

## Influenza (Flu)

# Misconceptions about Seasonal Flu and Flu Vaccines

## Misconceptions about Flu Vaccines

### Can a flu vaccine give you the flu?

No, flu vaccines cannot cause flu illness. Flu vaccines given with a needle (i.e., flu shots) are currently made in two ways: the vaccine is made either with a) flu viruses that have been 'inactivated' (killed) and that therefore are not infectious, or b) using only a single gene from a flu virus (as opposed to the full virus) in order to produce an immune response without causing infection. This is the case for [recombinant influenza vaccines](#).

### Are any of the available flu vaccines recommended over the others?

For the 2019-2020 flu season, the [Advisory Committee on Immunization Practices](#) recommends annual influenza (flu) vaccination for everyone 6 months and older with any licensed, influenza vaccine that is appropriate for the recipient's age and health status, including inactivated influenza vaccine (IIV), recombinant influenza vaccine (RIV), or live attenuated nasal spray influenza vaccine (LAIV4) with no preference expressed for any one vaccine over another.

There are [many vaccine options](#) to choose from, but the most important thing is for all people 6 months and older to get a flu vaccine every year. If you have questions about which vaccine is best for you, talk to your doctor or other health care professional.

### Is it better to get the flu than the flu vaccine?

No. Flu can be 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. The most common side effects from flu shots are soreness, redness, tenderness or swelling where the shot was given. Low-grade fever, headache and muscle aches also may occur. If these reactions occur, they usually begin soon after the shot and last 1-2 days. In randomized, blinded studies, where some people get inactivated 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.

Side effects from the nasal spray flu vaccine may include: runny nose, wheezing, headache, vomiting, muscle aches, fever, sore throat and cough. If these problems occur, they usually begin soon after vaccination and are mild and short-lived. The most common reactions people have to flu vaccines are considerably less severe than the symptoms caused by actual flu illness.

- 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](#)  . New England Journal of Medicine. 333(14): 889-893.

## 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.

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

There are several reasons why someone might get a flu symptoms, 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, not other illnesses.
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 a flu 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 flu viruses that spread and cause illness among people. For more information, see [Influenza \(Flu\) Viruses](#).
4. The final explanation for experiencing flu symptoms after vaccination is that the flu vaccine can [vary in how well it works](#) and some people who get vaccinated may still get sick.

## Can vaccinating someone twice provide added immunity?

In adults, studies have not shown a benefit from getting more than one dose of vaccine during the same influenza season, even among elderly persons with weakened immune systems. [Except for some children](#), only one dose of flu vaccine is recommended each season.

## Is it true that getting a flu vaccine can make you more susceptible to other respiratory viruses?

There was [one study](#)  (published in 2012) that suggested that influenza vaccination might make people more susceptible to other respiratory infections. After that study was published, many experts looked into this issue further and conducted additional studies to see if the findings could be replicated. No other studies have found this effect. For example, [this article \[99 KB, 5 pages\]](#)  in Clinical Infectious Diseases (published in 2013). It’s not clear why this finding was detected in the one study, but the preponderance of evidence suggests that this is not a common or regular occurrence and that influenza vaccination does not, in fact, make people more susceptible to other respiratory infections.

## Misconceptions about Flu Vaccine Effectiveness

Influenza (flu) vaccine effectiveness (VE) can vary. The protection provided by a flu vaccine depends on the age and health status of the person getting the vaccine, and the similarity or “match” between the viruses in the vaccine and those in circulation. For more information, see [Vaccine Effectiveness – How well does the Flu Vaccine Work](#). For information specific to this season, visit [About the Current Flu Season](#).

There are many reasons to get an influenza (flu) vaccine each year. Below is a summary of the benefits of flu vaccination, and selected scientific studies that support these benefits.

- [Flu vaccination](#) can keep you from getting sick with flu.

- Flu vaccine prevents millions of illnesses and flu-related doctor's visits each year. For example, during [2017-2018](#), flu vaccination prevented an estimated 7.1 million influenza illnesses, 3.7 million influenza-associated medical visits, and 109,000 influenza-associated hospitalizations, and 8,000 influenza-associated deaths.
- During seasons when the flu vaccine viruses are similar to circulating flu viruses, flu vaccine has been shown to reduce the risk of having to go to the doctor with flu by [40 percent to 60 percent](#).
- **Flu vaccination can reduce the risk of flu-associated hospitalization for children, working age adults, and older adults.**
  - Flu vaccine prevents tens of thousands of hospitalizations each year. For example, during [2017-2018](#), flu vaccination prevented an estimated 109,000 flu-related hospitalizations.
  - A [2014 study](#)  showed that flu vaccine reduced children's risk of flu-related pediatric intensive care unit (PICU) admission by 74% during flu seasons from 2010-2012.
  - In recent years, [flu vaccines have reduced the risk of flu-associated hospitalizations among older adults](#)  on average by about 40%.
  - A [2018 study](#) showed that from 2012 to 2015, flu vaccination among adults reduced the risk of being admitted to an intensive care unit (ICU) with flu by 82 percent.
- **Flu vaccination is an important preventive tool for people with chronic health conditions.**
  - Flu vaccination has been associated with [lower rates of some cardiac events](#)  among people with heart disease, especially among those who had had a cardiac event in the past year.
  - Flu vaccination can reduce worsening and hospitalization for flu-related chronic lung disease, such as in persons with chronic obstructive pulmonary disease (COPD).
  - Flu vaccination also has been shown in [separate studies](#) to be associated with reduced hospitalizations among people with [diabetes](#)  and [chronic lung disease](#) .
- **Flu vaccination helps protect women during and after pregnancy.**
  - Vaccination reduces the risk of flu-associated acute respiratory infection in pregnant women by about [one-half](#).
  - A [2018 study](#)  that included influenza seasons from 2010-2016 showed that getting a flu shot reduced a pregnant woman's risk of being hospitalized with flu by an average of 40 percent.
  - A number of [studies](#) have shown that in addition to helping to protect pregnant women, a flu vaccine given during pregnancy helps protect the baby from flu for several months after birth, when he or she is not old enough to be vaccinated.
- **Flu vaccine can be life-saving in children.**
  - A 2017 [study](#) was the first of its kind to show that flu vaccination can significantly reduce a child's risk of dying from flu.
- **Flu vaccination has been shown in several studies to reduce severity of illness in people who get vaccinated but still get sick.**
  - A 2017 [study](#) showed that flu vaccination reduced deaths, intensive care unit (ICU) admissions, ICU length of stay, and overall duration of hospitalization among hospitalized flu patients.
  - A [2018 study](#)  showed that among adults hospitalized with flu, vaccinated patients were 59 percent less likely to be admitted to the ICU than those who had not been vaccinated. Among adults in the ICU with flu, vaccinated patients on average spent 4 fewer days in the hospital than those who were not vaccinated.
- **Getting vaccinated yourself may also protect people around you, including those who are more vulnerable to serious flu illness, like babies and young children, older people, and people with certain chronic health conditions.**

\*References for the studies listed above can be found at [Publications on Influenza Vaccine Benefits](#). Also, see the [A Strong Defense Against Flu: Get Vaccinated!](#)  [237 KB, 2 pages] fact sheet.

## Misconceptions about the Timing of Seasonal Influenza Vaccination

### Should I wait to get vaccinated so that my immunity lasts through the end of the season?

CDC recommends that people get a flu vaccine by the end of October. Getting vaccinated later, however, can still be beneficial. As long as flu viruses are circulating, it is not too late to get vaccinated, even in January or later. While seasonal flu outbreaks can happen as early as October, most of the time flu activity peaks between December and February,

although activity can last as late as May. Since it takes about two weeks after vaccination for antibodies to develop in the body that protect against flu virus infection, it is best that people get vaccinated in time to be protected before flu viruses begin spreading in their community.

How long you are immune or your “duration of immunity” is discussed in the [ACIP recommendations](#). While delaying getting of vaccine until later in the fall may lead to higher levels of immunity during winter months, this should be balanced against possible risks, such as missed opportunities to receive vaccine and difficulties associated with vaccinating a large number of people within a shorter time period.

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

No. Vaccination can still be beneficial as long as flu viruses are circulating. 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. Flu is unpredictable and seasons can vary. Seasonal flu disease usually peaks between December and March most years, but disease can occur as late as May.

## Misconceptions about Physician Consent for Vaccination

### Do pregnant women or people with pre-existing medical conditions need special permission or written consent from their doctor to receive the flu vaccine?

No. There is no recommendation for [pregnant women](#) or people with pre-existing medical conditions to seek special permission or secure written consent from their doctor for vaccination if they get vaccinated at a worksite clinic, pharmacy or other location outside of their physician’s office. With rare exception, CDC recommends an annual flu vaccine for everyone 6 months and older, including pregnant women and people with medical conditions.

A variety of flu vaccine products are available ([Table 1](#)). Vaccine providers should be aware of the approved age indications of the vaccine they are using and of any contraindications or precautions. Providers also should appropriately screen all people getting vaccinated for allergies to vaccine components or other contraindications. People who have previously had a severe allergic reaction to influenza vaccine or any of its ingredients should generally not be vaccinated.

There are some people who should not get a flu vaccine without first speaking with their doctor. These include:

- People who have a moderate-to-severe illness with or without a fever (they should wait until they recover to get vaccinated), and
- People with a history of [Guillain-Barré Syndrome](#) (a severe paralytic illness, also called GBS) that occurred after receiving influenza vaccine and who are not at risk for severe illness from influenza should generally not receive vaccine. Tell your doctor if you ever had Guillain-Barré Syndrome. Your doctor will help you decide whether the vaccine is recommended for you.

Pregnant women or people with pre-existing medical conditions who get vaccinated should get the flu shot.

If a person is vaccinated by someone other than their primary health care provider, the vaccinating provider should ensure that the patient and, if possible, the patient’s medical provider have documentation of vaccination.

For a complete list of people who should not get the vaccine before speaking with their doctor, please review the influenza Vaccine Information Statement for the [flu shot](#).

## 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.