
Misconceptions about Seasonal Influenza and Influenza Vaccines

Questions & Answers

Misconceptions about the flu shots

Can a flu shot give you the flu?

No, a flu shot cannot cause flu illness. The influenza viruses contained in a flu shot 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 get flu shots and others get salt-water 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 trial⁵. *JAMA*. 284(13):1655–1663.
- Kristin Nichol et al. (1995). The effectiveness of vaccination against influenza in healthy working adults⁶. *New England Journal of Medicine*. 333(14): 889-893.

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

The most common side effect of seasonal flu shots in adults has been 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 seasonal flu.

1. People may be exposed to one of the influenza viruses in the vaccine 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 protection from the vaccine takes effect.
2. People may become ill from non-flu viruses that circulate during the flu season, which can also cause flu-like symptoms (such as rhinovirus). Flu vaccine will not protect people from respiratory illness that is not caused by flu viruses.
3. A person may be exposed to an influenza virus that is very different from the viruses included in the vaccine. For example, the seasonal flu vaccine will not protect against the new 2009 H1N1 virus because this virus is so different from seasonal H1N1 viruses that normally spread in humans and is very different from the H1N1 virus contained in the seasonal vaccine. There are many different influenza viruses. For more information, see [“Influenza \(Flu\) Viruses.”](#)
4. 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 or the elderly. However, even among these people, a flu vaccine can still help prevent influenza complications. For more information about the effectiveness of the seasonal flu vaccine, see [“How Well Does the Seasonal Flu Vaccine Work?”](#)

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 exactly match circulating seasonal 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 close-contacts of high-risk people. Children under 6 months old are the pediatric group at highest risk of influenza complications, but they are too young to get a flu vaccine. The best way to protect young children is to make sure members of their household and their caregivers are vaccinated.

Does getting vaccinated against seasonal flu early in the season pose a risk that immunity may wane before the end of the season?

Seasonal flu vaccination provides protection against the influenza strains contained in the vaccine through one influenza season. Vaccination can begin as soon as vaccine is available. Studies have not demonstrated a benefit of receiving more than one dose during an influenza season, even among elderly persons with weakened immune systems.

Misconceptions about the nasal spray flu vaccine

Can a nasal spray flu vaccine give you the flu?

Unlike the flu shot, the nasal spray flu vaccine does contain live viruses. However, the viruses are attenuated (weakened) and cannot cause flu illness. The weakened viruses are cold-adapted, which means they are designed to only cause infection at the cooler temperatures found within the nose. The viruses cannot infect the lungs or other areas where warmer temperatures exist. Some children and young adults 2-17 years of age have reported experiencing mild reactions after receiving nasal spray flu vaccine, including runny nose, nasal congestion or cough, chills, tiredness/weakness, sore throat and headache. Some adults 18-49 years of age have reported runny nose or nasal congestion, cough, chills, tiredness/weakness, sore throat and headache. These side effects are mild and short-lasting, especially when compared to symptoms of seasonal influenza infection.

Misconceptions about the timing of seasonal influenza vaccination

Is it too early to get a flu vaccine in September?

No. CDC recommends that providers begin to offer flu vaccine as soon as it becomes available in the fall. Immunity from vaccination will last throughout the year.

Is it too late to get vaccinated after Thanksgiving (or the end of November)?

No. Vaccination can still be beneficial as long as influenza viruses are circulating. CDC recommends that providers begin to offer influenza vaccination as soon as vaccine becomes available in the fall, but if you have not been vaccinated by Thanksgiving (or the end of November), it can still be protective to get vaccinated in December or later. Influenza is unpredictable and seasons can vary. Seasonal influenza disease usually peaks in January or February most years, but disease can occur as late as May.

Misconceptions about "stomach flu"

Is the "stomach flu" really the flu?

No. Many people use the term "stomach flu" to describe illnesses with nausea, vomiting or diarrhea. These symptoms can be caused by many different viruses, bacteria or even parasites. While vomiting, diarrhea, and being nauseous or "sick to your stomach" can sometimes be related to the flu – more commonly in children than adults – these problems are rarely the main symptoms of influenza. The flu is a respiratory disease and not a stomach or intestinal disease.