

Misconceptions about Seasonal Flu and Flu Vaccines

Questions & Answers from the CDC*

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.

•Carolyn Bridges et al. (2000). Effectiveness and cost-benefit of influenza vaccination of healthy working adults: A randomized controlled trial.
•Kristin Nichol et al. (1995). The effectiveness of vaccination against influenza in healthy working adults. *NEJM Medicine*. 333(14): 889-893.

CAN THE NASAL SPRAY FLU VACCINE GIVE YOU THE FLU?

Unlike the flu shot, the nasal spray vaccine does contain live viruses. However, the viruses contained in the nasal spray flu vaccine are attenuated (i.e., weakened), which means they cannot cause flu illness. These weakened viruses are also cold-adapted, which means they are designed to only cause mild infection at the cooler temperatures found within the nose. These viruses cannot infect the lungs or other areas of the body where warmer temperatures exist.

IS IT BETTER TO GET THE FLU THAN THE FLU VACCINE?

No. Flu is a serious disease, particularly among young children, older adults, and people with certain chronic health conditions, such as asthma, heart disease or diabetes. Any flu infection can carry a risk of serious complications, hospitalization or death, even among otherwise healthy children and adults. Therefore, getting vaccinated is a safer choice than risking illness to obtain immune protection.

DO I REALLY NEED A FLU VACCINE EVERY YEAR?

Yes. CDC recommends a yearly flu vaccine for just about everyone 6 months and older, even when the viruses

the vaccine protects against have not changed from the previous season. The reason for this is that a person's immune protection from vaccination declines over time, so an annual vaccination is needed to get the "optimal" or best protection against the flu.

WHY DO SOME PEOPLE NOT FEEL WELL AFTER GETTING THE SEASONAL FLU VACCINE?

Some people report having mild reactions to flu vaccination. Common reactions to the flu shot and the nasal spray flu vaccine are described below.

Reactions to the flu shot:

The most common reaction to the flu shot in adults has been soreness, redness or swelling at the spot where the shot was given. This usually lasts less than two days. This initial soreness is most likely the result of the body's early immune response reacting to a foreign substance entering the body. Other reactions following the flu shot are usually mild and can include a low grade fever and aches. If these reactions occur, they usually begin soon after the shot and last 1-2 days. The most common reactions people have to flu vaccine are considerably less severe than the symptoms caused by actual flu illness.

Reactions to nasal spray flu vaccine:

People also may have mild reactions to the nasal spray vaccine. 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.

WHAT ABOUT SERIOUS REACTIONS TO FLU VACCINE?

Serious allergic reactions to flu vaccines are very rare. If they do occur, it is usually within a few minutes to a few hours after the vaccination. While these reactions can be life-threatening, effective treatments are available.

* Source: Center for Disease Control (CDC) [cdc.gov/flu/about/qa/misconceptions](https://www.cdc.gov/flu/about/qa/misconceptions)

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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 a flu-like illness, even after they have been vaccinated against flu:

1. One reason is that some people can become ill from other respiratory viruses besides flu such as rhinoviruses, which are associated with the common cold, cause symptoms similar to flu, and also spread and cause illness during the flu season. The flu vaccine only protects against influenza viruses, not other viruses.
2. Another explanation is that it is possible to be exposed to influenza viruses, which cause the flu, shortly before getting vaccinated or during the two-week period after vaccination that it takes the body to develop immune protection. This exposure may result in a person becoming ill with flu before protection from the vaccine takes effect.
3. A third reason why some people may experience flu like symptoms despite getting vaccinated is that they may have been exposed to an influenza virus that is very different from the viruses the vaccine is designed to protect against. The ability of a flu vaccine to protect a person depends largely on the similarity or “match” between the viruses selected to make the vaccine and those spreading and causing illness. There are many different influenza viruses that spread and cause illness among people.
4. The final explanation for experiencing flu-like symptoms after vaccination is that unfortunately, the flu vaccine doesn't always provide adequate protection against the flu. This is more likely to occur among people that have weakened immune systems or people age 65 and older.

CAN VACCINATING SOMEONE TWICE PROVIDE ADDED IMMUNITY?

In adults, studies have not demonstrated a benefit of receiving more than one dose during an influenza season, even among elderly persons with weakened immune systems. Except for some children, only one dose of flu vaccine is recommended each season.

SHOULD I WAIT TO GET VACCINATED SO THAT MY IMMUNITY LASTS THROUGH THE END OF THE SEASON?

No. CDC recommends that influenza vaccination begin as soon as flu vaccine becomes available and continues throughout the flu season. The flu season is unpredictable, and since it takes about two weeks after vaccination for antibodies to develop in the body that protect against influenza virus infection, it is best that people get vaccinated early so they are protected before influenza begins spreading in their community. While immunity can vary by person, previously published studies suggest that immunity lasts through a full flu season. Although adults 65 and older typically have a reduced immune response to flu vaccination compared with young healthy adults, their immune protection still extends through one flu season. In addition, a review of published studies concluded that no clear evidence exists that immunity declines more rapidly in the elderly. Note: The high-dose vaccine for people aged 65 and older is intended to create a stronger immune response in this age group.

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.

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.

* Source: Center for Disease Control (CDC) [cdc.gov/flu/about/qa/misconceptions](https://www.cdc.gov/flu/about/qa/misconceptions)