

## DEFINITION

- Viral respiratory infection of the nose and throat
- *Use this protocol only if the patient has symptoms that match a Cold.*

**SYMPTOMS** of a Cold include:

- Runny or congested (stuffy) nose is the main symptom. The nasal discharge may be clear, cloudy, yellow, or green.
- Sneezing.
- Mild fever and muscle aches, feeling tired and sleepy, headache
- Scratchy or sore throat
- Postnasal drip, throat clearing, cough
- Sometimes associated with hoarseness, tearing eyes, and swollen lymph nodes in the neck

## TRIAGE ASSESSMENT QUESTIONS

### Call EMS 911 Now

**Severe** difficulty breathing (e.g., struggling for each breath, speaks in single words)

*R/O: respiratory failure, hypoxia*

Very weak (can't stand)

Sounds like a life-threatening emergency to the triager

### See More Appropriate Protocol

Difficulty breathing and not from stuffy nose (e.g., not relieved by cleaning out the nose)

*Go to Protocol: Breathing Difficulty (Adult)*

Runny nose is caused by pollen or other allergies

*Go to Protocol: Nasal Allergies (Hay Fever) (Adult)*

Cough is main symptom

*Go to Protocol: Cough (Adult)*

Sore throat is main symptom

*Go to Protocol: Sore Throat (Adult)*

### Go to ED/UCC Now (or to Office with PCP Approval)

Patient sounds very sick or weak to the triager

*Reason: severe acute illness or serious complication suspected*

### Go to Office Now

Fever > 103° F (39.4° C)

*R/O: pneumonia*

Fever > 101° F (38.3° C) and over 60 years of age

Fever > 100.0° F (37.8° C) and has diabetes mellitus or a weak immune system (e.g., HIV positive, cancer chemotherapy, organ transplant, splenectomy, chronic steroids)

Fever > 100.0° F (37.8° C) and bedridden (e.g., nursing home patient, stroke, chronic illness, recovering from surgery)

*R/O: Reason: higher risk of bacterial infection. Note: may need ambulance transport to ED.*

## See in Office Today

Fever present > 3 days (72 hours)

*R/O: bacterial sinusitis, bronchitis, pneumonia*

Fever returns after gone for over 24 hours and symptoms worse or not improved

*R/O: bacterial sinusitis, bronchitis, pneumonia*

Sinus pain (not just congestion) and fever

*R/O: bacterial sinusitis*

Earache

*R/O: otitis media*

## See in Office Today or Tomorrow

Sinus congestion (pressure, fullness) present > 10 days

*R/O: bacterial sinusitis, allergic rhinitis*

Nasal discharge present > 10 days

*R/O: bacterial sinusitis, allergic rhinitis*

Using nasal washes and pain medicine > 24 hours and sinus pain (lower forehead, cheekbone, or eye) persists

*R/O: sinusitis*

Patient wants to be seen

## Strep Test Only Visit Today or Tomorrow

Sore throat present > 5 days

*R/O: Strep pharyngitis*

## Home Care

Colds with no complications

Vitamin and herbal supplements for colds, questions about

Neti Pot, questions about

## HOME CARE ADVICE

## General Care Advice for Treating a Cold

- 1. Reassurance and Education - Common Cold Symptoms:**
  - It sounds like an uncomplicated cold that we can treat at home.
  - Colds are very common and may make you feel uncomfortable.
  - Colds are caused by viruses, and no medicine or "shot" will cure an uncomplicated cold.
  - Colds are usually not serious.
  - *Here is some care advice that should help.*
- 2. For a Runny Nose - Blow Your Nose:**
  - Nasal mucus and discharge help wash viruses and bacteria out of the nose and sinuses.
  - Blowing your nose helps clean out your nose. Use a handkerchief or a paper tissue.
  - If the skin around your nostrils gets irritated, apply a tiny amount of petroleum ointment to the nasal openings once or twice a day.
- 3. Nasal Washes for a Stuffy Nose:**
  - *Introduction:* Saline (salt water) nasal irrigation (nasal wash) is an effective and simple home remedy for treating stuffy nose and sinus congestion. The nose can be irrigated by pouring, spraying, or squirting salt water into the nose and then letting it run back out.
  - *How it Helps:* The salt water rinses out excess mucus and washes out any irritants (dust, allergens) that might be present. It also moistens the nasal cavity.
  - *Methods:* There are several ways to irrigate the nose. You can use a saline nasal spray bottle (available over-the-counter), a rubber ear syringe, a medical syringe without the needle, or a **Neti Pot**.
- 4. Nasal Washes - Step-By-Step Instructions:**
  - **Step 1:** Lean over a sink.
  - **Step 2:** Gently squirt or spray warm salt water into one of your nostrils.
  - **Step 3:** Some of the water may run into the back of your throat. Spit this out. If you swallow the salt water it will not hurt you.
  - **Step 4:** Blow your nose to clean out the water and mucus.
  - **Step 5:** Repeat steps 1 through 4 for the other nostril. You can do this a couple times a day if it seems to help you.
- 5. How to Make Saline (Salt Water) Nasal Wash:**
  - Put 1 cup (8 oz; 240 ml) of water in a clean container.
  - Add 3/4 teaspoon of non-iodized salt (such as canning or pickling salt) to the water.
  - Add 1/4 teaspoon baking soda to the water. Stir well.
  - Use distilled water or boiled tap water that has cooled.
  - Throw away any unused saline nasal wash after 24 hours.
- 6. Treatment for Other Cold Symptoms:**
  - *For muscle aches, headaches, or moderate fever* (more than 101° F or 38.3° C): Take acetaminophen every 4 hours.
  - *Sore throat:* Try throat lozenges, hard candy, or warm chicken broth.
  - *Cough:* Use cough drops.
  - *Hydrate:* Drink adequate liquids.
- 7. Use a Humidifier:**
  - If the air in your home is dry, use a cool-mist humidifier.
  - *Reason:* dry air makes coughs worse.
- 8. Contagiousness:**

- The cold virus is present in your nasal secretions.
- Cover your nose and mouth with a tissue when you sneeze or cough.
- Wash your hands frequently with soap and water.
- You can return to work or school after the fever is gone and you feel well enough to participate in normal activities.

9. **Expected Course:**

- Fever may last 2 to 3 days
- Nasal discharge 7 to 14 days
- Cough up to 2 to 3 weeks.

10. **Call Back If:**

- Difficulty breathing occurs
- Fever lasts more than 3 days
- Nasal discharge lasts more than 10 days
- Cough lasts more than 3 weeks
- You become worse

**Over-the-Counter Medicines for a Cold**

1. **Medicines for a Stuffy or Runny Nose:**

- Most cold medicines that are available over-the-counter (OTC) are not helpful.
- Antihistamines: Are only helpful if you also have nasal allergies.
- If you have a very runny nose and you really think you need a medicine, you can try using a nasal decongestant for a couple days.

2. **Nasal Decongestants for a Very Stuffy or Runny Nose:**

- **Most people do not need to use these medicines.**
- If your nose feels blocked, you should try using nasal washes first.
- If you have a very stuffy nose, nasal decongestant medicines can shrink the swollen nasal mucosa and allow for easier breathing. If you have a very runny nose, these medicines can reduce the amount of drainage. They may be taken as pills by mouth or as a nasal spray.
- *Pseudoephedrine (Sudafed)*: Available over-the-counter in pill form. Typical adult dosage is two 30 mg tablets every 6 hours.
- *Oxymetazoline Nasal Drops (Afrin)*: Available over-the-counter. Clean out the nose before using. Spray each nostril once, wait one minute for absorption, and then spray a second time.
- *Phenylephrine Nasal Drops (Neo-Synephrine)*: Available over-the-counter. Clean out the nose before using. Spray each nostril once, wait one minute for absorption, and then spray a second time.
- *Before taking any medicine, read all the instructions on the package.*

3. **Caution - Nasal Decongestants:**

- Do not take these medications if you have high blood pressure, heart disease, prostate problems, or an overactive thyroid.
- Do not take these medications if you are pregnant.
- Do not take these medications if you have used a MAO inhibitor such as isocarboxazid (Marplan), phenelzine (Nardil), rasagiline (Azilect), selegiline (Eldepryl, Emsam), or tranylcypromine (Parnate) in the past 2 weeks. Life-threatening side effects can occur.
- Do not use these medications for more than 3 days (Reason: rebound nasal congestion).

4. **Cough Medicines:**

- **OTC Cough Syrups:** The most common cough suppressant in OTC cough medications is dextromethorphan. Often the letters "DM" appear in the name.

- **OTC Cough Drops:** Cough drops can help a lot, especially for mild coughs. They reduce coughing by soothing your irritated throat and removing that tickle sensation in the back of the throat. Cough drops also have the advantage of portability - you can carry them with you.
  - **Home Remedy - Hard Candy:** Hard candy works just as well as medicine-flavored OTC cough drops. People who have diabetes should use sugar-free candy.
  - **Home Remedy - Honey:** This old home remedy has been shown to help decrease coughing at night. The adult dosage is 2 teaspoons (10 ml) at bedtime. Honey should not be given to infants under one year of age.
5. **OTC Cough Syrup - Dextromethorphan:**
- Cough syrups containing the cough suppressant dextromethorphan (DM) may help decrease your cough. Cough syrups work best for coughs that keep you awake at night. They can also sometimes help in the late stages of a respiratory infection when the cough is dry and hacking. They can be used along with cough drops.
  - *Examples:* Benylin, Robitussin DM, Vicks 44 Cough Relief
  - *Before taking any medicine, read all the instructions on the package.*
6. **Caution - Dextromethorphan:**
- Do not try to completely suppress coughs that produce mucus and phlegm. Remember that coughing is helpful in bringing up mucus from the lungs and preventing pneumonia.
  - *Research Notes:* Dextromethorphan in some research studies has been shown to reduce the frequency and severity of cough in adults (18 years or older) without significant adverse effects. However, other studies suggest that dextromethorphan is no better than placebo at reducing a cough.
  - *Drug Abuse Potential:* It should be noted that dextromethorphan has become a drug of abuse. This problem is seen most often in adolescents. Overdose symptoms can range from giggling and euphoria to hallucinations and coma.
  - **CONTRAINDICATED:** Do not take dextromethorphan if you are taking a monoamine oxidase (MAO) inhibitor now or in the past 2 weeks. Examples of MAO inhibitors include isocarboxazid (Marplan), phenelzine (Nardil), selegiline (Eldepryl, Emsam, Zelapar), and tranylcypromine (Parnate). Do not take dextromethorphan if you are taking venlafaxine (Effexor).
7. **Pain and Fever Medicines:**
- For pain or fever relief, take either acetaminophen or ibuprofen.
  - They are over-the-counter (OTC) drugs that help treat both fever and pain. You can buy them at the drugstore.
  - Treat fevers above 101° F (38.3° C). The goal of fever therapy is to bring the fever down to a comfortable level. Remember that fever medicine usually lowers fever 2 degrees F (1 - 1 1/2 degrees C).
  - **Acetaminophen Regular Strength Tylenol:** Take 650 mg (two 325 mg pills) by mouth every 4 to 6 hours as needed. Each Regular Strength Tylenol pill has 325 mg of acetaminophen. The most you should take each day is 3,250 mg (10 pills a day).
  - **Acetaminophen - Extra Strength Tylenol:** Take 1,000 mg (two 500 mg pills) every 8 hours as needed. Each Extra Strength Tylenol pill has 500 mg of acetaminophen. The most you should take each day is 3,000 mg (6 pills a day).
  - **Ibuprofen (e.g., Motrin, Advil):** Take 400 mg (two 200 mg pills) by mouth every 6 hours. The most you should take each day is 1,200 mg (six 200 mg pills), unless your doctor has told you to take more.
8. **Pain and Fever Medicines - Extra Notes and Warnings:**
- Use the lowest amount of medicine that makes your pain or fever better.
  - Acetaminophen is thought to be safer than ibuprofen or naproxen in people over 65 years old. Acetaminophen is in many OTC and prescription medicines. It might be in more than one medicine that you are taking. You need to be careful and not take an overdose. An

acetaminophen overdose can hurt the liver.

- McNeil, the company that makes Tylenol, has different dosage instructions for Tylenol in Canada and the United States. In Canada, the maximum recommended dose per day is 4,000 mg or twelve Regular-Strength (325 mg) pills. In the United States, McNeil recommends a maximum dose of ten Regular-Strength (325 mg) pills.
- **Caution:** Do not take acetaminophen if you have liver disease.
- **Caution:** Do not take ibuprofen if you have stomach problems, kidney disease, are pregnant, or have been told by your doctor to avoid this type of anti-inflammatory drug. Do not take ibuprofen for more than 7 days without consulting your doctor.
- *Before taking any medicine, read all the instructions on the package.*

## Mineral and Vitamin and Herbal Supplements

1. **Zinc:**
  - Some studies have reported that zinc gluconate lozenges (i.e., Cold-Eeze) may reduce the duration and severity of cold symptoms.
  - *Dosage:* Taken by mouth. You should take this with food to minimize the chance of nausea. Follow package instructions.
  - *Side Effects:* Some people complain of nausea and a bad taste in their mouth when they take zinc.
  - *Important Note about Zicam:* A zinc nasal gel (i.e., Zicam) is also available over-the-counter. There have been a number of lawsuits claiming that Zicam causes loss of smell (anosmia); it is uncertain whether this truly happens, but for now you should not use this medicine.
2. **Vitamin C:**
  - A number of experts, including Nobel Prize-winner Linus Pauling, have promoted taking high doses of this vitamin as a treatment for the common cold.
  - Research to date shows that vitamin C has minimal (if any) effect on the duration or degree of cold symptoms. Thus, it cannot be recommended as a treatment.
  - Vitamin C is probably harmless in standard doses (less than 2 gm daily).
3. **Echinacea:**
  - There is no proven benefit of using this herbal remedy in treating or preventing the common cold. In fact, current research suggests that it does not help.
4. **Read Package Instructions:**
  - *Read the package instructions thoroughly on all supplements that you take.*

## Neti Pot for Sinus Symptoms

1. **Neti Pot:**
  - The Neti Pot is a small ceramic or plastic pot with a narrow spout. It looks like a small tea pot. Two manufacturers of the Neti Pot are the Himalayan Institute in Pennsylvania and SinuCleanse in Wisconsin.
  - *How it Helps:* The Neti Pot performs nasal washing (also called nasal irrigation or "jala neti"). The salt water rinses out excess mucus, washes out any irritants (dust, allergens) that might be present, and moisturizes the nasal cavity.
  - *Indications:* The Neti Pot is widely used as a home remedy to relieve conditions such as colds, sinus infections, and hay fever (nasal allergies).
  - *Adverse reactions:* None. Though, not everyone likes the sensation of pouring water into their nose.
  - *YouTube Instructional Video:* There are instructional videos on how to use a Neti Pot both on manufacturers websites and also on YouTube (<http://www.youtube.com/watch?v=j8sD1bRAXIq>).
2. **Neti Pot Step-By-Step Instructions:**

- **Step 1.)** Follow the directions on the salt package to make warm salt water.
  - **Step 2.)** Lean forward and turn your head to one side over the sink. Keep your forehead slightly higher than your chin.
  - **Step 3.)** Gently insert the spout of the Neti Pot into the higher nostril. Put it far enough so that it forms a comfortable seal.
  - **Step 4.)** Raise the Neti Pot gradually so the salt water flows in through your higher nostril and out of the lower nostril. Breathe through your mouth.
  - **Step 5.)** When the Neti Pot is empty, blow your nose to clean out the water and mucus.
  - **Step 6.)** Some of the water may run into the back of your throat. Spit this out. If you swallow the salt water it will not hurt you.
  - **Step 7.)** Refill the Neti Pot and repeat on the other side. Again, blow your nose to clear the nasal passages.
3. **How to Make Saline (Salt Water) Nasal Wash:**
- Put 1 cup (8 oz; 240 ml) of water in a clean container.
  - Add 3/4 teaspoon of non-iodized salt (such as canning or pickling salt) to the water.
  - Add 1/4 teaspoon baking soda to the water. Stir well.
  - Use distilled water or boiled tap water that has cooled.
  - Throw away any unused saline nasal wash after 24 hours.

## FIRST AID

N/A

## BACKGROUND INFORMATION

### Key Points

- Colds are very common. The average adult has 3-4 colds each year.
- Colds are caused by viruses, and no medicine or "shot" will cure an uncomplicated cold.
- Colds are usually not serious. Most patients with colds do not need to be seen.
- Rarely colds can lead to illnesses of greater seriousness like: sinusitis, bronchitis, pneumonia, and otitis media. The elderly and immunocompromised are at higher risk of developing these infectious complications.

### Color of Nasal Discharge

The nasal discharge normally changes color during different stages of a cold.

- It starts as a clear discharge and later becomes cloudy.
- Sometimes it becomes yellow or green colored for a few days; and this is still normal.
- Intermittent yellow or green discharge is more common with sleep, antihistamines, or low humidity (Reason: all of these events reduce the production of normal nasal secretions).
- Yellow or green nasal secretions suggest the presence of a bacterial sinusitis ONLY if they occur in combination with [1] sinus pain OR [2] the return of a fever after it has been gone for over 24 hours OR [3] nasal discharge persists > 10 days without improvement.
- Nasal mucus can become blood-tinged during a cold. It is just due to frequent wiping and blowing the nose.

Nasal secretions only become a problem when they block the nose and interfere with breathing

through the nose. During a cold, if nasal breathing is noisy but the caller can't see blockage in the nose, it usually means the dried mucus is farther back. Nasal washes can remove it.

### **Nasal Washes (Nasal Irrigation) for Sinus Symptoms**

- **Introduction:** Saline (salt water) nasal irrigation is an effective and simple home remedy for treating cold symptoms and other conditions involving the nasal and sinus passages. Nasal irrigation consists of pouring, spraying, or squirting salt water into the nose and then letting it run back out.
- **How it Helps:** The salt water rinses out excess mucus, washes out any irritants (dust, allergens) that might be present, and moisturizes the nasal cavity.
- **Indications:** Nasal irrigation appears to be an effective treatment for chronic sinusitis. It may also help reduce sinus symptoms from acute viral upper respiratory infection (colds), irritant rhinitis (e.g., dust from the workplace), and allergic rhinitis (hay fever). Some doctors recommend it for rhinitis of pregnancy.
- **Adverse reactions:** Nasal irrigation is safe and there are no serious adverse effects. However, not everyone likes the sensation of having water in their nose.
- **Methods:** There are several ways to perform nasal irrigation. None has been proven to be better than any other. Methods include use of a nasal spray bottle (available OTC), a rubber ear syringe, a Water Pik set on "low", a 5- to 20-cc medical syringe without the needle, or a **Neti Pot**.

### **Neti Pot for Sinus Symptoms**

- The Neti Pot is a small ceramic or plastic pot with a narrow spout. It looks like a small tea pot. Two manufacturers of the Neti Pot are the Himalayan Institute in Pennsylvania and SinuCleanse in Wisconsin.
- **How it Helps:** The Neti Pot performs nasal washing (also called nasal irrigation or "jala neti"). The salt water rinses out excess mucus, washes out any irritants (dust, allergens) that might be present, and moisturizes the nasal cavity.
- **Indications:** The Neti Pot is widely used as a home remedy to relieve conditions such as colds, sinus infections, and hay fever (nasal allergies).
- **Adverse reactions:** None. Nasal irrigation with a Neti Pot is safe and there are no serious adverse effects. However, not everyone likes the sensation of having salt water poured into their nose.
- **YouTube Instructional Video:** <http://www.youtube.com/watch?v=j8sD1bRAXIq>

### **Neti Pot and Primary Amebic Meningoencephalitis (PAM)**

- Primary amebic meningoencephalitis (PAM) is caused by *Naegleria fowleri*, the so-called "brain-eating amoeba". This is an extremely rare infection. There were 32 cases in the United States between 2001 and 2010.
- The majority of the cases of PAM have occurred in the southern United States and were linked to swimming or bathing in fresh water lakes, rivers, and ponds containing this amoeba. The amoeba can also be found in hot springs, geothermal water sources, and poorly maintained swimming pools.
- In 2011 there were two cases of PAM in the state of Louisiana that occurred after nasal irrigation with a Neti Pot. These two cases suggest -- but is not definite proof -- that the nasal irrigation fluid that the individuals used was somehow contaminated with the *Naegleria fowleri* amoeba.
- The Centers for Disease Control and Prevention (CDC) recommends that individuals should use distilled, sterile or previously boiled water for nasal irrigation. It's also important to rinse the irrigation device after each use and leave open to air dry.

### **Mineral, Vitamin and Herbal Supplements for Colds**

- **Zinc:** Some studies have reported that zinc gluconate lozenges (i.e., Cold-Eeze) may reduce the duration and severity of cold symptoms [See Mossad and Prasad references]. Some people complain



of nausea and a bad taste in their mouth when they take zinc. A zinc nasal gel (i.e., Zicam) is also available over-the-counter. There have been a number of lawsuits claiming that Zicam causes loss of smell (anosmia); it is uncertain whether this truly happens, but for now it is reasonable for the call center nurse to not recommend this product.

- **Vitamin C:** A number of experts, including Nobel Prize winner Linus Pauling, have promoted taking high doses of this vitamin as a treatment for the common cold. Research to date shows that Vitamin C has minimal (if any) effect on the duration or degree of cold symptoms. Thus, it cannot be recommended as a treatment. Vitamin C is probably harmless in standard doses (< 2 gms daily).
- **Echinacea:** There is no proven benefit of using this herbal remedy in treating or preventing the common cold. In fact, current research suggests that it does not help.

### **Dextromethorphan Cough Medicines for Cough**

- The most common cough suppressant in OTC cough medications is dextromethorphan. Usually the letters "DM" appear in the name. An example is Robitussin DM.
- **Research:** Dextromethorphan in some research studies has been shown to reduce the frequency and severity of cough in adults (18 years or older) without significant adverse effects. However, other studies suggest that dextromethorphan is no better than placebo at reducing a cough.
- **Dextromethorphan and Adult Telephone Triage Guidelines:** The care advice in these guidelines continues to recommend DM containing cough syrups. The rationale for this is: DM may reduce cough to some extent in adults, adult patients may benefit from the placebo effect of DM, many patients demand a recommendation for a cough syrup, there is no OTC medicine that works better than DM, and generally DM has no side effects.
- **Use Cough Drop or Hard Candy Instead:** Cough drops can often be used instead of cough syrups. While some would consider them a placebo similar to cough medicines, they may actually reduce coughing by soothing an irritated throat. In addition they have the advantage of portability. Hard candy probably works just as well as an OTC cough drop.
- **Use Honey for Nocturnal Cough:** See information below.
- **Dextromethorphan - A Drug of Abuse:** It is important to note that DM has become a drug of abuse. This problem is seen most commonly in the adolescent population. Overdose symptoms can range from giggling and euphoria to hallucinations or coma.

### **Honey for Cough**

- **Recent Research Study:** A recent research study [Paul reference] compared honey to either dextromethorphan (DM) or no treatment for the treatment of nocturnal coughing. The study group contained 105 children age 2 to 18 years. Honey consistently scored the best for reducing cough frequency and cough severity. It also scored best for improving sleep. Dextromethorphan (DM) did not score significantly better than "no treatment" (showing its lack of efficacy).
- **How Might Honey Work?** One explanation for how honey works is that sweet substances naturally cause reflex salivation and increased airway secretions. These secretions may lubricate the airway and remove the trigger (or tickle) that causes a dry, nonproductive cough.
- **Adult Dosage:** 2 teaspoons (10 ml) at bedtime.

**Definition - Severe Difficulty Breathing:** Marked respiratory effort (struggling to breathe). Can only speak in single words. Cyanosis may occur. (Response: Activate EMS)

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