twice a day for 5 to 7 days  
30 to 40 kg: 250 mg twice a day for 5 to 7 days  
or  
12 to 17 years: 250 mg to 500 mg twice a day for 5 to 7 days |
| **Alternative first choice oral antibiotic for penicillin allergy in pregnancy** |                                                                                         |
| Erythromycin                   | 8 to 17 years: 250 mg to 500 mg four times a day or 500 mg to 1,000 mg twice a day for 5 to 7 days |
| Erythromycin is preferred if a macrolide is needed in pregnancy, for example, if there is true penicillin allergy and the benefits of antibiotic treatment outweigh the harms. See the Medicines and Healthcare products Regulatory Agency (MHRA) Public Assessment Report on the safety of macrolide antibiotics in pregnancy. |
| **Second choice oral antibiotic (worsening symptoms on first choice taken for at least 2 to 3 days)** |                                                                                         |
| Co-amoxiclav                   | 1 to 11 months: 0.25 ml/kg of 125/31 suspension three times a day for 5 to 7 days  
1 to 5 years: 5 ml of 125/31 suspension three times a day or 0.25 ml/kg of 125/31 suspension three times a day for 5 to 7 days  
6 to 11 years: 5 ml of 250/62 suspension three times a day or 0.15 ml/kg of 250/62 suspension three times a day for 5 to 7 days  
or  
12 to 17 years: 250/125 mg three times a day or 500/125 mg three times a day for 5 to 7 days |
| **Alternative second choice oral antibiotic for penicillin allergy or intolerance** |                                                                                         |
| Consult local microbiologist   |                                                                                         |

1 See the BNF for children for appropriate use and dosing in specific populations, for example, hepatic impairment and renal impairment.  
2 The age bands apply to children of average size. In practice, the prescriber will use age bands along with other factors such as the severity of the condition and the child's size in relation to the average size of children of the same age. Doses given are by mouth using immediate-release medicines, unless otherwise stated.