

# Seasonal Influenza

## The Flu

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### What is influenza?

Influenza (the flu) is a contagious respiratory illness caused by influenza viruses. There are two main types or strains of influenza virus; types A and B. Influenza A and B viruses are responsible for seasonal flu epidemics each year. Over the course of a flu season, different types (A & B) and subtypes of influenza A viruses can circulate and cause illness.

### What is seasonal influenza?

Seasonal influenza refers to the flu viruses that circulate during the winter months each year and for which vaccines are created to protect people each season.

### Who gets influenza?

Every year in the United States, 5-20% of the population gets the flu, more than 200,000 people are hospitalized from flu complications, and an average of 23,600 die from flu-related causes. Some people, including those over 65 or under five years of age, and people with certain conditions, such as pregnancy, asthma, arthritis, lupus, diabetes, cancer, HIV/AIDS, heart or kidney disease, or morbid obesity, are at high risk for serious flu complications.

### How is influenza spread?

The main way that influenza viruses are spread is person to person by "droplet spread." This happens when droplets from a cough or sneeze of an infected person are propelled through the air and deposited on the mouth, nose, or eyes of people nearby. Influenza viruses may also be spread when a person touches respiratory droplets on an object and then touches their mouth, nose, or eyes before washing their hands.

### What are the symptoms of influenza?

The flu usually comes on suddenly and may include these symptoms:

- Fever (usually high;  $\geq 101^{\circ}\text{F}$ )
- Headache
- Extreme tiredness
- Dry cough
- Muscle aches/body aches
- Weakness
- Nausea, vomiting, and diarrhea can occur but are more common in children than adults.

Influenza causes mild to severe illness and can be fatal.

### How soon after exposure to influenza do symptoms appear?

It can take one to four days from when a person is exposed to flu virus for symptoms to develop, with an average of about two days.

### When and for how long is a person able to spread influenza?

Most healthy adults may be able to infect others beginning one day before symptoms develop and up to five days after becoming sick. Children and immune-compromised people may pass the virus for longer than ten days. That means that a person may be able to pass on the flu to someone else before they feel ill, as well as during their illness. Some people can be infected with flu virus but have no symptoms. During this time, they can still spread influenza to others when they sneeze or cough.

### Does infection with influenza make a person immune to other strains of influenza?

In general, a person infected with a particular strain of influenza virus will have some immunity to closely related viruses – this immunity may persist for one or more years. The degree of protection depends on the health of the person involved. Young and healthy people with normal immune systems will likely have good immunity against the same or closely related viruses from one year to the next. However, people with weakened immune systems are less likely to have immunity that carries over in other years. It's important to remember that influenza viruses are constantly changing so immunity against one strain is less effective against new strains as influenza viruses evolve over time.

### What are the complications associated with influenza?

Complications of flu can include bacterial pneumonia, ear infections, sinus infections, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, and diabetes.

### Are there vaccines for influenza?

Yes. The single best way to prevent the flu is to get a flu vaccine each year. Within two weeks of vaccination, antibodies develop that protect against influenza virus infection.

Trivalent flu vaccines protect against two strains of influenza A and one strain of influenza B. Quadrivalent vaccines protect against an additional strain of influenza B.

For the 2016-17 season, only the injectable flu vaccine is recommended. This is a vaccine containing inactivated (killed) virus that is given with a needle.

- The standard flu vaccine is approved for use in people six months of age and older, including healthy people and people with chronic medical conditions. One trivalent vaccine formulation can be given with a jet injector for persons aged 18 through 64 years.
- Two flu shots, called Fluzone HD and FLUAD (new this year), are intended to create a stronger immune system response for persons 65 years and older.
- A flu shot called Fluzone Intradermal vaccine uses a needle that is 90% smaller than a regular flu vaccine needle and is available for those 18 through 64 years of age.

The nasal-spray flu vaccine was not recommended by the Advisory Committee on Immunization Practices (ACIP) for the 2016-17 flu season due to concerns over poor vaccine effectiveness and should not be used.

Recommendations for flu vaccination of persons with egg allergy have also been modified for the 2016-17 season. Persons with a history of egg allergy who have experienced only hives after exposure to egg can receive any licensed flu vaccine that is otherwise appropriate for the recipient's age and health status. Persons who report having had reactions to egg involving symptoms other than hives, such as angioedema, respiratory distress, light headedness, or recurrent emesis, may similarly receive any licensed flu vaccine that is otherwise appropriate for the recipient's age and health status. The selected vaccine should be administered in a medical setting and supervised by a healthcare provider who is able to recognize and manage severe allergic conditions. Studies indicate severe allergic reactions in people with egg allergies are unlikely.

### Who should get vaccinated for influenza?

It is recommended that all people six months of age or older get a flu vaccine. Everyone, every year.

Because they are at high risk of serious flu-related complications or because they live with or care for high risk persons, it is especially important for the following people to get an annual flu vaccine:

- Children younger than five and especially children younger than two
- Pregnant women
- Adults 65 years of age and older
- People of any age with chronic medical conditions
- People who live in long-term care facilities
- People with certain medical conditions, such as asthma, heart disease, chronic lung disease, blood disorders, kidney disorders, liver disorders, weakened immune systems, endocrine disorders (such as diabetes),

neurological and neurodevelopmental conditions, and/or people who are more than 100 lbs. overweight.

- People who live with or care for those at high risk for complications from flu, including:
  - a. Healthcare workers
  - b. Household contacts of persons at high risk for complications from the flu
  - c. Caregivers and household contacts of children less than six months of age, as these children are too young to be vaccinated.

During flu seasons when vaccine supplies are limited or delayed, the Advisory Committee on Immunization Practices (ACIP) makes recommendations regarding priority for vaccination based on this risk status.

### What can be done to prevent the spread of influenza?

- **Get vaccinated every year! This is the single best way to prevent seasonal flu.**
- **Avoid close contact with people who are sick.**
- **Stay home when you are sick.**  
If possible, stay home from work and school when you are sick. Also, keep your distance from others to protect them from getting sick. Postpone errands until you are well.
- **Cover your mouth and nose.**  
Cover your mouth and nose with a tissue when coughing or sneezing. Wash your hands after disposing of used tissues. If you don't have a tissue, sneeze or cough into your sleeve, not your hands.
- **Clean your hands.**  
Washing your hands often will help protect you from germs. When soap and water are not available, alcohol-based disposable hand wipes or gel sanitizers may be used.
- **Avoid touching your eyes, nose or mouth.**  
Germs are frequently spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose, or mouth.
- **Practice other good health habits**  
Get enough sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food.
- **Use antiviral drugs** as prescribed by your healthcare provider to treat and prevent the flu.

### For more information:

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