

# 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                                   | ≥ 38C                     |
| 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](http://www.cdc.gov/getsmart) or contact your local health department for more information and patient education materials.

## Key Reference

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

