

# Cold & Cough

## The Common Cold

- **Cold symptoms**

Day 1	Days 2-3	Days 4-5
Sore throat	Nasal symptoms	Cough (<20% of pts)

- **Common cold vs. flu**

<b>Common cold</b>	Rhinorrhea, nasal congestion, sneezing, sore throat, water eyes, complications (sinus congestion, earache)
<b>Influenza</b>	Fever (>102°F-104°F), headache, myalgia, fatigue, sore throat, pain from eye motion, photophobia, burning eyes, complications (bronchitis, pneumonia)

- **Exclusions to self-treatment:** fever >101.5°F, chest pain, SOB, worsening with treatment, AIDS therapy, chronic immunosuppressant therapy, pulmonary disease (asthma, COPD)

- **Decongestants:** only for nasal congestion

- **Topical decongestants**

- Minimal systemic absorption
- Short acting (4-6hr): phenylephrine (Neo-Syneprine), naphazoline (Privine), levmetamfetamine (Vicks inhaler), propylhexedrine (Benedrex inhaler)
- Long acting (12hr): oxymetazoline (Afrin, Duration, Neo-Syneprine 12hr)
- Counseling:
  - *Drops:* blow nose, recline/hang head over side of bed/tilt head, keep tilted for several minutes
  - *Spray atomizer:* blow nose, don't shake, spray upright, sniff deeply, wait 2-5 mins and blow
  - *Spray pump:* blow nose, don't shake, prime pump, sniff deeply, upright position, wait 3-5 mins
  - *Inhaler:* blow nose, warm inhaler to RT, inhale in 1 nostril while closing off other, repeat in other nostril, wipe off, loses potency after 2-3 months
  - Notify MD if: insomnia, tremor, weakness, irregular heart beat
- Saline products: used to restore moisture, relieve dry/inflamed nasal membranes, relieve irritation
- SE: rebound congestion from overuse, vicious cycle
- Pediatrics: never use in kids < 6 months old (exception: saline); mentholated products only in kids > 2 y/o
- Pregnancy/nursing: category C

- **Oral decongestants**

- Advantages: longer duration of action than some topical agents, no rebound congestion
- Disadvantages: less intense vasoconstriction, delayed onset
- SE: ↑bp, cardiac stimulation if prolonged use, hyperthyroidism, CAD, prostatic hypertrophy, ↑IOP
- Nursing mothers: small amounts in breast milk, pseudoephedrine safe
- Pregnancy: category C
- Athletes: considered as stimulants, banned during official events
- Pseudoephedrine (Sudafed)
  - Adult dosing: 60mg q6hr - or - SR 120mg q12hr
  - NPLEx tracking system: methamphetamine precursor tracking service
- Phenylephrine (Sudafed PE)
  - Adult dosing: 10mg q4hr
  - P'kinetics: ↓bioavailability due to first pass effect, ↑inter-individual variability
  - Disadvantages: ↑\$, ↓stability, no SR formulation, 10mg efficacy questionable
- Counseling: high doses may cause insomnia, tremor, weakness, or irregular heart beat

- **Nasal strips** (available mentholated)

- 3 sizes: 2 adults + 1 pediatric (> 5 y/o)
- Recommended for pregnant patients

- **Antihistamines**

- Indications: sneezing, rhinorrhea, nasal pruritus, lacrimation, ocular pruritus
- Sedation: ethanalamines > ethylenediamines > alkylamines > piperazines > piperidines  
[Diphenhydramine > pyrilamine > chlorpheniramine > cetirizine > loratidine, fexofenadine]
- SE: paradoxical excitation, anticholinergic effects, GI effects
- Avoid: patients with narrow angle glaucoma or asthma
- Pregnancy/nursing: avoid during nursing, avoid during pregnancy especially in 3<sup>rd</sup> trimester
- Pediatrics:

- No dosing for children < 6 y/o: most products
- Children > 2 y/o: loratadine, cetirizine, fexofenadine
- Products: **cetirizine** (Zyrtec), **chlorpheniramine** (Chlor Trimeton), **clemastine** (Tavist), **loratadine** (Claritin), **fexofenadine** (Allegra)
- Counseling:
  - ↓Clinical effect: grapefruit, orange, apple juice
  - ODT: don't chew, place on tongue, allow to dissolve, swallow with or w/o water, empty stomach, don't remove from package until time to administer
  - Fexofenadine: don't take with antacids, ↓dose if renally impaired

## Cough

- Two types: congested/productive or dry/non-productive
- Exclusions to self-treatment: thick yellow/green sputum/phlegm, fever, night sweats, chronic cough, worsens with treatment, medical history (COPD, asthma, chronic bronchitis, CHF)
- ACCP/CHEST guidelines: 1<sup>st</sup> generation antihistamine/decongestant combo (e.g. brompheniramine + SR pseudoephedrine) or naproxen; newer non-sedating antihistamines ineffective

### • Expectorants

- Indication: ineffective productive cough (questionable efficacy)
- **Guaifenesin** (Mucinex)
  - Adult dosing: 200-400mg q4hr
  - SE: N/V/D, dizziness, headache, rash, sedation
  - Pregnancy/nursing: category C, no breast feeding data available
  - Counseling: adequate fluid intake, humidity, don't take for persistent cough (e.g. COPD, asthma, smoking, chronic bronchitis)
  - Consult MD if: > 7 days, high fever (>101.5°F), skin rash, sore throat, signs of secondary bacterial infection (colored sputum, fever)

### • Antitussives

- Indication: dry non-productive cough
- Acts on cough center in medulla → suppresses cough reflex → ↓frequency of a cough
- Consult MD if cough > 7 days + high fever, skin rash, or sore throat
- **Dextromethorphan**
  - Adult dosing: 10-30mg q4-8hr (max 120mg/24hr)
  - Pregnancy category C
  - Abuse potential: (C-C-C, Robo, Red Devils, Dex, DXM) causes LSD-like effects with high doses
  - Counseling: do not use if taking MAOI or SSRIs
- **Diphenhydramine**
  - Anticholinergic effects
  - Pregnancy/nursing: preferred agent
  - Counseling: may cause drowsiness, avoid alcohol
- **Codeine**
  - Pregnancy category C
- **Topical antitussives:** camphor & menthol, lozenge (menthol), or ointment

## Sore throat

- Sore throat vs. strep throat
  - Sore throat: viral infection
  - Strep throat: bacterial infection that is associated with fever, swollen lymph nodes, white patches at back of throat, malaise, headache, nausea, chills, difficulty swallowing
- **Treatment:** warm liquids, avoid citrus, gargle warm salt water, ice, hard candies, vaporizer/humidifier, APAP for pain
- **Anesthetics:** benzocaine, phenol, benzyl alcohol, cetylpyridinium chloride (Cepacol)
- **Zinc:** proposed anti-viral agent
  - Dosage forms: lozenge, nasal spray, nasal gel, other oral dosage forms
  - Dosing: 1 lozenge q2hrs (max 150mg/day)
  - SE: bad taste, nausea, mouth irritation
  - Counseling: start within 24hrs of symptoms, don't use long term, don't use if pregnant
- See MD if: contact with strep throat person, sudden onset, fever, swollen glands, rash, difficulty swallowing liquids, > 1 week, front of neck is sore/stiff