

Antibiotics for COPD (acute exacerbation)

Consider an antibiotic, but only after taking into account prescribing considerations

Some people at risk of exacerbations may have antibiotics to keep at home as part of their exacerbation action plan (see the NICE guideline on COPD in over 16s)

When an antibiotic is given, advise:

- possible adverse effects of antibiotics, particularly diarrhoea
- symptoms may not be fully resolved by completion of antibiotic course
- seeking medical help if symptoms worsen rapidly or significantly, or do not improve within 2 to 3 days (or other agreed time), or the person becomes systemically very unwell

When no antibiotic given, advise:

- antibiotic is not currently needed
- seeking medical help without delay if symptoms worsen rapidly or significantly, do not improve in an agreed time, or the person is systemically very unwell

If sputum sample sent for testing, when results available:

- review antibiotic choice
- only change antibiotic if bacteria resistance and symptoms not improving

Reassess at any time if symptoms worsen rapidly or significantly, taking account of:

- other possible diagnoses, such as pneumonia
- symptoms or signs of something more serious, such as cardiorespiratory failure or sepsis
- previous antibiotic use, which may have led to resistant bacteria

Send sputum sample for testing if symptoms have not improved after antibiotics

Background

- An acute exacerbation of COPD is a sustained worsening of symptoms from a person's stable state
- A range of factors (including viral infections and smoking) can trigger an exacerbation
- Many exacerbations (including some severe exacerbations) are not caused by bacterial infections so will not respond to antibiotics

Prescribing considerations

When considering antibiotics, take into account:

- the severity of symptoms, particularly sputum colour changes and increases in volume or thickness beyond the person's normal day-to-day variation
- whether they may need to go into hospital for treatment (see the NICE guideline on COPD)
- previous exacerbation and hospital admission history, and the risk of developing complications
- previous sputum culture and susceptibility results
- the risk of antimicrobial resistance with repeated courses of antibiotics

Give oral antibiotics first line if possible

Refer to hospital if a severe systemic infection is present or in line with NICE's guidelines on COPD and sepsis
Seek specialist advice if:

- symptoms do not improve with repeated courses of antibiotics, or
- bacteria are resistant to oral antibiotics, or
- the person cannot take oral medicines (to explore giving intravenous antibiotics at home or in the community if appropriate)