Otitis media (acute): antimicrobial prescribing

**Self-care**
- Offer regular doses of paracetamol or ibuprofen to manage pain, with the right dose for age or weight at the right time and maximum doses for severe pain
- 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 ear drum
- 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 ear drum perforation)
- Children under 2 years with acute otitis media in both ears

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**Acute otitis media**

- **Otorrhoea (discharge after ear drum perforation) in any child or young person**
  - Offer regular doses of paracetamol or ibuprofen for pain
  - Consider no antibiotic or a back-up antibiotic prescription
- **Under 2 years with infection in both ears**
  - Offer regular doses of paracetamol or ibuprofen for pain
  - Consider no antibiotic or a back-up antibiotic prescription

**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

**Advise:**
- acute otitis media lasts about 3 days but can last up to 1 week
- manage symptoms with self-care

**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

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

**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

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

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Dosage and course length</th>
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<tbody>
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<td><strong>First choice</strong></td>
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| Amoxicillin                 | 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 choices for penicillin allergy or intolerance** |                                                |
| 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: 62.5 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 |
| Erythromycin                | 1 month to 1 year: 125 mg four times a day or 250 mg twice a day for 5 to 7 days  
2 to 7 years: 250 mg four times a day or 500 mg twice a day for 5 to 7 days  
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 |
| **Second choice (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  
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 for penicillin allergy or intolerance** | Consult local microbiologist |

1 See [BNF for children](https://www.gov.uk/government/collections/antibiotics-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 and, in practice, the prescriber will use age bands in conjunction 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.

3 Erythromycin is preferred in young women who are pregnant.

When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.