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<http://www.cdc.gov/flu/about/qa/flushot.htm>

Questions & Answers

Seasonal Flu Shot

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What is the flu shot?

The flu shot is an inactivated vaccine (containing killed virus) that is given with a needle, usually in the arm. It contains three seasonal influenza viruses that are grown in eggs. The seasonal flu vaccine protects against three influenza viruses. The seasonal flu vaccine protects against three influenza viruses that research indicates will be most common during the upcoming season. The 2010-2011 flu vaccine will protect against 2009 H1N1, and two other influenza viruses (an H3N2 virus and an influenza B virus).

Who should get a seasonal flu shot?

On February 24, 2010 vaccine experts voted that everyone 6 months and older should get a flu vaccine each year starting with the 2010-2011 influenza season. CDC's Advisory Committee on Immunization Practices (ACIP) voted for "universal" flu vaccination in the U.S. to expand protection against the flu to more people. While everyone should get a flu vaccine each flu season, it's especially important that certain people get vaccinated either because they are at high risk of having serious flu-related complications or because they live with or care for people at high risk for developing flu-related complications. While everyone should get a flu vaccine each flu season, it's especially important that the following groups get vaccinated either because they are at high risk of having serious flu-related complications or because they live with or care for people at high risk for developing flu-related complications:

1. Pregnant women

2. Children younger than 5, but especially children younger than 2 years old
3. People 50 years of age and older
4. People of any age with certain chronic medical conditions
5. People who live in nursing homes and other long-term care facilities
6. People who live with or care for those at high risk for complications from flu, including:
 1. Health care workers
 2. Household contacts of persons at high risk for complications from the flu
 3. Household contacts and out of home caregivers of children less than 6 months of age (these children are too young to be vaccinated)

Use of the Nasal Spray Flu Vaccine

It should be noted that vaccination with the nasal-spray flu vaccine is always an option for healthy* persons aged 2-49 years who are not pregnant.

Who should not get a flu shot?

Talk with a doctor before getting a flu shot if you:

1. Have ever had a severe allergic reaction to eggs or to a previous flu shot **or**
2. People with a history of Guillain–Barré Syndrome that occurred after receiving influenza vaccine

If you are sick with a fever when you go to get your flu shot, you should talk to your doctor or nurse about getting your shot at a later date. However, you can get a flu shot at the same time you have a respiratory illness without fever or if you have another mild illness.

How effective is the flu shot?

In studies of the seasonal flu shot, when the “match” between vaccine viruses and circulating viruses is close, the vaccine has been shown to prevent influenza in about 70%-90% of healthy persons younger than age 65 years. Among elderly persons living outside chronic-care facilities (such as nursing homes) and those persons with long-term (chronic) medical conditions (such as asthma, diabetes, or heart disease), the flu shot has been shown to be between 30% and 70% effective in preventing hospitalization for pneumonia and influenza. Among elderly nursing home residents, the flu shot has been shown to be most effective in preventing severe illness, secondary complications, and deaths related to the flu. In this population, the shot has been shown to be between 50% and 60% effective in preventing hospitalization or pneumonia and 80% effective in preventing death from the flu.

What are the risks from getting a flu shot?

The viruses in the flu shot are killed (inactivated), so you cannot get the flu from a flu shot. The risk of a flu shot causing serious harm, or death, is extremely small.

However, a vaccine, like any medicine, may rarely cause serious problems, such as severe allergic reactions. Almost all people who get influenza vaccine have no serious problems from it.

What are the side effects that could occur?

- Soreness, redness, or swelling where the shot was given
- Fever (low grade)
- Aches

If these problems occur, they begin soon after the shot and usually last one to two days.

Can severe problems occur?

- Life-threatening allergic reactions are very rare. Signs of serious allergic reaction can include breathing problems, hoarseness or wheezing, hives, paleness, weakness, a fast heartbeat, or dizziness. If they do occur, it is within a few minutes to a few hours after the shot. These reactions are more likely to occur among persons with a severe allergy to eggs, because the viruses used in the influenza vaccine are grown in hens' eggs. People who have had a severe reaction to eggs or to a flu shot in the past should not get a flu shot before seeing a physician.
- Guillain-Barré syndrome: Normally, about one person per 100,000 people per year will develop Guillain-Barré syndrome (GBS), an illness characterized by fever, nerve damage, and muscle weakness. In 1976, vaccination with the swine flu vaccine was associated with getting GBS. Several studies have been done to evaluate if other flu vaccines since 1976 were associated with GBS. Only one of the studies showed an association. That study suggested that one person out of 1 million vaccinated persons may be at risk of GBS associated with the vaccine.
- More facts about potential side effects of the seasonal influenza vaccine can be found in Prevention & Control of Influenza - Recommendations of the Advisory Committee on Immunization Practices (ACIP).

What should I do if I have had a serious reaction to seasonal influenza vaccine?

- Call a doctor, or get to a doctor right away.
- Tell your doctor what happened, the date and time it happened, and when you got the flu shot.
- Ask your doctor, nurse, or health department to file a Vaccine Adverse Event Reporting System (VAERS) form, or call VAERS at 1-800-822-7967.

Can the flu shot give me the flu?

No, a flu shot cannot cause flu illness. The viruses contained in flu shots are inactivated (killed), which means they cannot cause infection. Flu vaccine

manufacturers kill the viruses used in the vaccine during the process of making vaccine, and batches of flu vaccine are tested to make sure they are safe. In randomized, blinded studies, where some people got flu shots and others got saltwater shots, the only differences in symptoms was increased soreness in the arm and redness at the injection site among people who got the flu shot. There were no differences in terms of body aches, fever, cough, runny nose or sore throat.

More information about these studies is available at:

- Carolyn Bridges et al. (2000). Effectiveness and cost-benefit of influenza vaccination of healthy working adults: A randomized controlled trial. *JAMA*. 284(13):1655–1663.
- Kristin Nichol et al. (1995). The effectiveness of vaccination against influenza in healthy working adults. *New England Journal of Medicine*. 333(14): 889-893.

Why do some people not feel well after getting the flu shot?

The most common side effect of the flu vaccine in adults is soreness at the spot where the shot was given, which usually lasts less than two days. The soreness is often caused by a person's immune system making protective antibodies to the killed viruses in the vaccine. These antibodies are what allow the body to fight against flu. The needle stick may also cause some soreness at the injection site. According to the Advisory Committee on Immunization Practices (ACIP), rare symptoms include fever, muscle pain, and feelings of discomfort or weakness. If these problems occur, they are very uncommon and usually begin soon after the shot and last 1-2 days.

What about people who get a seasonal flu vaccine and still get sick with flu-like symptoms?

There are several reasons why someone might get flu-like symptoms even after they have been vaccinated against the flu.

1. People may be exposed to an influenza virus shortly before getting vaccinated or during the two-week period that it takes the body to gain protection after getting vaccinated. This exposure may result in a person becoming ill with flu before the vaccine begins to protect them.
2. People may become ill from other (non-flu) viruses that circulate during the flu season, which can also cause flu-like symptoms (such as rhinovirus).
3. A person may be exposed to an influenza virus that is not included in the seasonal flu vaccine. There are many different influenza viruses that circulate every year. The flu shot protects against the 3 viruses that research suggests will be most common. Unfortunately, some people can remain unprotected from flu despite getting the vaccine. This is more likely to occur among people that have weakened immune systems. However, even among people with weakened immune systems, the flu

vaccine can still help prevent influenza complications. For more information about the effectiveness of the flu vaccine, see [How Well Does the Seasonal Flu Vaccine Work?](#)

Seasonal influenza vaccine provides the best protection available from seasonal flu – even when the vaccine does not closely match circulating flu strains, and even when the person getting the vaccine has a weakened immune system. Vaccination can lessen illness severity and is particularly important for people at high risk for serious flu-related complications and for close contacts of high-risk people.