Acute upper respiratory infections are the most frequent reasons for seeking ambulatory medical attention in the United States. **Nearly all of these infections are caused by viruses, against which antibiotics are ineffective**; yet these illnesses are associated with up to 75 percent of the total antibiotic prescriptions written in the U.S. each year.

The diagnosis of upper respiratory tract infection should be used to denote an acute infection in which sinus, pharyngeal, and lower airway symptoms, although frequently present, are not prominent. These infections are predominantly viral in origin, and complications are rare. When symptoms are severe, and particularly when they are accompanied by muscle aches and fatigue, influenza and parainfluenza infections are the most common causes, whereas rhinoviruses predominate when symptoms are mild. Most cases of uncomplicated upper respiratory tract infection in adults resolve spontaneously. The duration of illness typically is 1 to 2 weeks, and most patients feel much better within the first week. Coughs can sometimes last up to 6 weeks. Yellow to green mucous secretions from the nares or throat (commonly observed in patients with uncomplicated upper respiratory tract infection) predict neither bacterial infection nor benefit from antibiotic treatment. A small portion of upper respiratory infections become complicated by bacterial sinusitis or pneumonia.

A multitude of different viruses and, on occasion, bacteria may cause this illness. **Antibiotic treatment for an upper respiratory tract infection is almost always inappropriate because the vast majority of the time it has a nonbacterial cause.**

The need to decrease excess antibiotic use in ambulatory practice has been fueled by the epidemic increase in antibiotic–resistant *Streptococcus pneumoniae*. Emerging antibiotic resistance has been inextricably linked to the overuse and misuse of antibiotics. It will be the most significant infectious disease problem of the coming decade. **The appropriate use of antibiotics is not only a public health priority; it constitutes the best care for your patient.** Excessive and frequent use of unnecessary antibiotics leads to increased incidence of allergic drug reactions with attendant significant morbidity and mortality. Prescriptions that are not needed increase patients’ out-of-pocket costs. It is estimated that 50% of antibiotic prescriptions are not needed, totaling more than $3 billion in wasted spending.

Studies have shown that, although patients frequently expect antibiotics for upper respiratory infections, their satisfaction with their physician is not dependent on receiving antibiotics, but rather on how well the physician explains the appropriateness of the recommended treatment. For uncomplicated cases of upper respiratory infection instruct the patient to treat symptomatically. In addition, discuss with the patient the lack of benefit of antibiotics and the risks related to antibiotic use.
Pharmaceutical symptom control therapies that may be effective in adults for treatment of common cold symptoms

- Analgesics should be used for relief of headaches, ear pain, muscle/joint pain, and general malaise.
- Antihistamine/decongestant combinations may have some benefit; utilizing these agents independently (i.e. only an antihistamine) is less likely to be beneficial.
  - Use of a decongestant (i.e. pseudoephedrine or phenylephrine) as a solo medication can provide mild relief for rhinitis symptoms.
- Intranasal products, specifically cromolyn or ipratropium, can improve the nasal symptoms associated with a common cold. *Note, ipratropium improves rhinorrhea and sneezing, but does not affect nasal congestion.*
- Strong data is lacking for use of dextromethorphan or expectorants, such as guaifenesin for cough in a common cold patient; however, the risks of using these medications in otherwise healthy patients is low, thus it would be reasonable to support a patient’s use of these products short-term for symptom relief.
- Codeine does not have consistent benefit in patients with acute cough, this agent is best avoided for cough control associated with the common cold.
- Uniform recommendations for zinc aren’t available. Caution is advised however, when using zinc-containing nasal spray products, such as Zicam, because of the risk of anosmia (loss of sense of smell). Oral formulations can also cause nausea and alter taste.
  - Utilization of zinc lozenges or vitamin C supplements don’t appear to be overtly harmful; expectations should be modest at best for their ability to decrease the severity of cold symptoms or shorten cold duration. In healthy patients, initiation of zinc within 24 hours of symptom onset may reduce duration of common cold symptoms.

References
