



A summary of prescribing recommendations from NICE guidance

This edition includes two antimicrobial prescribing guidelines:

1. Bronchiectasis (acute exacerbation) and 2. Cough (acute)

1. Bronchiectasis (acute exacerbation): antimicrobial prescribing

NICE NG117; 2018

This guideline sets out an antimicrobial prescribing strategy for managing and preventing acute exacerbations of bronchiectasis (non-cystic fibrosis). It aims to optimise antibiotic use and reduce antibiotic resistance.

Treatment and management

- ◆ Be aware that an acute exacerbation of bronchiectasis is a sustained worsening of symptoms from a person's stable state.
- ◆ Obtain a sputum sample from people with an acute exacerbation of bronchiectasis and send for culture and susceptibility testing.

Antibiotic treatment

- ◆ Offer an antibiotic – see **Box 1**.
- ◆ When choosing an antibiotic, take account of:
 - severity of symptoms,
 - previous exacerbation and hospital admission history, and risk of developing complications,
 - previous sputum culture and susceptibility results.
- ◆ When results of sputum culture and susceptibility testing are available:
 - review the choice of antibiotic, **AND**
 - only change the antibiotic according to susceptibility results if bacteria are resistant and symptoms are not already improving (using a narrow-spectrum antibiotic wherever possible).
- ◆ When prescribing an antibiotic, give advice about:
 - possible adverse effects of antibiotics, particularly diarrhoea,
 - seeking medical help if symptoms worsen rapidly or significantly at any time, or the person becomes systemically very unwell.

Box 1: Choice of antibiotic for treating an acute exacerbation of bronchiectasis

- ◆ Take account of local antimicrobial resistance data and follow the tables in the NICE 3-page [visual summary](#):
 - Table 1 for adults ≥ 18 years,
 - Table 2 for children and young people < 18 years.
- ◆ Give oral antibiotics first line if the person can take oral medicines, and the severity of their condition does not require intravenous antibiotics.
- ◆ Review intravenous antibiotics by 48 hours and consider stepping down to oral antibiotics where possible.

Reassessment

- ◆ Reassess people with an acute exacerbation of bronchiectasis if their symptoms worsen rapidly or significantly at any time, taking account of:
 - other possible diagnoses, such as pneumonia,
 - any symptoms or signs suggesting a more serious illness or condition, such as cardiorespiratory failure or sepsis,
 - previous antibiotic use, which may have led to resistant bacteria.

Referral and seeking specialist advice

- ◆ Refer people with an acute exacerbation of bronchiectasis to hospital if they have any symptoms or signs suggesting a more serious illness or condition (for example, cardiorespiratory failure or sepsis).
- ◆ Seek specialist advice for people with an acute exacerbation of bronchiectasis if they:
 - have symptoms that are not improving with repeated courses of antibiotic treatment, **OR**
 - have bacteria that are resistant to oral antibiotics, **OR**
 - cannot take oral medicines (to explore locally available options for giving intravenous antibiotics at home or in the community, rather than in hospital, where this is appropriate).

Preventing acute exacerbations of bronchiectasis (non-cystic fibrosis)

- ◆ Do not routinely offer antibiotic prophylaxis to prevent acute exacerbations of bronchiectasis. Give advice about seeking medical help if symptoms of an acute exacerbation develop.
- ◆ Seek specialist advice about options for preventing exacerbations in people with repeated acute exacerbations, which may include a trial of antibiotic prophylaxis.
- ◆ Only start a trial of antibiotic prophylaxis (with oral or inhaled antibiotics) in people with repeated acute exacerbations on the advice of a specialist. To ensure shared decision-making, discuss the following with the person:
 - potential benefits of antibiotics for reducing exacerbations (taking into account the uncertain evidence of benefit for inhaled antibiotics),
 - risks of antimicrobial resistance with long-term antibiotics, which may mean fewer effective antibiotics for future exacerbations,
 - possible adverse effects of long-term antibiotics, such as:
 - ❖ diarrhoea, cardiac events, hearing loss or tinnitus with macrolide antibiotics,
 - ❖ bronchospasm with inhaled antibiotics.
 - possible interactions of macrolide antibiotics with other medicines,
 - need to regularly review prophylaxis.

Further resource

[NICE \(NG15\) - Antimicrobial stewardship](#)

Recommendations – wording used such as 'offer' and 'consider' denote the [strength of the recommendation](#).

Drug recommendations – the guideline assumes that prescribers will use a drug's [Summary of Product Characteristics \(SPC\)](#) to inform treatment decisions.

Please go to www.nice.org.uk to check for any recent updates to this guidance.

2. Cough (acute): antimicrobial prescribing

NICE NG120; 2019

This guideline sets out an antimicrobial prescribing strategy for acute cough associated with an upper respiratory tract infection or acute bronchitis in adults, young people and children. It aims to limit antibiotic use and reduce antibiotic resistance.

Treatment and management

- ◆ Be aware that acute cough:
 - is usually self-limiting and gets better within 3 to 4 weeks without antibiotics,
 - is most commonly caused by a viral upper respiratory tract infection, such as cold or flu,
 - can also be caused by acute bronchitis, a lower respiratory tract infection, which is usually a viral infection but can be bacterial,
 - can also have other infective or non-infective causes.
- ◆ For children <5 years with acute cough and fever follow [NICE CG160 - Fever in under 5s](#).
- ◆ For adults with acute cough and suspected pneumonia follow [NICE CG191 - Pneumonia in adults](#).
- ◆ Give general advice to people about:
 - the usual course of acute cough (lasts up to 3 to 4 weeks),
 - how to manage their symptoms with self-care – see **Box 2**,
 - when to seek medical help e.g. if symptoms worsen rapidly or significantly, do not improve after 3 to 4 weeks or the person becomes systemically very unwell.
- ◆ Do not offer the following treatments to treat an acute cough associated with upper respiratory tract infection or acute bronchitis:
 - mucolytic (e.g. acetylcysteine or carbocysteine),
 - oral or inhaled bronchodilator (e.g. salbutamol) unless the person has an underlying airways disease (e.g. asthma),
 - oral or inhaled corticosteroid unless the person has an underlying airways disease (e.g. asthma).

Box 2: Self-care

- ◆ Be aware that some people may wish to try the following self-care treatments, which have limited evidence of some benefit for the relief of cough symptoms:
 - Honey (in people >1 year)
 - Pelargonium (a herbal medicine; in people ≥12 years)
 - Over-the-counter cough medicines containing the expectorant guaifensin (in people ≥ 12 years)
 - Over-the-counter cough medicines containing cough suppressants, except codeine (in people ≥ 12 years who do not have a persistent cough, such as in asthma, or excessive secretions).
- ◆ Be aware that limited evidence suggests that antihistamines, decongestants and codeine-containing cough medicines do not help cough symptoms.

Box 3: Choice of antibiotic for acute cough

- ◆ When prescribing antibiotics for an acute cough follow NICE 2-page [visual summary](#):
 - Table 1 for adults ≥18 years,
 - Table 2 for children and young people <18 years.
- ◆ When an antibiotic prescription is given, give advice about possible adverse effects, particularly diarrhoea and nausea.
- ◆ When a back-up antibiotic prescription is given, give advice about:
 - An antibiotic not being needed immediately, **AND**
 - Using the back-up prescription if symptoms worsen rapidly or significantly at any time.

Antibiotic treatment

Acute cough associated with upper respiratory tract infection

- ◆ Do not offer antibiotics to people who are not systemically very unwell or at higher risk of complications.
- ◆ Give advice about why an antibiotic is not needed.

Acute cough associated with acute bronchitis

- ◆ Do not routinely offer antibiotics to people who are not systemically very unwell or at higher risk of complications.
- ◆ Be aware that antibiotics:
 - do not improve the overall clinical condition of people with acute bronchitis,
 - make little difference to how long symptoms of acute bronchitis last,
 - have possible adverse effects, particularly diarrhoea and nausea.
- ◆ For adults who have had point of care C-reactive protein test after clinical diagnosis of pneumonia has been ruled out, follow recommendations on prescribing antibiotics according to C-reactive protein results in [NICE CG191 - Pneumonia in adults](#).
- ◆ When no antibiotic prescription is given, give advice about why an antibiotic is not needed.

Acute cough in people who are systemically very unwell

- ◆ Offer an immediate antibiotic (see **Box 3**) for people identified at face-to-face clinical examination as systemically very unwell.

Acute cough in people at higher risk of complications

- ◆ For people identified at a face-to-face clinical examination as at higher risk of complications, consider:
 - an immediate antibiotic prescription – see **Box 3**, **OR**
 - a back-up antibiotic prescription - see **Box 3**.
- ◆ Be aware that people with an acute cough may be at higher risk of complications if they:
 - have a pre-existing comorbidity, such as significant heart, lung, renal, liver or neuromuscular disease, immunosuppression or cystic fibrosis, **OR**
 - are young children who were born prematurely, **OR**
 - are older than 65 years with ≥2 of the following criteria, or older than 80 years with ≥1 of the following criteria:
 - ❖ hospitalisation in previous year,
 - ❖ type 1 or type 2 diabetes,
 - ❖ history of congestive heart failure,
 - ❖ current use of oral corticosteroids.

Referral and seeking specialist advice

- ◆ Refer people to hospital, or seek specialist advice on further investigation and management, if they have symptoms or signs suggesting a more serious illness or condition (e.g. sepsis, pulmonary embolism or lung cancer).

Reassessment

- ◆ Reassess people with an acute cough if their symptoms worsen rapidly or significantly, taking account of:
 - alternative diagnoses, such as pneumonia,
 - any symptoms or signs suggesting a more serious illness or condition, such as cardiorespiratory failure or sepsis
 - previous antibiotic use, which may have led to resistant bacteria.

Further resource

[NICE \(NG15\) - Antimicrobial stewardship](#)

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