

## Upper Respiratory Infections

### Types of Upper Respiratory Infections

The *common cold* syndrome is caused by one of many viruses that enter through the nose and grow in the back of the throat. A typical cold starts with a sore throat rapidly followed by nasal congestion, possible low grade fever and finally coughing. The nasal discharge may start as clear mucus, but rapidly become thicker and colored over time.

The cold virus is killed by your immune system. **Antibiotics are not effective in treating the common cold.** Cold symptoms can last 1 to 3 weeks, sometimes longer. Treatment is limited to decreasing the symptoms until the cold goes away with time.

No medicine yet exists that will kill or stop the growth of the viruses that cause the common cold. Allow your body to get rid of the virus in its own way. Reasons for not taking antibiotics for a common cold include:

- They just don't help.
- Beneficial bacteria are killed leading to yeast infections and diarrhea.
- Bacteria become resistant to antibiotics. When you are sick with a bacterial infection, antibiotics may not be effective.
- Antibiotics may cause side effects or an allergic reaction (rash, vomiting, diarrhea).
- Antibiotics are expensive.

**Tonsillitis** (strep throat, pharyngitis) is an infection of the throat and/or tonsils usually caused by viruses but occasionally caused by bacteria (strep). The throat appears bright red and swallowing becomes painful. Many patients have fever, headache, muscle aches, and occasionally white spots on the tonsils. Runny nose and cough are not common with a bacterial infection. A throat culture may identify strep throat, an infection that requires antibiotics. Mononucleosis may present with tonsillitis associated with fatigue and testing may be needed.

**Sinusitis** is an infection of one or more of the sinuses surrounding the nose. If the opening to a sinus cavity becomes clogged, a bacterial infection can occur which may require an antibiotic medication. Most often sinusitis occurs as a complication of a common cold. Sinusitis may cause a feeling of pressure in the face, nasal discharge, an unpleasant taste in the mouth, pain in the upper teeth, fever, sore throat, or cough. The current recommendation for antibiotic treatment is when the symptoms persist without improvement for over one to two weeks.

**Bronchitis** is an inflammation of the bronchi (the tree-like structures whose branches serve as air tubes in the lungs).

Bronchitis is usually caused by a virus, but can also be caused by bacteria or inhaled irritants. Most cases are preceded by a cold, vague muscle aches, slight fever, sore throat, and a dry cough. Later the cough produces a mucous secretion called sputum that may last 2 to 3 weeks. Antibiotics are usually not prescribed, although other medications such as bronchodilators may help the cough.

**Pneumonia** is a bacterial or viral infection affecting the alveoli (small air sacs) in the lung.

### Treatment Recommendations

Drink plenty of *fluids*.

**Rest.** You do not have to stay in bed, but you should limit your activity as much as possible.

**Humidify** the air by using a cool mist vaporizer, taking a steamy shower, hanging wet towels in the room, steam inhalations (face bowl), or placing a warm, moist towel over your face.

#### **Antihistamines**

Histamine is a natural substance, one of the important inflammatory mediators produced in certain cells in the body. *The effects of histamine cause sneezing, coughing, and runny nose during colds. Antihistamines block these effects of histamine.*

The major side effect of first generation antihistamines is drowsiness, which may be severe in some people. Therefore some people can only take this medication at bedtime.

Examples of 1st generation antihistamines are brompheniramine (generic for DimeTapp), \*chlorpheniramine (generic for Chlor-Trimeton and Singlet), \*diphenhydramine (generic for Benadryl), and \*doxylamine (generic for NyQuil and Alka-Seltzer Plus Night-Time Cold Medicine).

The newer (non-sedating) antihistamines do not appear to have the same degree of effectiveness for treating colds. Examples are \*Loratadine (Claritin), Fexofenadine (Allegra – prescription required), and \*Cetirizine (Zyrtec).

\*Available over-the-counter at the UHS pharmacy

**NSAIDs** (nonsteroidal anti-inflammatory drugs), such as ibuprofen and naproxen, are *effective in treating fever, chill, pain, muscle aches, and not feeling well in general.* A major action of NSAIDs is to block the production of certain natural inflammatory mediators called "prostaglandins".

The major side effect of NSAIDs is irritation of the stomach, occasionally leading to gastrointestinal ulceration and bleeding. Stop the medication if you have stomach upset or pain. Consider taking acetaminophen (Tylenol), instead, for fever and pain if you have stomach upset.

**CAUTION:** Aspirin may cause Reyes Syndrome; it is not recommended for college students.

#### ***Nasal Salt Water Irrigation or Throat Gargles***

Various nasal saline rinse kits are available commercially, including the Sinus Rinse brand, which contains pre-mixed salt packages. Alternatively, a nasal bulb syringe can be used with a homemade salt-water mixture. To make your own saline, mix the following in a clean container:

- ½ teaspoon salt
- 8 ounces of warm water

*Directions: Place the above mixture in a reusable sinus rinse bottle or draw up into a nasal bulb syringe. The most convenient way to perform a sinus rinse is in the shower or over a sink.*

**Decongestants**, such as pseudoephedrine, open the nasal passages by shrinking blood vessels in the mucus membrane of the nose, which is the primary cause of the *nasal obstruction of colds*. Decongestants may be taken by mouth or applied directly on the nasal mucus membrane in the form of nose sprays.

A long acting decongestant nose spray oxymetazoline hydrochloride (generic Afrin) can rapidly relieve nasal obstruction. When the decongestant effect of the drug wears off, nasal obstruction rapidly returns. Therefore, *this can be very effective, but use must be limited to 3 days if used twice daily or 5-6 nights if only used at bedtime*. Overuse by just a few days can result in "rebound" obstruction and mucosal damage.

Decongestants taken by mouth have less powerful and immediate activity but cause less problem with the cycles of recurrent nasal obstruction than topical preparations. Oral decongestants may produce rapid heart rate, blood pressure elevation, nervous stimulation, and **restlessness which may interfere with sleep**.

**NOTE:** The only effective oral decongestant currently available is pseudoephedrine. You must ask the pharmacist for this medication (regulated because of illegal use to make methamphetamine), although no prescription is required. Decongestants purchased off the shelf contain phenylephrine and are much less effective.

**Cough suppressants** are natural narcotics, like codeine, and synthetic narcotics, like dextromethorphan (DM). They

act on the brain to depress the cough reflex center. Their effectiveness in patients with chronic cough has been demonstrated in controlled studies *but there is little published information on their effectiveness in coughs associated with colds*. Cough suppressants can produce gastrointestinal discomfort but otherwise have few side effects. In normal healthy people with good cough reflexes, cough suppressants are safe.

Drug interactions may occur with DM and certain anti-depressants. If you are on an antidepressant, discuss this with your provider.

Keeping a **throat lozenge**, cough drop, or hard candy in your mouth will stimulate your saliva and help soothe your throat.

**Do not smoke**, and avoid second hand smoke.

**Practice good hygiene.** To help prevent the spread of the virus, wash your hands frequently, cover your nose and mouth when sneezing, properly dispose of facial tissues, and do not share items like toothbrushes and drinking containers.

If antibiotics are prescribed for your particular infection, carefully follow the instructions on the label. Antibiotics can reduce the effectiveness of birth control pills; a back-up method of birth control (e.g. condoms with spermicide) is suggested during the entire pill cycle.

**Call the UHS advice nurse at (814) 863-4463 if any of the following happens:**

- Temperature over 102 degrees F persists
- Severe headache
- Increased facial swelling
- Very large neck glands
- Painful joints
- Skin rash
- Chest pain
- Shortness of breath
- Difficulty swallowing own saliva
- Persistent vomiting
- Blurred vision
- Persistent greenish nasal discharge
- Foul odor to breath

\*\*This content is reviewed periodically and is subject to change as new health information becomes available. This information is intended to inform and educate and is not a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional.