

Acute Cough Illness (Acute Bronchitis)

Acute bronchitis is an acute respiratory infection with a normal chest radiograph that is manifested by cough with or without phlegm production that lasts for up to 3 weeks (*Chest* 2006;129:95S-103S).

Principles apply to the appropriate treatment of cough illness lasting less than 3 weeks in otherwise healthy adults.

Refer to acute cough illness as a “chest cold” to reduce patient expectation for antibiotics (*Am J Med* 2000;108-83).

Background

- Greater than 90% of cases of acute cough illness are non-bacterial.
 - Viral etiologies include influenza, parainfluenza, RSV, and adenovirus.
 - Bacterial agents include *Bordetella pertussis*, *Mycoplasma pneumoniae*, and *Chlamydia pneumoniae*.
- The presence of purulent sputum is not predictive of bacterial infection.
 - >95% of patients with purulent sputum do not have pneumonia (*J Chron Di* 1984; 37:215).

Diagnosis

- Evaluation should focus on excluding severe illness, particularly pneumonia.

Clinical Assessment for Pneumonia

- Pneumonia is unlikely if all of the following findings are absent (*JAMA* 1997;278:1440).

Sign	Abnormal Finding
Fever	≥ 38°C
Tachypnea	≥ 24 breaths/min
Tachycardia	≥ 100 beats/min
Evidence of consolidation on chest exam	rales, egophony, fremitus

- Consider chest radiograph for patients with any of these findings or cough lasting >3 weeks.

Treatment

- Empiric antibiotic treatment is **not** indicated for acute bronchitis.
 - Meta-analyses of randomized, controlled trials all concluded that routine antibiotic treatment is not justified (*BMJ* 1998;316:906; *Chest* 2006;129:95S-103S).
- If influenza therapy is considered, it should be initiated within 48 hours of symptom onset for clinical benefit.
 - During the 2005-06 Flu season CDC recommends that neither amantadine nor rimantadine be used for treatment or prevention of influenza A infections because of high levels of resistance (*MMWR* 2006 Jan 20;55(2):44-6).
 - Neuramidase inhibitors such as oseltamivir or zanamivir have activity against influenza A and B viruses.
 - Antiviral therapy reduces symptom duration by approximately 1 day.
<http://www.cdc.gov/flu/professionals/treatment/>
- If pertussis is suspected, empiric therapy may be initiated while obtaining a diagnostic test for confirmation.
 - Antibiotic treatment decreases transmission but has little effect on symptom resolution.
- Over-the-counter cough suppressants have limited efficacy in relief of cough due to acute bronchitis (*Chest* 2006; 129:95S-103S).

TIPS TO REDUCE ANTIBIOTIC USE

- Tell patients that antibiotic use increases the risk of an antibiotic-resistant infection.
- Identify and validate patient concerns.
- Recommend specific symptomatic therapy.
- Spend time answering questions and offer a contingency plan if symptoms worsen.
- Provide patient education materials on antibiotic resistance.
- REMEMBER: Effective communication is more important than an antibiotic for patient satisfaction.
- See www.cdc.gov/getsmart or contact your local health department for more information and patient education materials.

Key Reference

Gozaes R et al. Principles of appropriate antibiotic use for treatment of uncomplicated acute bronchitis: Background. *Annals of Internal Medicine* 2001; 134(6):521-90.

