INFLUENZA FACTS FROM CDC

Getting an annual flu vaccine is the first and best way to protect yourself and your family from the flu. Flu vaccination can reduce flu illnesses, doctors' visits, and missed work and school due to flu, as well as prevent flu-related hospitalizations. Increasing the number of people who get vaccinated each year helps to protect more people, including older people, very young children, pregnant women and people with certain health conditions who are more vulnerable to serious flu complications. This page summarizes information for the 2016-2017 flu season.

What's new this flu season?

A few things are new this season:

- Only injectable flu shots are recommended this season.
- Flu vaccines have been updated to better match circulating viruses.
- There are some new flu vaccines on the market this season.
- The flu vaccine recommendations for people with egg allergies have changed.
- Generic versions of the flu antiviral drug oseltamivir have become available.

What flu vaccines are recommended this season?

This season, only injectable flu vaccines (flu shots) should be used. Some flu shots protect against three flu viruses and some protect against four flu viruses.

Options this season include:

Live attenuated influenza vaccine(https://www.cdc.gov/media/releases/2016/s0622-laiv-flu.html) (LAIV) – or the nasal spray vaccine – is **not** recommended for use during the 2016-2017 season because of concerns about its effectiveness.

What viruses do 2016-2017 flu vaccines protect against?

There are many flu viruses and they are constantly changing. The composition of U.S. flu vaccines is reviewed annually and updated to match circulating flu viruses. Flu vaccines protect against the

three or four viruses (depending on the type of flu vaccine) that research suggests will be most common. For 2016-2017, three-component vaccines are recommended to contain:

- A/California/7/2009 (H1N1)pdm09-like virus,
- A/Hong Kong/4801/2014 (H3N2)-like virus and a
- B/Brisbane/60/2008-like virus (B/Victoria lineage).

Four component vaccines are recommended to include the same three viruses above, plus an additional B virus called B/Phuket/3073/2013-like virus (B/Yamagata lineage).

When and how often should I get vaccinated?

Everyone 6 months and older should get a flu vaccine every year by the end of October, if possible. However, getting vaccinated later is OK. Vaccination should continue throughout the flu season, even in January or later. Some children who have received flu vaccine previously and children who have only received one dose in their lifetime, may need two doses of flu vaccine. A health care provider can advise on how many doses a child should get.

Can I get a flu vaccine if I am allergic to eggs?(https://www.cdc.gov/flu/protect/vaccine/egg-allergies.htm)

The recommendations for people with egg allergies have been updated for this season.

- People who have experienced only hives after exposure to eggs can get any licensed and recommended flu vaccine that is otherwise appropriate for their age and health.
- People who have symptoms other than hives after exposure to eggs, such as angioedema, respiratory distress, lightheadedness, or recurrent emesis; or who have needed epinephrine or another emergency medical intervention, also can get any licensed and recommended flu vaccine that is otherwise appropriate for their age and health, but the vaccine should be given in a medical setting and be supervised by a health care provider who is able to recognize and manage severe allergic conditions. (Settings include hospitals, clinics, health departments, and physician offices). People with egg allergies no longer have to wait 30 minutes after receiving their vaccine.

Flu Activity

What sort of flu season are we experiencing?

As of a flu activity update published in the Morbidity and Mortality Weekly Report on February 17, 2017(https://www.cdc.gov/mmwr/volumes/66/wr/mm6606a2.htm), flu activity during the 2016-2017 season had been moderate, with influenza A (H3N2) viruses predominating and severity indicators within the range of what has been seen during previous seasons that were H3N2-predominant. H3N2-predominant seasons have been associated with more severe illness and mortality, especially in older people and young children, relative to seasons during which H1N1 or B viruses predominated.

Is the United States having a flu epidemic?

The United States experiences epidemics of seasonal flu each year. This time of year is called “flu season.” In the United States, flu viruses are most common during the fall and winter months. Influenza activity often begins to increase in October and November. Most of the time flu activity peaks between December and March and can last as late as May. CDC monitors certain key flu indicators (for example, outpatient visits of influenza-like illness (ILI), the results of laboratory testing and flu hospitalization and deaths). When these indicators rise and remain elevated for a number of consecutive weeks, flu season is said to have begun. Usually ILI increases first, followed by an increase in flu-associated hospitalizations, which is then followed by increases in flu-associated deaths. During 2016-2017, influenza-like-illness (ILI) went above baseline the week ending December 17, 2016(https://www.cdc.gov/mmwr/volumes/66/wr/mm6606a2.htm).

When did flu activity begin and when will it peak?

The timing of flu is very unpredictable and can vary in different parts of the country and from season to season. Seasonal flu viruses can be detected year-round; however, seasonal flu activity can begin as early as October and continue to occur as late as May. Flu activity most commonly peaks in the United States between December and March.

For the 2016-2017 season, influenza-like-illness (ILI) in the United States went above baseline the week ending December 17, 2016 and remained elevated as of mid-March. The season has likely peaked.

How many people die from flu each year? CDC does not count how many people die from flu each year. Unlike flu deaths in children, flu deaths in adults are not nationally reportable. However, CDC uses mortality data collected by the National Center for Health Statistics to monitor relative levels of flu-associated deaths. This system tracks the proportion of death certificates processed that list pneumonia or influenza as the underlying or contributing cause of death of the total deaths reported. This system provides an overall indication of whether flu-associated deaths are elevated, but does not provide an exact number of how many people died from flu. For more information, see Overview of Influenza Surveillance in the United States(https://www.cdc.gov/flu/weekly/overview.htm), "Mortality Surveillance."

Protective Actions

What should I do to protect myself from flu this season?

CDC recommends a yearly flu vaccine(https://www.cdc.gov/flu/protect/vaccine/index.htm) for everyone 6 months of age and older as the first and most important step in protecting against this serious disease.

In addition to getting a seasonal flu vaccine, you can take everyday preventive actions(https://www.cdc.gov/flu/protect/habits/index.htm) like staying away from sick people and washing your hands to reduce the spread of germs. If you are sick with flu, stay home from work or school to prevent spreading flu to others. In addition, there are prescription medications called antiviral drugs that can be used to treat influenza illness. Visit What you Should Know About Flu Antiviral Drugs(https://www.cdc.gov/flu/antivirals/whatyoushould.htm) for more information.

What should I do to protect my loved ones from flu this season?

Encourage your loved ones to get vaccinated. Vaccination is especially important for people at high risk for developing flu-related complications(https://www.cdc.gov/flu/about/disease/high_risk.htm), and their close contacts. Also, if you have a loved one who is at high risk of flu complications and they develop flu symptoms, encourage them to get a medical evaluation for possible treatment with flu antiviral drugs. CDC recommends that people who are at high risk for serious flu complications who get flu symptoms during flu season be treated with flu antiviral drugs as quickly as possible. People who are not at high risk for serious flu complications may also be treated with antiviral drugs, especially if treatment can begin within 48 hours.

Some children 6 months through 8 years of age will require two doses of flu vaccine for adequate protection from flu. Children in this age group who are getting vaccinated for the first time will need two doses of flu vaccine, spaced at least 28 days apart. Some children who have received flu vaccine previously and children who have only received one dose in their lifetime also may need two doses. Your child's doctor or other health care professional can tell you if your child needs two doses. Visit Children, the Flu, and the Flu Vaccine(https://www.cdc.gov/flu/protect/children.htm) for more information.

Children younger than 6 months are at higher risk of serious flu complications, but are too young to get a flu vaccine. Because of this, safeguarding them from flu is especially important. If you live with or care for an infant younger than 6 months of age, you should get a flu vaccine to help protect them from flu. See Advice for Caregivers of Young Children(https://www.cdc.gov/flu/protect/infantcare.htm) for more information. Also, studies have shown that getting the flu vaccine during pregnancy can protect the baby after birth for several months.

In addition to getting vaccinated, you and your loved ones can take everyday preventive actions(https://www.cdc.gov/flu/protect/habits/index.htm) like staying away from sick people and washing your hands to reduce the spread of germs. If you are sick with flu, stay home from work or school to prevent spreading flu to others.

When did flu vaccine become available?

Flu vaccine is produced by private manufacturers, so the timing of vaccine availability depends on when production is completed. For the 2016-2017 influenza season, by late September, more than 90 million doses of 2016-2017 flu vaccine had already been distributed in the United States.

When should I get vaccinated?

Getting vaccinated before flu activity begins helps protect you once the flu season starts in your community. It takes about two weeks after vaccination for the body's immune response to fully respond and for you to be protected, so make plans to get vaccinated. CDC recommends that people get a flu vaccine by the end of October, if possible. However, getting vaccinated later can still be beneficial. CDC recommends ongoing flu vaccination as long as flu viruses are circulating, even into January or later. Children aged 6 months through 8 years who need two doses of vaccine should get the first dose as soon as possible to allow time to get the second dose before the start of flu season. The two doses should be given at least 28 days apart.

Where can I get a flu vaccine?

Flu vaccines are offered by many doctor's offices, clinics, health departments, pharmacies and college health centers, as well as by many employers, and even by some schools.

Even if you don't have a regular doctor or nurse, you can get a flu vaccine somewhere else, like a health department, pharmacy, urgent care clinic, and often your school, college health center, or work.

How well will flu vaccines work this season?

Influenza vaccine effectiveness (VE) can vary from year-to-year among different age and risk groups and even by vaccine type. How well the vaccine works can depend in part on the match between the vaccine virus used to produce the vaccine and the circulating viruses that season. It's not possible to predict what viruses will be most predominant during the upcoming season. CDC monitors circulating viruses throughout the year and provides new and updated information about the vaccine match as it becomes available. Information is published weekly in FluView and summarized at intervals in the Morbidity and Mortality Weekly Report (MMWR). Vaccine effectiveness estimates are

also provided when they become available. For more information about vaccine effectiveness, visit How Well Does the Seasonal Flu Vaccine Work?(https://www.cdc.gov/flu/about/qa/vaccineeffect.htm) .

Early vaccine effectiveness estimates for the 2016-2017 season indicated that flu vaccines this season was reducing a vaccinated person's risk of getting sick and needing medical care because of flu by about half. According to data from the U.S. Flu Vaccine Effectiveness Network, interim estimates show flu vaccine has been 48% effective in preventing medically-attended influenza A and B illness. Interim effectiveness estimates against the predominant influenza A (H3N2) viruses are 43% while the interim effectiveness estimate against influenza B viruses is 73%.(https://www.cdc.gov/mmwr/volumes/66/wr/mm6606a3.htm)

These interim estimates are consistent with vaccine effectiveness (VE) estimates from previous seasons(https://www.cdc.gov/flu/professionals/vaccination/effectiveness-studies.htm) during which vaccine viruses have been characterized as being "like" (well-matched to) circulating viruses based on standard characterization methods. During seasons with a less than optimal match, reduced VE has been observed.

Antiviral treatment is an important adjunct to flu vaccination. CDC's antiviral guidance is available at Antiviral Drugs(https://www.cdc.gov/flu/professionals/antivirals/index.htm).

Can the flu vaccine provide protection even if the vaccine is not a "good" match?

Yes, antibodies made in response to vaccination with one flu virus can sometimes provide protection against different but related viruses. A less than ideal match may result in reduced vaccine effectiveness against the virus that is different from what is in the flu vaccine, but it can still provide some protection against flu illness.

In addition, it's important to remember that the flu vaccine contains three or four flu viruses (depending on the type of vaccine you receive) so that even when there is a less than ideal match or lower effectiveness against one virus, the vaccine may protect against the other viruses.

For these reasons, even during seasons when there is a less than ideal match, CDC continues to recommend flu vaccination for everyone 6 months and older. Vaccination is particularly important for people at high risk for serious flu complications(https://www.cdc.gov/flu/about/disease/high_risk.htm), and their close contacts.

How long does a flu vaccine protect me from getting the flu?

Multiple studies conducted over different seasons and across flu vaccine types and flu virus subtypes have shown that the body's immunity to flu viruses (acquired either through natural infection or vaccination) declines over time. The decline in antibodies is influenced by several factors, including the antigen(https://www.cdc.gov/flu/professionals/laboratory/antigenic.htm) used in the vaccine, the age of the person being vaccinated, and the person's general health (for example, certain chronic health conditions may have an impact on immunity). When most healthy people with regular immune systems are vaccinated, their bodies produce antibodies and they are protected throughout the flu season, even as antibody levels decline over time. Older people and others with weakened immune systems may not generate the same amount of antibodies after vaccination; further, their antibody levels may drop more quickly when compared to young, healthy people.

For everyone, getting vaccinated each year provides the best protection against the flu throughout flu season. It's important to get a flu vaccine every season, even if you got vaccinated the season before and the viruses in the vaccine have not changed for the current season.

Can I get vaccinated and still get the flu?

Yes. It's possible to get sick with the flu even if you have been vaccinated (although you won't know for sure unless you get a flu test). This is possible for the following reasons:

- You may be exposed to a flu virus shortly before getting vaccinated or during the period that it takes the body to gain protection after getting vaccinated. This exposure may result in you becoming ill with flu before the vaccine begins to protect you. (About 2 weeks after vaccination, antibodies that provide protection develop in the body.)

- You may be exposed to a flu virus that is not included in the seasonal flu vaccine. There are many different flu viruses that circulate every year. The flu vaccine is made to protect against the three or four flu viruses that research suggests will be most common.

Unfortunately, some people can become infected with a flu virus the flu vaccine is designed to protect against, despite getting vaccinated. Protection provided by flu vaccination can vary widely, based in part on health and age factors of the person getting vaccinated. In general, the flu vaccine works best among healthy younger adults and older children. Some older people and people with certain chronic illnesses may develop less immunity after vaccination. Flu vaccination is not a perfect tool, but it is the best way to protect against flu infection.

If You Get Sick

What should I do if I get sick with the flu?

Antiviral drugs are prescription drugs that can be used to treat flu illness. People at high risk(https://www.cdc.gov/flu/about/disease/high_risk.htm) of serious flu complications(https://www.cdc.gov/flu/about/disease/complications.htm) (such as children younger than 5 years, adults 65 years of age and older, pregnant women, people with certain medical conditions, and residents of nursing homes and other long-term care facilities) and people who are very sick with flu (such as those hospitalized because of flu) should get treatment with antiviral drugs as early as possible after illness begins. Some other people may be treated with antivirals at their health care professional's discretion. Treating high risk people or people who are very sick with flu with antiviral drugs is very important. Studies show that prompt treatment, especially within 2 days of illness onset, with antiviral drugs can prevent serious flu complications. Prompt treatment can mean the difference between having a milder illness versus very serious illness that could result in a hospital stay.

Treatment with antivirals works best when begun within 48 hours of getting sick, but can still be beneficial when given later in the course of illness. Antiviral drugs are effective across all age and risk groups. Studies show that antiviral drugs are under-prescribed for people who are at high risk of complications who get flu. Three FDA-approved antiviral medications are recommended for use

during the 2016-2017 flu season: oseltamivir (available as a generic version or under the trade name Tamiflu®), zanamivir (trade name Relenza®), and peramivir (trade name Rapivab®). More information about antiviral drugs can be found at Treatment – Antiviral Drugs(https://www.cdc.gov/flu/antivirals/index.htm).