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The Centers for Disease Control and Prevention (CDC) estimates that between 25 to 50 million patients, or between 5% and 20% of the United States population, contract the influenza virus each year. Due to the complications from the flu, such as pneumonia, it is believed that the flu may result in as many as 200,000 hospitalizations and 30,000 to 40,000 deaths annually. Children younger than age 5 are especially vulnerable to the flu. Adults are estimated to miss greater than 70 million work days due to influenza. Children miss almost 22 million days of school annually.

Americans suffer approximately 1 billion colds annually. Children contract the most colds annually with approximately six to 10. Adults average about two to four colds per year. People older than age 60 tend to have the least number of colds approximating one or fewer per year. The common cold accounts for about 19 million missed days of work for adults and almost 22 million missed days of school for children annually.

Colds can be caused by more than 200 viruses. Rhinoviruses are responsible for more than 50% of reported colds. Coronaviruses and RSV (respiratory syncytial viruses) account for about 10% of colds, respectively. Parainfluenza viruses, adenoviruses, echoviruses, and coxsackie viruses groups A and B are responsible for less than 5% of colds.

Flu Virus Facts

What is commonly referred to as "seasonal" flu is caused by highly contagious influenza viruses that are classified as A, B or C based upon their protein compositions. Influenza A and Influenza B are the more severe strains of flu and are capable of causing epidemics. Research has shown the Influenza A virus to be present on fomites (inanimate objects that can harbor viruses) found throughout homes and daycare centers during the flu season.

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The 2009 H1N1 virus, or "swine" flu, was first detected in the United States in April 2009. By June 2009, the World Health Organization proclaimed it as a pandemic flu virus.

Symptoms of seasonal flu and the 2009 H1N1 virus are similar. The 2009 H1N1 virus, however, appears less likely to cause fever and more likely to cause diarrhea than the seasonal flu virus. Some patients have shown little to no symptoms when infected with the 2009 H1N1 virus while others have rapidly developed serious complications.

Consequently, experts have predicted that this flu season could be unprecedented. According to the CDC, people between the ages of 5 and 49 are most vulnerable to the 2009 H1N1 virus. Vaccination priority should be given to the following patient types:

- Pregnant women
- People who live with or care for children younger than 6 months
- Healthcare and emergency medical services workers
- People between the ages of 6 months and 24 years
- Immunocompromised people and those with chronic health issues between the ages of 25 and 64

The 2009 H1N1 virus, along with the Eurasian swine viruses, is thought to have evolved from pig, avian and human flu strains. It is not clear how the new H1N1 will continue to evolve. It may stay the same (highly contagious but not very deadly). It could mutate, or reassort, with other flu viruses (such as bird H5N1), or it could disappear as a result of mutations making it harder to transmit (unlikely).

Cold and Flu Virus Transmission

Routes of viral transmission can be direct or indirect. Direct transmission occurs when infected persons cough or sneeze on someone else. Viruses are transmitted indirectly when a person becomes infected after touching a contaminated object and then touches their eyes, nose or mouth. Generally, colds and flu are transmitted through the following:

- Inhalation of virus containing cough and sneeze particles

- Contact with respiratory droplets
- Spray of cough droplets onto facial membranes
- Virus-contaminated hand to facial membrane contact

Prevention and Treatment

Reducing the transmission of cold and flu viruses involves hand washing, disinfecting, vaccination against influenza, and possible prescribing of antiviral medications.

Frequent and proper hand washing involves vigorous scrubbing with soap and warm water for 15 to 20 seconds. Proper hand washing includes the backs of hands, wrists, scrubbing between fingers and under finger nails. If hand washing is not possible, then an alcohol-based hand sanitizer is an acceptable substitute. Individuals should sneeze or cough into a tissue and immediately dispose of the used tissue. If no tissue is available, sneezing or coughing into the elbow is an option.

There is no vaccine available for the common cold due to the numerous viruses that may cause colds. Annual vaccinations are available for seasonal influenza. There is also a vaccine for the 2009 H1N1 virus. Antiviral medications may also be useful in both treating and preventing influenza. These include amantadine, rimantadine, oseltamivir, and zanamivir. The CDC recommends treatment with oseltamivir or zanamivir among those at higher risk for flu complications or those requiring hospitalization. According to the CDC, the 2009 H1N1 strain is also susceptible to oseltamivir and zanamivir. It appears to be resistant to amantadine and rimantadine. Recommendations may change as the flu season progresses. Thus, it is crucial that pharmacists stay up to date on the most recent CDC recommendations.

Disinfecting Tips

An effective approach for helping to prevent transmission of cold and flu viruses in the home and around the workplace is the disinfection of surfaces and objects with the use of an appropriate bleach solution or other disinfecting product, as directed.*

Area	What to Disinfect or Sanitize
Kitchen	Floors, countertops, plastic cutting boards, sponges, dish rags, appliance handles, garbage can lids and sinks.
Bathrooms	Flush and drawer handles, countertops, floors, bathtubs, showers, soap dishes, faucets, drains and trashcans.
Other Rooms	Plastic toys, door knobs, phones, remote controls, light switches, keyboards and objects touched and used frequently.
Workplace	Desktops, staplers, phone receivers, keyboards, appliance handles, water cooler handles and surfaces used in common areas.

*See www.bleachuses.com for more information. Use all products as directed.

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Each year, Americans suffer about 1 billion colds. There are 25 to 50 million cases of influenza, or the flu, documented annually. Flu can become complicated by conditions such as pneumonia. This is what makes the flu so potentially dangerous. Millions of days are lost from work and school every year due to colds and flu. It is estimated that half of the children younger than age 5 are more likely to catch the flu. Flu prevention is extremely important.

Colds and flu occur more often in the fall and winter. Colds are caused by more than 200 viruses. The rhinovirus is the most frequent cause of the common cold. "Seasonal" flu is caused by influenza viruses called A, B or C. Influenza A and Influenza B are the more severe flu viruses. This year a new strain of the flu called 2009 H1N1 or "swine flu" has also emerged in addition to seasonal influenza.

How to Tell: Cold v. Flu

People often ask pharmacists how to tell the difference between a cold and the flu. Cold symptoms tend to come on gradually. Colds usually start with a sore throat followed by nasal symptoms such as a stuffy or runny nose and then a cough. Fever is not very common in colds. If present, fever is low grade and more likely in children than adults. Cold symptoms generally last about a week.

Flu symptoms are more severe than cold symptoms. They develop quickly and are often described by patients as the feeling of "being run over by a truck". The symptoms, generally, are not similar to a "stomach bug". The main symptoms of seasonal flu include fever (which may be high), chills, body ache, dry and possibly hacking cough, and extreme fatigue. Nasal symptoms and sore throat may also occur but are not as common with the flu.

The symptoms of the 2009 H1N1 flu appear to be similar to seasonal flu. However, fever

may not always be present. Vomiting and diarrhea seem to be more frequent with the 2009 H1N1 strain than with the regular seasonal flu. Complications of flu include sinus infection, ear infection, bronchitis, and pneumonia. Call your doctor if you experience severe symptoms such as persistent fever, severe headache, inability to keep fluids down, painful swallowing, or persistent coughing, congestion or headaches.

Colds, seasonal flu and H1N1 or swine flu spread from person to person the same way. This occurs from coughing or sneezing on another person or by touching surfaces that are contaminated with the virus and then touching your nose or mouth.

What You Can Do

The most important thing you can do is help prevent the spread of cold and flu viruses by frequent hand washing. The correct way to wash your hands is with soap and warm water. Scrub your hands (including the backs of the hands), wrists, between the fingers and under the fingernails for 15-20 seconds. If it is not possible to wash hands, then use an alcohol-based hand sanitizer being sure to wash the entire hand as described for the soap and water wash. Dry with a clean towel or paper wipe. It is important to cover your mouth with a tissue when coughing and sneezing and then dispose of the used tissue. As an alternative, you can cough or sneeze into your elbow when you have nothing available to cover your mouth and nose.

Get vaccinated! Seasonal flu shots are available starting early each fall and should be received in October or November. Children older than 6 months of age can be given the traditional flu shot. There is also a nasal spray flu vaccine which can be given to healthy children over age 2. You should not get the flu shot if you have a severe allergy to chicken eggs or have had a severe reaction to the flu shot.

Both seasonal and 2009 H1N1 flu vaccines are available. These are two separate vaccines. Some children also require a second shot or booster vaccine following their first flu vaccination.

People most at risk for influenza should also consider getting the 2009 H1N1 flu vaccine. This includes the following people:

- Pregnant women
- People living with or caring for children younger than 6 months
- Healthcare workers
- People between the ages of 6 months and 24 years
- People with chronic health conditions or compromised immune systems between the ages of 25 and 64 years

Other ways to help boost your immunity include getting plenty of sleep, exercise, healthy eating and drinking lots of water. Avoid close contact with sick people. If you are sick, stay at home.

Colds and flu can be treated with medications such as over the counter antihistamines, decongestants, and analgesics. Do not give aspirin to children with flu-like symptoms. There are also antiviral medications available by prescription from your doctor for treatment of some patients with the flu. Colds and flu are caused by viruses. Antibiotics do not work for viral infections. Until your fever has been gone for at least 24 hours without the use of a fever-reducing medicine, continue to stay at home.

Importance of Disinfecting

Hard, non-porous surfaces in your home can be disinfected with an appropriate bleach solution as directed on the product label.* Disinfecting wipes are also available and convenient. Research has shown that the flu virus can exist on up to 60% of common household surfaces in homes with one sick child. The flu virus can live up to 48 hours on hard, non-porous surfaces such as door knobs and desks. It is important to disinfect these surfaces routinely when someone has the flu or flu-like symptoms.

Where, What and How to Disinfect or Sanitize*

Where	What	How
Kitchen & Bathroom	<input type="checkbox"/> Countertops <input type="checkbox"/> Highchairs <input type="checkbox"/> Sinks <input type="checkbox"/> Appliance handles <input type="checkbox"/> Plastic kids toys <input type="checkbox"/> Showers/Tubs	1. Pre-wash item 2. Mix 3/4 cup of bleach with 1 gallon of water 3. Wipe and let stand for 5 minutes 4. Rinse and air dry
Rest of the home	<input type="checkbox"/> Travel mugs <input type="checkbox"/> Baby bottles <input type="checkbox"/> Pet bowls <input type="checkbox"/> Plastic cutting boards <input type="checkbox"/> Teething rings	1. Pre-wash item 2. Mix 1 tablespoon of bleach with 1 gallon of water 3. Soak for 2 minutes 4. Drain and air dry

*See www.bleachuses.com for more information. Use all products as directed.

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