



The common cold and influenza

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Introduction

The common cold and influenza are respiratory illnesses. However, they are caused by different viruses. Because these two types of illnesses have similar symptoms, it can be difficult to tell the difference between them based on symptoms alone. Colds are usually milder than the flu and people with colds are more likely to have a runny or stuffy nose. In general, the flu is worse than the common cold, and symptoms such as fever, body aches, extreme tiredness, and dry cough are more common and intense.¹

The common cold

The common cold is an acute, self-limited viral infection of the upper respiratory tract (nose and throat) which may be caused by more than one of 200 different viruses.²⁻⁴ Rhinovirus is the most common cause, accounting for 10 to 40 percent of colds. Other common cold viruses include coronavirus and respiratory syncytial virus. Colds are highly contagious and they spread when droplets of fluid that contain a cold virus are transferred by touch. These droplets may also be inhaled.⁴ Preschool children are at greatest risk of frequent colds, but even healthy adults can expect to have a few colds each year.³ A cold may last for about one week, but some colds last longer, especially in children, the elderly and those in poor health.⁴

Influenza

Influenza is a common respiratory viral infection.^{5,6,7} It usually occurs during winter, either sporadically or in epidemics. Influenza is spread by respiratory droplets and contaminated

surfaces.⁷ There are three distinct types of influenza virus: A, B and C.⁷ Seasonal epidemics are caused by both Influenza A and B viruses and often occur in 2 waves. The first in schoolchildren and their household contacts (generally younger people) and the second mostly in household or institutionalised people, particularly the elderly.⁵

Symptoms

It is important to be able to distinguish between cold and flu symptoms. A cold is a milder respiratory illness when compared to the flu.⁸ After an incubation period of 24 to 72 hours, cold symptoms begin with a scratchy or sore throat, followed by sneezing, rhinorrhoea, nasal obstruction, and malaise. Temperature is usually normal, particularly when the pathogen is a rhinovirus or coronavirus. Nasal secretions are watery and profuse during the first days but may become more mucoid and purulent. However, mucopurulent secretions do not indicate a bacterial superinfection. Cough is usually mild but often lasts into the second week. Most symptoms due to uncomplicated colds resolve within 10 days. Colds may worsen asthma and chronic bronchitis.²

The incubation period for influenza ranges from 1 to 4 days with an average of about 48 hours. In mild cases, many symptoms are like those of a common cold (e.g. sore throat, rhinorrhoea). Mild conjunctivitis may also occur. Typical influenza in adults is characterised by sudden onset of chills, fever, cough, and generalised aches and pains (especially in the back and legs). Headache is prominent, often with photophobia. Children may experience nausea, vomiting, or abdominal pain. After 2 to 3 days, acute symptoms rapidly subside, although fever may last up to 5 days. Cough, weakness, sweating, and fatigue may persist for several days or occasionally for weeks.⁵

Management

Pharmacological agents

Over-the-counter cough and cold medications may provide temporary relief of symptoms.⁴

The ingredients listed below are found in many cold and flu medicines.

Table 1: Characteristic cold and flu symptoms⁸

Symptoms	Cold	Flu
Stuffy nose	Common	Sometimes
Sneezing	Usually	Sometimes
Sore throat	Common	Sometimes
Chest discomfort, cough	Mild to moderate; hacking cough	Common May become severe
Fever	Sometimes, usually mild	Usually
Headache	Occasionally	Common
General aches, pains	Slight	Usually; may be severe
Fatigue, weakness	Sometimes	Usually May last 2 to 3 weeks
Extreme exhaustion	Uncommon	Usually; at the beginning of the illness

Analgesics and anti-inflammatories

Analgesics such as paracetamol or anti-inflammatory agents such as aspirin and ibuprofen may be given to relieve the discomfort of fever, muscle pain or a sore throat.^{2,7} However, aspirin should be avoided in children or teenagers with influenza due to the possible link with the rare complication of Reye syndrome.⁷

Decongestants

Decongestants may be effective in reducing nasal congestion, sinus or ear pain.^{7,9} Nasal decongestants work by constricting the dilated blood vessels in the nasal mucosa. By reducing the swelling inside the nose, drainage of mucus and circulation of air are improved and the feeling of nasal stuffiness is relieved and this makes breathing easier. These medicines can be applied topically (e.g. oxymetazoline or xylometazoline) or be given orally (e.g. pseudoephedrine and phenylephrine).⁹ Intranasal decongestants may help to relieve a blocked nose, but should not be used for more than 4 or 5 consecutive days to avoid rebound nasal congestion.²

When taken orally, decongestants have the potential to keep patients awake because of their stimulating effects on the central nervous system. Decongestants may cause an increase in blood pressure, stimulation of the heart and may affect diabetic control because they can increase blood glucose levels. They should be used with caution in those with heart disease, hypertension, diabetes, and in those with hyperthyroidism.⁹

Antihistamines

The older antihistamines may reduce some of the symptoms of a cold such as a runny nose, itchy watery eyes and sneezing. For this reason, they are included in many cold and flu remedies, but may cause drowsiness.

Note: Recommendations against giving OTC cough and cold medicines to children younger than 2 years of age have been made. Over-the-counter cough and cold medicines don't effectively treat the underlying cause of a child's cold, and won't cure a child's cold or make it go away any sooner.

These medications also have potential side effects, including rapid heart rate and convulsions. When administering cough or cold medicines to an older child, carefully follow the label directions.³

Complementary agents

Zinc, echinacea, and vitamin C have all been evaluated as common cold therapies. However, none has been clearly shown to be beneficial.^{2,4}

Zinc

In studies with positive results, zinc seemed most effective when taken within 24 hours of the onset of symptoms.⁴ There is limited proof that zinc gluconate or acetate lozenges may reduce continuing symptoms at 7 days compared with placebo.⁹

Echinacea

Some echinacea preparations may be better than placebo or no treatment for the prevention and treatment of colds. However, due to variations in preparations containing echinacea, there is insufficient evidence to recommend a specific product.⁹

Vitamin C

It appears that for the most part taking vitamin C won't help the average person prevent colds. However, taking vitamin C at the onset of cold symptoms may shorten the duration of symptoms.³ A review article found that high-dose vitamin C (over 1 g per day) reduced the duration of colds by about half a day (a reduction of approximately 15% in duration).⁹

Tips to help ease and prevent cold and flu symptoms^{4,10,11}

- Get plenty of rest, especially if you have a fever. Rest helps the body fight infection
- Stop smoking and avoid second-hand smoke, which can make cold symptoms worse
- Drink plenty of fluids such as water, juice and clear soups. Fluids help keep the lining of the nose and throat from drying out, so that mucus remains moist and easy to clear from the nose. Fluids are also important because they help prevent dehydration
- Gargle with warm salt water a few times a day to relieve a sore throat. Throat sprays or lozenges may also help relieve the pain
- Avoid coffee, tea or soft drinks that contain caffeine. Also avoid any drinks that contain alcohol. Caffeine and alcohol may lead to dehydration, the opposite of what the body needs to recover
- Eating healthily, exercising and getting enough sleep also play a part in preventing colds and flu because these measures help boost the immune system
- Use a humidifier or vaporiser to moisten the air. This will help with nasal congestion
- Use a saline nasal spray or drops to thin nasal mucus. A bulb syringe may be used to suction mucus out of a baby's or child's nose

- Cover the mouth and nose when sneezing or coughing. To avoid contaminating the hands, cough or sneeze into a tissue and wash the hands frequently to reduce the spread of cold germs to others
- Avoid crowds and close contact with people who have a cold, especially during the first few days when they are most likely to spread the infection
- If a child has a cold, wash his or her toys after play
- The best way to avoid getting the flu is to get an annual influenza vaccine

Table 2: Factors that may increase the risk of developing influenza or its complications⁶

Age

- Seasonal influenza tends to target young children and older adults.

Living conditions

- People who live in facilities along with many other residents, such as nursing homes or military barracks, are more likely to develop influenza.

Chronic illnesses

- Chronic conditions, such as asthma, diabetes or heart problems, may increase the risk of influenza complications.

Pregnancy

- Pregnant women are more likely to develop influenza complications, particularly in the second and third trimesters.

Obesity

- People with a Body Mass Index of 40 kg/m² or more have an increased risk of complications from flu.

Weakened immune system

- Cancer treatments, anti-rejection drugs, corticosteroids and HIV/AIDS may weaken the immune system. This can make it easier to become infected with the influenza virus and may also increase the risk of developing complications.

Conclusion

Although OTC medicines cannot cure a cold or flu, they may help to relieve some of the associated symptoms. Many cold and flu products combine two or more categories of drugs to treat a variety of symptoms at the same time. It is therefore important to check the composition of cold and flu remedies to make sure that patients don't double-up on the same or similar

medicines. Also, check whether products are approved for use in children and avoid aspirin in children under 16 years. If the patient has flu symptoms and is at risk of complications e.g. a pregnant woman, the patient should be referred to a doctor.

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