

Cold, Flu, Allergies: Maintaining Upper Respiratory Health



A. Common Cold: Mild self limited syndrome caused usually by viral upper respiratory infection.

1. Epidemiology

- Rhinoviruses: 25-30% of annual colds, seasonal peaks in early Fall to late Spring
- Corona viruses: 10-15% of annual colds, seasonal peak in mid winter
- Influenza, Para influenza, respiratory syncytial, adenoviruses: 10-15% of annual colds, but more common with the flu
- Bacteria associated with pharyngitis can also cause common cold syndrome.

2. Clinical Characteristics

- Incubation period of 48-72 hours
- Begins with: malaise, nasal discharge, sneezing, scratchy throat, loss sense of taste and smell; symptoms worsened in second to fourth day
- Fever usually not present, if present does not exceed 1 F elevation
- Cough and hoarseness may begin later, severe and intensity increased in cigarette smokers
- Usually lasts for 1 week, some cases lasts for 2 weeks

3. Challenges

- Identify the patient with complicating secondary bacterial infections, like:
- Bacterial Sinusitis: discolored nasal discharge (greenish or yellowish), maxillary or frontal sinus pain, toothache, temperature above 100 F, severe headaches, productive cough
- Otitis Media: earache, feeling of fullness, drainage from ears, pain in jaw area, high fever,
- Pharyngitis: Streptococcal: sore throat, usually without upper respiratory symptoms like nasal congestion/discharge; headache, high fever, swollen neck glands, abdominal discomfort, nausea.
- Pneumonia: high fever, productive cough, chest pain, shortness of breath, chills, malaise, sweaty skin, fatigue

4. Treatment

- Symptomatic treatment is the only treatment available
- Bed rest
- Increase fluid intake to as least 8 glasses/day, water, juices

- Vitamin C 500 mg QD
- Steams help to alleviate nasal congestion and liquefy secretions
- Sipping hot chicken soup
- Rest the voice for hoarseness
- Gargle with salt and water for sore throats
- Can use nasal decongestants, no more than 3 days to avoid rebound effect, increase in nasal congestion after discontinuing
- Can use oral decongestants
 - Sudafed OTC 60 mg 1 oral Q 6 hours as needed or prescription 120 mg BID, side effect of tremors, increased heart rate, nervousness, elevation in blood pressure
 - Combination of decongestant and antihistamine, like Benadryl Cold OTC or Allegra-D or Claritin-D (non-sedating prescription) can help to relieve symptoms in adults
 - Antimicrobials: useless in uncomplicated cold, causes increase in antibiotic resistance when not used appropriately

5. Education

- Strict hand washing, reduced finger-to-nose contact, reduced exposure to the person with the cold
- Health care provider should wash their hands before and after coming in contact with the patient

B. Flu Syndrome: abrupt onset of malaise, myalgia, headache, fever, runny nose, sore throat. Illness is severe for 3 to 14 days, recovery may take 1 to 4 weeks

1. Epidemiology

- 85% of cases due to influenza viruses during an epidemic, other viruses causing the flu are Para influenza, respiratory syncytial, and adenovirus
- antigenic variations occur almost annually in Influenza type A and less frequently in influenza type B, (reason to have annual flu shots)
- transmitted by virus-containing small particle aerosols dispersed by sneezing, coughing, or talking
- Incubation period is 18 to 72 hours
- Viral shedding persists for 5 to 10 days, but virus present in high titers in secretions for only 48 hours after onset of illness
- Spread from person to person is rapid, initially among children then among adults

2. Clinical Characteristics

- abrupt onset of systemic symptoms:
- fever which may rise to 106 F, lasts 3 days and may persist up to 5 to 7 days,
- chills
- headaches
- myalgias, involving the back, arms, legs, eyes and persist as long as the fever

- malaise
- Respiratory symptoms: cough, nasal discharge, hoarseness, sore throat appear as the systemic symptoms go away
- Physical findings: general toxicity, flushed face, hot skin, watery eyes, clear nasal discharge, tender cervical lymph nodes
- CBC: increased lymphocytes, mild decreased neutrophils

3. Treatment

- Amantadine (Symmetrel) 100 mg BID or 200 mg QD
- Rimantadine (Flumadine)
- Tamiflu
- Attenuate the clinical disease in all patients with influenza type A by reducing fever by 50% and shortening the duration of the illness by 1 or 2 days, these benefits only seen when the drug is administered within 24-48 hours of onset of illness.
- Side effects: insomnia, nervousness, dizziness, difficulty concentrating – 7% of adults who take Amantadine. Contraindications seizures, liver or kidney disease. Side effects are less common with Rimantadine.
- Bedrest
- Adequate fluid intake
- Tylenol 1-2 Q 4 hours to reduce fever, headache, myalgia
- Sponging with tepid water to reduce fever
- Relief of nasal congestion as discussed above

4. Complications

- dyspnea, coughing up blood, wheezing, purulent sputum, fever persisting more than 7 days, dark urine, severe muscle pain and tenderness – complications that demand prompt medical attention and hospitalization
- Airway hyperactivity: most common after influenza. The exposure to inhaled irritants induces bronchospasm, coughing or both. Patient with asthma or chronic bronchitis have greater bronchoconstrictor response because of their underlying bronchial muscle hyperactivity. This hyperactivity can be demonstrated 3 to 8 weeks after influenza and may last for 4 to 6 months. This hyperactivity is presented as nonproductive cough, wheezing and dyspnea on exertion. Common in urban areas, during periods of high air pollution. Can be treated with bronchodilator at bedtime.
- Pneumonia: low in individuals below 50 y.o. Mortality increases in individuals with chronic pulmonary disease. Primary influenza viral pneumonia: rare, more in individuals with cardiovascular disease. Fever, cough and dyspnea rapidly progresses to cyanosis and delirium, often developing into ARDS. Needs immediate hospitalization. Mild influenza pneumonia: restricted to a single lobe – persistent fever, cough, dyspnea, localized rales, normal WBC, benign course.

- Secondary bacterial pneumonia and bronchitis: biphasic, influenza symptoms is followed by several days of improvement and then exacerbated by fever and purulent or bloody sputum.

C. Seasonal Allergic Rhinitis

1. Symptoms

- will recur each year at approximately the same time. Pollen counts are higher in the morning and outdoor symptoms are usually worse at that time.
- obstruction of nasal airflow
- dry mouth (from mouth breathing)
- nasal discharge (usually clear)
- itching of the nose and soft palate
- sneezing
- dry cough
- discharge, itchy, puffiness of the eyes
- periodic loss of sense of smell and taste

2. Complications

- acute sinusitis
- serous otitis media

3. Treatment

- Removal of suspected agent from the environment: very hard when the problem irritating substance is pollen. Can remove cigarette smoke, pet dander, avoid pets in the bedroom
- Reduction of humidity in the inside environment 35-40%
- Medications:
 - Antihistamines: may provide adequate relief most of the time, particularly when symptoms include sneezing, itching, nasal discharge, postnasal drip. OTC products with Benadryl may cause sedation, can be taken at bedtime. If symptoms happen during the day, may need the new non-sedating antihistamines like Claritin, Allegra, Zyrtec
 - Nasal steroids: Flonase, Nasonex, Rhinocort
 - Sympathomimetic Decongestant: particularly effective