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Treatment/Management of Upper Respiratory Tract Infection (URI) in Adults

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Upper respiratory tract infections (URI), which include acute rhinosinusitis, pharyngitis, acute bronchitis, and the common cold, are the most common reason for acute outpatient physician visits. Antibiotics are often inappropriately prescribed for patients with URI, which further contributes to the emergence of antibiotic resistance and increases risk for adverse drug events. The table below summarizes recommendations from existing guidelines for the proper management of URI.

Illness/pathogen	Indications for antibiotic therapy	Recommended antibiotic regimen	Other management considerations	Management strategies to avoid
Acute rhinosinusitis[1,2,3] Viral pathogens (≥ 90%), *Streptococcus pneumoniae, Haemophilus influenza, Moraxella catarrhalis*	Most cases resolve without abx Give abx ONLY if any of the following: • Persistent sx lasting for ≥ 10 days without improvement • Severe sx or fever ≥ 39°C + purulent nasal discharge or facial pain lasting for 3-4 days • Worsening sx (new fever, headache, increased nasal discharge) following typical viral URI that lasted 5-6 days	***First-line therapy*** • Amoxicillin/clavulanate 500 mg/125 mg PO TID or 875 mg/125 mg PO BID ***Alternative therapy*** • Doxycycline 100 mg PO BID • Levofloxacin 500 mg PO daily • Moxifloxacin 400 mg PO daily Duration of therapy: 5 – 7 days	• Recommended adjunctive treatment: intranasal saline irrigation, intranasal corticosteroids • If clinically worse despite 72 hours or no improvement after 3-5 days of abx, evaluate for resistant pathogens, noninfectious etiology, structural abnormality, or other causes	• Macrolides, TMP/SMX, cephalosporins (high rates of *S. pneumoniae resistance*) • Topical or oral decongestants and/or antihistamines have shown no benefit
Pharyngitis[2,3,4] *Streptococcus pyogenes (*group A *Streptococcus),* routine respiratory viruses	• Confirm diagnosis with throat culture or swab for rapid antigen detection test (RADT). Abx NOT recommended if RADT results are negative. • Usual sx: sudden onset sore throat, fever, headache, tonsillopharyngeal inflammation, tonsillopharyngeal exudates, scarlatiniform rash, lymphadenitis • Viral sx: rhinorrhea, cough, oral ulcers, and/or hoarseness – abx NOT indicated	***First-line therapy*** • Penicillin V 250 mg PO QID or 500 mg PO BID x 10 days • Amoxicillin 50 mg/kg daily x 10 days • Penicillin G 1,200,000 U IM x 1 ***Alternative therapy*** • Cephalexin 500 mg PO BID x 10 days • Cefadroxil 1000 mg PO daily x 10 days • Clindamycin 300 mg PO TID x 10 days • Azithromycin 500 mg PO daily x 5 days • Clarithromycin 250 mg PO BID x 10 days	• Recommended adjunctive treatment: acetaminophen or NSAID	• Corticosteroids • Tonsillectomy is not recommended to reduce frequency of pharyngitis • Abx not recommended for chronic group A *Streptococcus* carriers
Acute uncomplicated bronchitis[3,5,6,7,8] Viral pathogens (≥ 90%), *Bordetella pertussis, Chlamydia pneumoniae, Mycoplasma pneumoniae*	• Abx NOT recommended, regardless of cough duration. Abx are reserved for acute exacerbation of chronic bronchitis, COPD, pneumonia • Usual sx: acute cough ± sputum production, dyspnea, nasal congestion, headache, fever	Abx NOT indicated in absence of pneumonia If pertussis is confirmed/suspected because of persistent cough w/sx of paroxysmal cough, whooping cough, and post-tussive emesis or recent pertussis exposure: • Azithromycin 500 mg PO x 1 day, then 250 mg PO daily x 4 days	• Symptomatic therapy options: dextromethorphan or guaifenesin • Colored sputum does not indicate bacterial infection	• Ibuprofen, acetaminophen, antihistamines, codeine, beta-2 agonists showed no benefit in reducing symptoms
Nonspecific URI/ Common cold[3,7,9] Viral pathogens	• Abx NOT indicated • Usual sx: low-grade fever, cough, rhinorrhea, nasal congestion, post-nasal drip, sore throat, headache, malaise	Abx NOT indicated	• Symptomatic therapy options: Pseudoephedrine or phenylephrine combined w/antihistamine, NSAID	• Antihistamine monotherapy, intranasal corticosteroids, nasal saline irrigation not shown to be efficacious

Sx = symptoms, abx = antibiotic, TMP/SMX = trimethoprim/sulfamethoxazole, NSAID = non-steroidal anti-inflammatory drug

References

1. Chow AW, Benninger MS, Brook I, Brozek JL, Goldstein EJ, Hicks LA, Pankey GA, Seleznick M, Volturo G, Wald ER, File TM Jr; Infectious Diseases Society of America. IDSA clinical practice guideline for acute bacterial rhinosinusitis in children and adults. Clin Infect Dis. 2012 Apr;54(8):e72-e112.
2. Wong DM, Blumberg DA, Lowe LG. Guidelines for the use of antibiotics in acute upper respiratory tract infections. Am Fam Physician. 2006 Sep 15;74(6):956-66.
3. Centers for Disease Control and Prevention. Adult Treatment Recommendations for Antibiotic Prescribing and Use in Doctor's Offices. https://www.cdc.gov/antibiotic-use/community/for-hcp/outpatient-hcp/adult-treatment-rec.html. Accessed November 3, 2017.
4. Shulman ST, Bisno AL, Clegg HW, Gerber MA, Kaplan EL, Lee G, Martin JM, Van Beneden C; Infectious Diseases Society of America. Clinical practice guideline for the diagnosis and management of group A streptococcal pharyngitis: 2012 update by the Infectious Diseases Society of America. Clin Infect Dis. 2012 Nov 15;55(10):e86-102.
5. Kinkade S, Long NA. Acute Bronchitis. Am Fam Physician. 2016 Oct 1;94(7):560-565.
6. Wenzel RP, Fowler AA 3rd. Clinical practice. Acute bronchitis. N Engl J Med. 2006 Nov 16;355(20):2125-30.
7. Harris AM, Hicks LA, Qaseem A; High Value Care Task Force of the American College of Physicians and for the Centers for Disease Control and Prevention. Appropriate Antibiotic Use for Acute Respiratory Tract Infection in Adults: Advice for High-Value Care From the American College of Physicians and the Centers for Disease Control and Prevention. Ann Intern Med. 2016 Mar 15;164(6):425-34.
8. Irwin RS, Baumann MH, Bolser DC, Boulet LP, Braman SS, Brightling CE, Brown KK, Canning BJ, Chang AB, Dicpinigaitis PV, Eccles R, Glomb WB, Goldstein LB, Graham LM, Hargreave FE, Kvale PA, Lewis SZ, McCool FD, McCrory DC, Prakash UBS, Pratter MR, Rosen MJ, Schulman E, Shannon JJ, Hammond CS, Tarlo SM. Diagnosis and management of cough executive summary: ACCP evidence-based clinical practice guidelines. Chest. 2006 Jan;129(1 Suppl):1S-23S.
9. Fashner J, Ericson K, Werner S. Treatment of the common cold in children and adults. Am Fam Physician. 2012 Jul 15;86(2):153-9.