

Endorsing Organizations

- American Academy of Pediatrics, California District
- American Academy of Urgent Care Medicine
- Association of California Nurse Leaders
- California Academy of Family Physicians
- California Academy of Physician Assistants
- California Association of Nurse Practitioners
- California Pharmacists Association
- California Society of Health-System Pharmacists
- Urgent Care Association of America

Supporting Organizations

- Aetna Health of California
- Blue Cross of California
- Blue Shield of California
- CalOptima
- Care1st Health Plan
- Health Net of California
- Health Plan of San Joaquin
- Inland Empire Health Plan
- Kaiser Permanente
- L.A. Care Health Plan
- Molina Healthcare
- National Medical Health Card Systems, Inc.
- Santa Barbara Regional Health Authority

Over-the-Counter & Home Care Treatment for Viral Infections

Antibiotic treatment does not cure viral infections. Antibiotics can be harmful if they are given when not needed. The treatments recommended below may help your patients feel better while their bodies' own defenses are defeating the viruses.

Certain OTC medications (including antihistamines, expectorants, antitussives, and decongestants) have been shown to reduce cold symptoms in adolescents and adults. These medications should not be recommended for children < 6 years of age given the lack of proven benefit and the potential for adverse effects.

Symptoms	Home Remedies	Over-the-Counter Generic Name & Brand Name Examples
Fever, Aches and Pain	<ul style="list-style-type: none"> Cool compress Bed rest Heating pad on sore muscles 	<p>Analgesics</p> <ul style="list-style-type: none"> Acetaminophen (Children's Tylenol) Ibuprofen (Children's Motrin, Advil, Nuprin) Naproxen (Aleve)
Cough or Sore Throat	<ul style="list-style-type: none"> Drink more fluids Room humidifier Gargle (warm salt water) Avoid Smoke 	<p>Expectorant</p> <ul style="list-style-type: none"> Guaifenesin (Robitussin Chest Congestion, Children's Mucinex) <p>Antitussives</p> <ul style="list-style-type: none"> Dextromethorphan (Delsym, Robitussin Pediatric Cough)
Stuffy or Runny Nose	<ul style="list-style-type: none"> Steam inhalation Saline nose drops or spray For red, raw nose, dab on petroleum jelly or salve or use tissues with lotion 	<p>Decongestants</p> <ul style="list-style-type: none"> Pseudoephedrine* (Children's Sudafed) Oxymetazoline (Afrin) Phenylephrine (Neo-Synephrine, Sudafed PE) <p>Antihistamines</p> <ul style="list-style-type: none"> Diphenhydramine (Children's Benadryl) Chlorpheniramine (Chlor-Trimeton) Loratadine (Dimetapp ND, Alavert, Claritin) Clemastine (Tavist Allergy) <p><i>*Behind-the-counter medication. Must be purchased from pharmacist.</i></p>

Antiviral Therapies for Influenza

For children over one year of age, oseltamivir and zanamivir may be given within 48 hours of the onset of flu symptoms and can reduce the duration of uncomplicated influenza A and influenza B.

This compendium was designed to summarize appropriate antibiotic treatment of common pediatric outpatient infections. It is based on guidelines and recommendations from leading medical experts and professional organizations in the US.

This guideline summary is updated annually.

Reference Articles

Otitis Media:

1. Ganiats, T., et. al., Diagnosis and Management of Acute Otitis Media. PEDIATRICS, 2004; 113: 1451-1465. CLINICAL PRACTICE GUIDELINE.

Acute Bacterial Sinusitis:

1. The Sinus and Allergy Health Partnership. Antimicrobial Treatment Guidelines for Acute Bacterial Rhinosinusitis. Executive Summary. SUPPLEMENT OTOLARYNGOLOGY-HEAD AND NECK SURGERY, 2004; 130: 1-45.

2. Piccirillo, JF., Clinical Practice. Acute Bacterial Sinusitis. N ENGL J MED. 2004 Aug 26; 351 (9): 902-10.

3. Subcommittee on Management of Sinusitis and Committee on Quality Improvement, Clinical Practice Guideline: Management of Sinusitis. PEDIATRICS, 2001; 108: 798-808.

4. O'Brien, K., et. al., Acute Sinusitis – Principles of Judicious Use of Antimicrobial Agents. PEDIATRICS, 1998, 101: 174-177.

Pharyngitis:

1. Linder J., et. al., Antibiotic Treatment in Children With Sore Throat. JAMA, November 9, 2005; 294: 2315-2322.

2. Institute for Clinical Systems Improvement. Acute Pharyngitis Health Care Guideline. Executive Summary. www.ICSI.org. May 2005.

3. Schwartz, B., et. al., Pharyngitis – Principles of Judicious Use of Antimicrobial Agents. PEDIATRICS, 1998; 101: 171-174.

Nonspecific Cough Illness/Bronchitis:

1. O'Brien, K., et. al., Cough Illness/Bronchitis Principles of Judicious Use of Antimicrobial Agents. PEDIATRICS, 1998; 101: 178-181.

Bronchiolitis/NonSpecific URI:

1. Colgan, R., Appropriate Antimicrobial Prescribing: Approaches that Limit Antibiotic Resistance. AMERICAN FAMILY PHYSICIAN, 2001; 64: 999-1004.

2. Dowell, S., et. al., Appropriate Use of Antibiotics for URIs in Children: Part II. Cough, Pharyngitis and the Common Cold. AMERICAN FAMILY PHYSICIAN, 1998; 58: 1335-1342.

3. Dowell, S., et. al., Principles of Judicious Use of Antimicrobial Agents for Pediatric Upper Respiratory Tract Infections. PEDIATRICS, 1998; 101: 163-165.

4. Kelly L.F., Pediatric Cough and Cold Preparations, Pediatr Rev, 2004; 25;115-123.

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www.aware.md



AWARE is a project of the California Medical Association Foundation, in collaboration with a number of clinical, public health and consumer organizations designed to increase appropriate antibiotic prescribing and lower antibiotic resistance in California.

Acute Respiratory Tract Infection Guideline Summary

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Alliance Working for Antibiotic Resistance Education

CMA Foundation AWARE Project Pediatric Clinical Practice Guidelines Compendium Summary

Illness	Indications for Antibiotic Treatment	Pathogen	Antimicrobial Therapy	Antibiotic	Organizational Guidelines Reviewed
Otitis Media	<p>When to Treat with an Antibiotic - Acute Otitis Media:</p> <ol style="list-style-type: none"> Recent, usually abrupt, onset of signs and symptoms of middle-ear inflammation and effusion AND Presence of middle-ear effusion that is indicated by any of the following: <ol style="list-style-type: none"> Bulging of the tympanic membrane Limited or absent mobility of tympanic membrane Air fluid level behind the tympanic membrane Otorrhea AND Signs or symptoms of middle-ear inflammation as indicated by either: <ol style="list-style-type: none"> Distinct erythema of the tympanic membrane OR Distinct otalgia [discomfort clearly referable to the ear(s) that interferes with or precludes normal activity or sleep] 	<p><i>Streptococcus pneumoniae</i></p> <p>nontypeable <i>Haemophilus influenzae</i></p> <p><i>Moraxella catarrhalis</i></p>	<p>Antibiotic Duration: 7-10 days (5 days for azithromycin)</p> <p>Age Group:</p> <ol style="list-style-type: none"> < 6 mo: antibiotics 6 mo - 2 yrs: antibiotics if diagnosis certain; antibiotics if diagnosis uncertain & severe illness > 2 yrs: antibiotics if diagnosis certain and severe illness <p>Analgesics & Antipyretics: Always assess pain. If pain is present, add treatment to reduce pain. <i>Oral:</i> ibuprofen/acetaminophen (may use acetaminophen with codeine for moderate-severe pain) <i>Topical:</i> Benzocaine (> 5 years of age).</p>	<p>1st Line:</p> <ul style="list-style-type: none"> High dose amoxicillin (80-90 mg/kg/day) High dose amoxicillin/clavulanate (80-90 mg/kg/day of amoxicillin component) if severe illness or additional coverage desired <p>Alternatives: Non-anaphylactic penicillin allergy</p> <ul style="list-style-type: none"> Cefdinir, cefpodoxime, or cefuroxime <p>Severe penicillin allergy</p> <ul style="list-style-type: none"> Azithromycin or clarithromycin <p>Unable to tolerate p.o. antibiotic</p> <ul style="list-style-type: none"> Ceftriaxone 	<p>American Academy of Pediatrics (AAP)</p> <p>Centers for Disease Control and Prevention (CDC)</p> <p>American Academy of Family Physicians (AAFP)</p>
	<p>When NOT to Treat with an Antibiotic: Otitis Media with Effusion.</p>				
Acute Bacterial Sinusitis	<p>When to Treat with an Antibiotic: Diagnosis of acute bacterial sinusitis may be made with symptoms of viral URI (nasal discharge or daytime cough not improved after 10 days, severe illness with fever, purulent nasal discharge, facial pain) not improving after 10 days or worse after 5-7 days.</p> <p>Diagnosis may include some or all of the following symptoms or signs: Nasal drainage, nasal congestion, facial pressure/pain (especially when unilateral and focused in the region of a particular sinus), postnasal discharge, anosmia, fever, cough, maxillary dental pain, ear pressure/fullness. Less frequent signs and symptoms include hyposmia and fatigue, in conjunction with some or all of the above.</p>	<p><i>Streptococcus pneumoniae</i></p> <p>nontypeable <i>Haemophilus influenzae</i></p> <p><i>Moraxella catarrhalis</i></p>	<p>Antibiotic Duration: 10 to 14 days</p> <p>Failure to respond after 72 hours of antibiotics: Reevaluate patient and switch to alternate antibiotic. Fiberoptic endoscopy or sinus aspiration for culture may be necessary for work up. Consider anti-inflammatory or decongestive therapy.</p>	<p>1st Line:</p> <ul style="list-style-type: none"> Amoxicillin (80-90 mg/kg/day) <p>Alternatives:</p> <ul style="list-style-type: none"> Amoxicillin-clavulanate (80-90 mg/kg/day of amoxicillin component) Cefpodoxime Cefuroxime Cefdinir Ceftriaxone <p>For β-Lactam Allergy:</p> <ul style="list-style-type: none"> Trimethoprim-sulfamethoxazole Macrolides Clindamycin 	<p>AAP AAFP CDC</p> <p>Sinus and Allergy Health Partnership (SAHP)</p>
	<p>When NOT to Treat with an Antibiotic: Nearly all cases of acute bacterial sinusitis resolve without antibiotics. Antibiotic use should be reserved for moderate symptoms not improving after 10 days, or that are worsening after 5-7 days, and severe symptoms.</p>	<p>Mainly viral pathogens</p>			
Pharyngitis	<p>When to Treat with an Antibiotic: <i>Streptococcus pyogenes</i> (Group A Strep): Symptoms and signs: sore throat, fever, headache, tonsillopharyngeal erythema, exudates, palatal petechiae, tender enlarged anterior cervical lymph nodes. Confirm diagnosis with throat culture or rapid antigen detection; negative rapid antigen detection tests should be confirmed with throat culture.</p>	<p><i>Streptococcus pyogenes</i></p>	<p>Group A Strep: Treatment reserved for patients with positive rapid antigen detection or throat culture.</p> <p>Antibiotic Duration: Generally 10 days</p>	<p>1st Line:</p> <ul style="list-style-type: none"> Penicillin V Benzathine penicillin G <p>Alternatives:</p> <ul style="list-style-type: none"> Amoxicillin Oral cephalosporins Clindamycin Macrolides <p>For β-Lactam Allergy:</p> <ul style="list-style-type: none"> Erythromycin 	<p>AAP AAFP CDC</p> <p>Infectious Diseases Society of America (IDSA)</p> <p>Institute for Clinical Systems Improvement (ICSI)</p>
	<p>When NOT to Treat with an Antibiotic: Respiratory viral causes: conjunctivitis, cough, rhinorrhea, diarrhea uncommon with Group A Strep.</p>	<p>Routine respiratory viruses</p>			
Nonspecific Cough Illness/ Bronchitis	<p>When to Treat with an Antibiotic: Presents with prolonged, unimproving cough (14 days). Clinically differentiate from pneumonia. Pertussis should be reported to public health authorities. <i>Chlamydophila pneumoniae</i> and <i>Mycoplasma pneumoniae</i> may occur in older children (unusual < 5 years of age).</p>	<p>< 10% of cases caused by <i>Bordetella pertussis</i>, <i>Chlamydophila pneumoniae</i>, or <i>Mycoplasma pneumoniae</i>. > 90% of cases caused by routine respiratory viruses.</p>	<p>Antibiotics are generally not indicated. Treatment reserved for <i>Bordetella pertussis</i>, <i>Chlamydophila pneumoniae</i>, <i>Mycoplasma pneumoniae</i>. Length of Therapy: 7-14 days (5 days for azithromycin)</p>	<ul style="list-style-type: none"> Macrolides Tetracyclines for children > 8 years of age 	<p>AAP AAFP CDC</p>
	<p>When NOT to Treat with an Antibiotic: Nonspecific cough illness.</p>				
Bronchiolitis/ Nonspecific URI	<p>When NOT to Treat with an Antibiotic: Sore throat, sneezing, mild cough, fever (generally < 102° F, < 3 days), rhinorrhea, nasal congestion; self-limited (typically 5-14 days).</p>	<p>> 200 viruses, including rhinoviruses, coronaviruses, adenoviruses, respiratory syncytial virus, enteroviruses (coxsackieviruses & echoviruses), influenza viruses & parainfluenza viruses.</p>	<p>Antibiotics not indicated. Assure adequate fluid intake. May advise rest, OTC medications, humidifier.</p>	<ul style="list-style-type: none"> None 	<p>AAP AAFP CDC ICSI</p>

This guideline summary is intended for physicians and healthcare professionals to consider in managing the care of their patients for acute respiratory tract infections. While the summary describes recommended courses of intervention, it is not intended as a substitute for the advice of a physician or other knowledgeable healthcare professional. These guidelines represent best clinical practice at the time of publication, but practice standards may change as more knowledge is gained.