

UCSD Skaggs OTC Presentation

Start time: 6:10 pm

End time: 6:50 pm

Common Cold

- **Symptoms**
 - Sore throat
 - Sneezing
 - Runny nose
 - Congestion
 - Mild aches
 - Typically about 7 days
- **When to see a healthcare provider**
 - Fever higher than 101.5 F
 - Chest pain, shortness of breath
 - Chronic cardiopulmonary diseases
 - Immunocompromised
 - Advanced age (>60) or infants <9 months old
- **Non-pharmalogical Treatment for Adults**
 - **Prevention: good hygiene**
 - Hand hygiene
 - Sneeze/cough into elbow
 - Avoid touching eyes, nose, and mouth
 - Humidification with eucalyptus oil
 - Foods and fluids to soothe throat
 - Increase water intake
 - Warm saline gargles

Nasal/Sinus Congestion

- typically only want to treat the symptoms and not use other unnecessary medications to prevent disrupting the immune system from doing its work towards another immune response
- 1. **Saline nasal sprays/drops**
 - A. How it works: thins the mucus in the sinus cavities, relieves congestion and allows free airflow
- 2. **Saline irrigation**
 - A. More complete cleansing of nasal passages
 - B. How it works: flushing into one nostril, flows through sinus cavities and exits through other nostril, rinsing mucus from the nasal passages
- 3. **Humidifier/vaporizer**
 - A. How it works: moistures the air, helps thin the mucus
 - B. Less effective than medications and saline rinses but may help relieve symptoms and/or prevent congestion
- 4. **Hydration**

Complementary and Alternative Treatments

1. **Vitamin C**
 - A. Large doses (1-2g/day) may reduce duration of cold
 - B. Must start early (within the first 24 hours)
 - C. May reduce symptoms severity by 20 percent
 - D. Precaution: doses greater than or equal to 2g may cause diarrhea and other GI symptoms
2. **Cold-Eeze (zincs gluconate) lozenges**
 - A. Use within 24 hours of symptom onset
 - B. Precautions: taste distortion
3. **Echinacea**
 - A. May reduce common cold severity and duration

- B. Continue for 7-10 days

Pharmacologic Treatment for Adults

Nasal Congestion

1. Oral decongestants
 - A. Products: Sudafed, Sudafed PE
 - B. Onset: 30 min - 1 hr
 - C. Duration of action 6 hours (pseudoephedrine), 2.5 hours (phenylephrine)
 - D. Adverse effects
 - a. Increased blood pressure, heart rate, palpitations
 - b. Insomnia
 - c. Tachyphylaxis = decreased effectiveness with repeated use
 - E. Drug-drug interactions:
 - F. F
 - G. Contraindications
 - a. Coronary or ischemic heart disease
 - b. Uncontrolled hypertension
 - c. Hyperthyroidism
 - d. Diabetes mellitus
 - e. Pregnancy/lactation
 - H. Patient education: max of 7 days use, avoid use at night

Topic decongestants

1. Products: Afrin
 - A. Fast onset of action but more likely to get rebound congestion
 - B. Less systemic side effects
 - C.

Cough

- when to see healthcare provider:
 - Cough with thick yellow, tan, or green sputum
 - Fever > 103 F (adults) or fever > 102 F (children)
 - Shortness of breath, chest pain, unintended weight loss, drenching night-time sweats, chills, persistent headache
 - Chronic underlying disease associated with cough (e.g. asthma, COPD)
 - Count > 7 days or frequency recurrences
 - Suspected drug-associated cough

1. Expectorants
 - A. Products: Mucinex
 - B. Uses: acute, ineffective productive "wet" coughs
 - C. Adverse effects
 - a. Nausea, vomiting
 - b. Dizziness
2. Antitussives
 - A. Products: Delsym
 - B. Uses: suppression of a dry cough
 - C. Adverse effects
 - a. Nausea, vomiting, stomach discomfort

Sore Throat

1. Local anesthetic, antiseptics
 - A. Products: Cepacol, Hall's lozenges
 - B. For temporary relief of sore throat
 - C. For ages greater or equal to 2 years old

Flu Prevention

What is the flu?

- influenza is a contagious respiratory illness caused by influenza viruses
- Onset is sudden and symptoms include: fever, dry cough, sore throat, runny or stuffy nose, muscle

aches, headache, and fatigue

Common flu vs flu

- Cold symptoms are milder and do not result in serious health complications

CDC Guidelines and Recommendations

- influenza vaccine should be administered annually for anyone 6 months or older
- Child 6 months – 8 years receiving the influenza vaccine for first time

Vaccines and the Immune Response

1. Vaccines contain antigens, which are recognized by the immune system and evoke an immune response
2. Various immune cells are activated
3. Production of antibodies, which attack and destroy the antigen
4. Antigen is eliminated, then

Complications of Influenza

1. Pneumonia (most common)
 2. Exacerbation of underlying medical conditions
 3. Sinus and ear infections
 4. Hospitalization and death
- those at increased risk of serious complications: young children, adults older than 65 years, pregnant women

Common Myths

- Too many vaccines “use up” the immune system
 - FALSE! The immune system has the capacity to respond to extremely large numbers of antigens
 - There is no upper limit to the number of vaccines that can be given in one day
- Vaccines can cause autism
 - FALSE!
- The flu shot will give me the flu
 - FALSE! It takes two weeks for the body to develop immune protection
 - People can get sick from other respiratory viruses besides the flu
 - How well the vaccine works can vary between people
- Concerns about side effects
 - Somewhat true. However, the benefits greatly outweigh the risks
 - Possible side effects include arm soreness, transient fever

How do I know if I have the cold or the flu?

- flu is more abrupt compared to where the cold is more gradual

What's the best way for me not get the cold or flu this year?

- practice good hygiene
- Get the vaccine

APhA – American Pharmacists Association

OTC Clarity Student Organization

- educate younger generations about OTC

OTC Clarity

Cold and Flu
Winter 2023

What is OTC Clarity?

A community service project that includes one outreach to multiple local community pharmacies per quarter (Fall, Winter, Spring) that focuses on educating the community on nonpharmacologic and over-the-counter treatments for seasonally featured topics.

Disclaimer:

This presentation is for general education purposes only. Please consult your healthcare provider for specific questions about your individual healthcare needs.

Outline

- Common Cold
 - Symptoms
 - When to see a healthcare provider
 - Nonpharmacologic treatment
 - Pharmacologic treatment
- Flu Prevention
 - Centers for Disease Control and Prevention (CDC) guidelines and recommendations
 - Why it's important to get vaccinated
 - Common myths
- Kahoot!

COMMON COLD

Symptoms

- Sore throat
- Sneezing
- Runny nose
- Congestion
- Mild aches and pains
- Dry cough
- Typically last for ~7 days

When to see a healthcare provider

- ▶ Fever > 101.5°F
- ▶ Chest pain, shortness of breath
- ▶ Chronic cardiopulmonary diseases (e.g. asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF))
- ▶ Immunocompromised (e.g. HIV)
- ▶ Advanced age (>60) or infants < 9 months old
- ▶ Severe sore throat
- ▶ If symptoms worsen or additional symptoms develop

***Nonpharmacologic
Treatment For Adults***

Common Cold

➤ Prevention: **good hygiene**

- Hand hygiene - prevent spread of respiratory viruses, especially from younger children
- Sneeze/cough into elbow
- Avoid touching eyes, nose, mouth

➤ Humidification w/eucalyptus oil

➤ Foods and fluids to soothe throat

- Increase water intake
- Hot soup
- Tea with lemon and honey

➤ Warm saline gargles (antiseptic mouthwash)



How to Handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

 Duration of the entire procedure: 20-30 seconds



Apply a palmful of the product in a cupped hand, covering all surfaces:



Rub hands palm to palm:



Right palm over left dorsum with interlaced fingers and vice versa:



Palm to palm with fingers interlaced:



Backs of fingers to opposing palms with fingers interlocked:



Rotational rubbing of left thumb clasped in right palm and vice versa:



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa:



Once dry, your hands are safe.



World Health
Organization

Patient Safety

A World Alliance for Safer Health-Care

SAVE LIVES

Clean Your Hands

Nasal/Sinus Congestion

1. Saline nasal sprays/drops

- a. How it works: thins the mucus in the sinus cavities → relieves congestion and allows free airflow

2. Saline irrigation

- a. More complete cleansing of nasal passages
- b. How it works: flushing into one nostril → flows through sinus cavities and exits through other nostril → rinsing mucus from the nasal passages

3. Humidifier/vaporizer

- a. How it works: moisturizes the air → helps thin the mucus
- b. Less effective than medications and saline rinses but may help relieve symptoms and/or prevent congestion

4. Hydration

Complementary and Alternative Treatments

1. Vitamin C

- a. Large doses (1-2 g/day) may reduce duration of cold
- b. Must start early (within the first 24 hours)
- c. May reduce symptom severity by 20%
- d. Precaution: doses \geq 2 g may cause diarrhea and other GI symptoms

2. Cold-Eeze (zinc gluconate) lozenges

- a. Use within 24 hours of symptom onset
 - May reduce common cold duration and severity of symptoms
- b. Precautions: taste distortion, headache, dry mouth and/or throat, nausea
- c. Use no more than 5 days

3. Echinacea

- a. May reduce common cold severity and duration
- b. Continue for 7-10 days

Side Note: Evidence that these treatments are effective are weakly supported and largely debated.

***Pharmacologic Treatment
for Adults***

Nasal Congestion

1. Oral decongestants

- a. Products: Sudafed (pseudoephedrine), Sudafed PE (phenylephrine)
- b. Onset: 30 min. - 1 hour
- c. Duration of action: 6 hours (pseudoephedrine), 2.5 hours (phenylephrine)
- d. Adverse effects:
 - i. Increased blood pressure, heart rate, palpitations
 - ii. Insomnia (avoid evening doses)
 - iii. Tachyphylaxis = decreased effectiveness with repeated use (max 7 days of use)
- e. Drug-drug interactions: monoamine oxidase inhibitors (antidepressants)
- f. Precautions: benign prostatic hyperplasia, glaucoma

Nasal Congestion

- g. Contraindications:
- i. Coronary or ischemic heart disease
 - ii. Uncontrolled hypertension
 - iii. Hyperthyroidism
 - iv. Diabetes mellitus
 - v. Pregnancy/lactation
- h. Patient education: maximum 7 days of use, avoid dosing at night



Pseudoephedrine



Phenylephrine

Topical decongestants

1. Products: Afrin (oxymetazoline)

- Fast onset of action but more likely to get rebound congestion
- Less systemic side effects and drug interactions than oral decongestants
- Patient education: maximum 3 days of continuous use



Cough

➤ When to see a healthcare provider:

- Cough with thick yellow, tan, or green sputum
- Fever $\geq 103^{\circ}\text{F}$ (adults) or Fever $\geq 102^{\circ}\text{F}$ (children ≥ 4 y.o.)
- Shortness of breath (SOB), chest pain, unintended weight loss, drenching night-time sweats, chills, persistent headache
- Chronic underlying disease associated with cough (e.g. asthma, COPD)
- Cough > 7 days or frequent recurrences
- Suspected drug-associated cough

Cough

1. Expectorants

- a. Products: Mucinex (guaifenesin)
- b. Uses: acute, ineffective productive (“wet”) coughs
- c. Adverse effects (generally well-tolerated):
 - i. Nausea and vomiting
 - ii. Dizziness



2. Antitussives

- a. Products: Delsym (dextromethorphan)
- b. Uses: suppression of a dry cough
- c. Adverse effects:
 - i. Nausea, vomiting, stomach discomfort, constipation
 - ii. Respiratory depression
 - iii. Dizziness, drowsiness
- d. Drug-drug interactions: CNS depressants, alcohol



Sore Throat (Pharyngitis)

1. Local anesthetics, antiseptics

- Products: Cepacol (benzocaine), Hall's lozenges (menthol)
- For temporary relief of sore throat
- For ages ≥ 2 years old



FLU PREVENTION

What is the flu?

- Influenza is a contagious respiratory illness caused by influenza viruses
- The onset is sudden and symptoms include: fever, dry cough, sore throat, runny or stuffy nose, muscle aches, headache, and fatigue

Common cold vs. flu

- Both respiratory illnesses but caused by different viruses but because they share many common symptoms, it can be difficult to differentiate them
- Flu symptoms may include headache, higher fever, and chills
- Cold symptoms are usually **milder** and includes runny or stuffy nose
- Colds generally do not result in serious health complications

CDC Guidelines and Recommendations

- Influenza vaccine should be administered annually for anyone > 6 months of age
- Children 6 months - 8 years receiving the influenza vaccine for the 1st time: 2 doses \geq 4 weeks apart in the same season
- Minimum age for inactivated influenza vaccine is 6 months; 2 years for the live attenuated influenza vaccine

Vaccines and the Immune Response

1. Vaccines contain antigens, which are recognized by the immune system and evoke an immune response
2. Various immune cells are activated
3. Production of antibodies, which attack and destroy the antigen
4. Antigen is eliminated → immune cells form and remember the antigen in the future
5. Memory B and T cells quickly recognize antigen → immediately activate the immune response → prevent disease from occurring because the antigen is rapidly eliminated

Complications of Influenza

1. Pneumonia (most common)
 2. Exacerbation of underlying medical conditions
 3. Sinus and ear infections
 4. Hospitalization and death
- Those at increased risk of serious complications: young children, adults \geq 65 years old, pregnant women, and people with certain chronic medical conditions

Common Myths

- Too many vaccines “use up” the immune system
 - FALSE! The immune system has the capacity to respond to extremely large numbers of antigens
 - There is no upper limit to the number of vaccines that can be given in one day
- Vaccines can cause autism
 - FALSE! The FDA determined there is no causal link between vaccines and autism

Common Myths

- The flu shot will give me the flu
 - FALSE! It takes two weeks for the body to develop immune protection
 - People can get sick from other respiratory viruses besides the flu
 - How well the vaccine works can vary between people
- Concerns about side effects
 - Somewhat true. However, the benefits greatly outweigh the risks
 - Possible side effects include arm soreness, transient fever, febrile seizure (rare), allergic reaction
 - Possible risks of not getting vaccinated are much more serious

KAHOOT!!!!!!



Questions?



Frequently Asked Questions

- How do I know if I have the cold or the flu?
- What's the best way for me not get the cold or flu this year?
- What symptoms warrant a visit to the doctor's office?
 - Cold
 - Cough
- What are some good OTC and non-drug treatments that could help my cold/flu?

Thank you for your attention
and participation!