



medfacts

AN EDUCATIONAL HEALTH SERIES FROM NATIONAL JEWISH HEALTH™

Seasonal Influenza and the Flu Vaccine

What is influenza?

Influenza, also known as the “flu,” is an infection of the respiratory system that is caused by the influenza virus. Influenza is spread by coughing and sneezing. Influenza season peaks between late December and March, although this can vary each year. The flu is responsible for an average of 226,000 hospitalizations and 36,000 deaths every year in the U.S.

What are the symptoms?

Symptoms of the flu typically begin very quickly. Symptoms often include muscle aches, feeling very tired, fever with chills, headache, cough and a sore throat. In addition, children may also have a high fever, diarrhea and seizures. Most people recover from the flu in 1 – 2 weeks. However, some people, especially the very young and the elderly, can have flu-related complications that can be serious.

What are the complications of influenza?

In some people, the flu can lead to serious complications. Some people develop influenza pneumonia or a secondary bacterial pneumonia. People with asthma and other chronic lung diseases may have worsening of respiratory symptoms that require stronger treatment. They also have a higher risk of developing pneumonia from influenza. Myocarditis and pericarditis, which affect the heart, have also been linked to the flu. Other rare complications include Reye's syndrome, myositis and Guillain-Barre syndrome.

How does the flu vaccine work?

Fortunately, the flu vaccine can prevent many of the illnesses and deaths associated with the flu. The flu vaccine contains either killed or weakened (attenuated) influenza viruses that cause your immune system to develop antibodies. It takes two weeks to build an adequate level of antibodies to protect against the flu. When you are exposed to the flu, these

antibodies then fight off the flu viruses. While the vaccine does not always prevent the flu, the vaccine reduces the risk of complications and the severity of the illness. The protection lasts about 1 year.

Who should get the flu vaccine?

Most people benefit from receiving the flu vaccine. Anyone who would like to decrease the chances of getting the flu or spreading the flu to others can get the flu shot each year. The flu shot is strongly recommended for people who are at high risk for complications of the flu. Also, people who can give the flu to those who are at high risk should be vaccinated.

A yearly flu vaccine is strongly recommended for the following groups:

- All children and teens aged 6 through 18 years,
- Adults aged 50 and over,
- Nursing home and long-term care residents,
- Adults or children with certain chronic illnesses,
- People with chronic respiratory diseases such as asthma, COPD (emphysema, chronic bronchitis), cystic fibrosis or bronchiectasis,
- People who have a suppressed immune system,
- Children and teens aged 6 through 18 years on long-term aspirin therapy,
- Health care providers,
- Women who will be pregnant during the flu season,
- Household members of people in high risk groups and,
- Household members and child care providers of children less than 6 months of age.

The vaccine is safe for children six months of age and older. The first time children under nine years of age are vaccinated, they should be given two doses one month apart.

When is the flu vaccine given?

Each year the flu vaccine is developed with the three main strains of influenza virus. These strains have been identified as the cause for the illness in the upcoming year. The flu vaccine must be given every year for protection against the flu. The best time to receive the vaccine is October through November. The flu vaccine can be given as soon as it becomes available in late August or September. It can also be given later than November.

What types of flu vaccines are available this year?

There are two types of influenza vaccines available. One is inactivated influenza vaccine or the standard “flu shot” that contains killed influenza viruses. The other is a live, intranasal influenza vaccine.

Inactivated influenza vaccine - The flu shot has been given for many years and is approved for infants aged 6 months and older, children, teens and adults. It is the preferred vaccine for people who have chronic illness, a weakened immune system, health care providers and pregnant women.

Live, intranasal influenza vaccine - The other vaccine, a nasal spray is also available. It contains live, but weakened (attenuated) viruses. It is recommended for healthy children and adults aged 2 through 49 years.

What are common side effects of the flu vaccine?

The flu vaccine is safe for almost everyone. Because the vaccine is made from killed or weakened viruses, a person cannot “get” the flu from the vaccine. Some people experience a few minor side effects from the flu shot. These can include: swelling, redness or soreness at the area of the shot, muscle aches and a low-grade fever for a few days.

Minor side effects from the nasal spray include: runny or stuffy nose, cough, headache and muscle aches, chills, and fever. In addition children and teens may have abdominal pain or occasionally vomiting and diarrhea.

Severe side effects are rare, but include an allergic reaction which may occur several minutes to a few hours after the flu shot.

When the swine flu vaccine was given in 1976, more serious side effects, such as Guillain-Barre Syndrome, were reported. There has been no increased incidence of Guillain-Barre Syndrome since that time.

There has been some concern about reactions to Thimerasol, the preservative in the flu shot. It is used at a very small amount and has not been shown to be a problem. However, if you are concerned about Thimerasol, you can check with your doctor about a “preservative free” flu vaccine.

Who should not get the flu vaccine?

There are certain groups of people who should check with their doctor before getting a flu vaccine. These include:

- People who have had a severe reaction to a flu shot in the past,
- People who developed Guillain-Barre Syndrome 6 weeks after getting a flu shot and,
- People who have a severe allergy to egg.

What if a person is allergic to eggs?

Because the flu vaccine has been grown on egg protein, the flu vaccine is not recommended for people who have a history of **severe** egg allergy. However, if you have been able to eat eggs, it may be possible for you to receive the flu vaccine. Many people who believe they are allergic to eggs tolerate the flu vaccine. At National Jewish, these people are first skin tested to egg and then to the vaccine. If the testing is negative, the vaccine is given in our clinic and the person is watched closely. For some people who are allergic to the vaccine, it can be given in smaller doses under close

supervision. This can require several shots over many hours. This is only done when the person is at high risk for complications of the flu.

What if someone still gets the flu?

Treatment with antiviral medicine is available when someone gets the flu. These medicines help lessen the symptoms and the length of time a person is ill. Antiviral medicines must be started within the first two days after symptoms begin. These medicines include:

- Relenza® (zanamivir)
- Tamiflu® (oseltamivir)

What is Novel H1N1 Flu?

The Novel H1N1 flu was first identified in the United States in April, 2009. H1N1 flu, first known as the swine flu, is an infection of the respiratory system that is caused by the H1N1 virus. The seasonal flu vaccine is not protective against the H1N1 flu. A vaccine for the H1N1 will be available.

What about the pneumococcal vaccine?

The pneumococcal vaccine can lessen the chance of getting pneumococcal pneumonia, which can occur as a major complication of the flu or without the flu. The pneumococcal vaccine, however, is not a substitute for the flu vaccine. The pneumococcal vaccine helps to protect someone from 23 strains of pneumococcal bacteria. It is generally recommended for many of the same high-risk people for whom influenza vaccine is recommended. People with COPD, congestive heart failure, cirrhosis, renal failure, diabetes or Hodgkin's disease should be given the pneumococcal vaccine. In addition, people over 65 years of age and those with asymptomatic HIV infection should receive the vaccine. Native Americans are also at increased risk and should receive the vaccine. The pneumococcal vaccine may be repeated in five to seven years. It is safe to receive both the influenza and pneumococcal vaccines at the same time.

Please discuss any questions you have about the influenza vaccine or the pneumococcal vaccine with your health care provider. The Center for Diseases Control and Prevention (CDC) has helpful Vaccine Information Statements (VIS) at www.cdc.gov/vaccines.

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