
Key Facts About Influenza (Flu) & Flu Vaccine

What is Influenza (Also Called Flu)?

The flu is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. The best way to prevent the flu is by getting a flu **vaccine** each year.

Symptoms of Flu

People who have the flu often feel some or all of these symptoms:

- fever* or feeling feverish/chills
- cough
- sore throat
- runny or stuffy nose
- muscle or body aches
- headaches
- fatigue (very tired)
- Some people may have vomiting and diarrhea, though this is more common in children than adults.

**It's important to note that not everyone with flu will have a fever.*

How Flu Spreads

Most experts believe that flu viruses spread mainly by droplets made when people with flu cough, sneeze or talk. These droplets can land in the mouths or noses of people who are nearby. Less often, a person might also get flu by touching a surface or object that has flu virus on it and then touching their own mouth, eyes or nose.

Period of Contagiousness

You may be able to pass on the flu to someone else before you know you are sick, as well as while you are sick. Most healthy adults may be able to infect others beginning 1 day **before** symptoms develop and up to 5-7 days **after** becoming sick. Some people, especially children and people with weakened immune systems, might be able to infect others for an even longer time.

How Serious is the Flu?

Flu is unpredictable and how severe it is can vary widely from one season to the next depending on many things, including:

- what flu viruses are spreading,
- how much flu vaccine is available
- when vaccine is available
- how many people get vaccinated, and
- how well the flu vaccine is matched to flu viruses that are causing illness.

Certain people are at greater risk for serious complications if they get the flu. This includes older people, young children, pregnant women and people with certain health conditions (such as asthma, diabetes, or heart disease).

One study found that during the 1990s, flu-related deaths ranged from an estimated 17,000 during the mildest season to 52,000 during the most severe season (36,000 average). Studies going back to 1976 have found that flu-related deaths ranged from a low of 4,700 to a high of 56,600 (average 25,500). During a regular flu season, about 90 percent of deaths occur in people 65 years and older.

During 2009-2010, a new and very different flu virus (called 2009 H1N1) spread worldwide causing the first flu pandemic in more than 40 years. It is estimated that the 2009 H1N1 pandemic resulted in more than 12,000 flu-related deaths in the U.S. In contrast to seasonal flu, nearly 90 percent of the deaths occurred among people younger than 65 years of age.

Complications of Flu

Complications of flu can include bacterial pneumonia, ear infections, sinus infections, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes.

Preventing Seasonal Flu: Get Vaccinated

The single best way to prevent the flu is to get a flu vaccine each season. There are two types of flu vaccines:

- **The "flu shot"**—an inactivated vaccine (containing killed virus) that is given with a needle. The seasonal flu shot is approved for use in people 6 months of age and older, including healthy people, people with chronic medical conditions and pregnant women.
- **The nasal-spray flu vaccine**—a vaccine made with live, weakened flu viruses that do not cause the flu (sometimes called LAIV for "Live Attenuated Influenza Vaccine"). LAIV is approved for use in healthy* people 2-49 years of age who are not pregnant.

About two weeks after vaccination, antibodies develop that protect against influenza virus infection. Flu vaccines will not protect against flu-like illnesses caused by non-influenza viruses.

The seasonal flu vaccine protects against the three influenza viruses that research suggests will be most common. The 2010-2011 flu vaccine will protect against 2009 H1N1, and two other influenza viruses (an H3N2 virus and an influenza B virus).

When to Get Vaccinated Against Seasonal Flu

Yearly flu vaccination should begin in September, or as soon as vaccine is available, and continue throughout the flu season which can last as late as May. This is because the timing and duration of flu seasons vary. While flu season can begin early as October, most of the time seasonal flu activity peaks in January or later.

Who Should Get Vaccinated?

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.

Who is at Higher Risk for Developing Flu-Related Complications?

- Children younger than 5, but especially children younger than 2 years old,
- Adults 65 years of age and older
- Pregnant women, and,
- People who have medical conditions including:
 - Asthma (even if it's controlled or mild)
 - Neurological and neurodevelopmental conditions [including disorders of the brain, spinal cord, peripheral nerve, and muscle such as cerebral palsy, epilepsy (seizure disorders), stroke, intellectual disability (mental retardation), moderate to severe developmental delay, muscular dystrophy, or spinal cord injury].
 - Chronic lung disease (such as chronic obstructive pulmonary disease [COPD] and cystic fibrosis)
 - Heart disease (such as congenital heart disease, congestive heart failure and coronary artery disease)
 - Blood disorders (such as sickle cell disease)
 - Endocrine disorders (such as diabetes mellitus)
 - Kidney disorders
 - Liver disorders
 - Metabolic disorders (such as inherited metabolic disorders and mitochondrial disorders)
 - Weakened immune system due to disease or medication (such as people with HIV or AIDS, or cancer, or those on chronic steroids)
 - People younger than 19 years of age who are receiving long-term aspirin therapy
 - People with Chronic Obstructive Pulmonary Disease (COPD)
 - People who are morbidly obese (Body Mass Index (BMI) of 30 or greater)
- Also, last flu season, American Indians and Alaskan Natives seemed to be at higher risk of flu complications

Who else should get vaccinated?

Other people for whom vaccination is especially important are:

- People who live in nursing homes and other long-term care facilities
- People who live with or care for those at high risk for complications from flu, including:
 - Health care workers
 - Household contacts of persons at high risk for complications from the flu
 - Household contacts and caregivers of children younger than 5 years of age with particular emphasis on vaccinating contacts of children younger than 6 months of age (children younger than 6 months are at highest risk of flu-related complications but are too young to get vaccinated)

Use of the Nasal Spray Seasonal Flu Vaccine

Vaccination with the nasal-spray flu vaccine is an option for healthy* people 2-49 years of age who are not pregnant. Even people who live with or care for those in a high risk group (including health care workers) can get the nasal-spray flu vaccine as long as they are healthy themselves and are not pregnant. The one exception is health care workers who care for people with severely weakened immune systems who require a protected hospital environment; these people should get the inactivated flu vaccine (flu shot).

Who Should Not Be Vaccinated Against Seasonal Flu

Some people should not be vaccinated without first consulting a physician. They include:

- People who have a severe allergy to chicken eggs.
- People who have had a severe reaction to an influenza vaccination in the past.
- People who developed Guillain-Barré syndrome (GBS) within 6 weeks of getting an influenza vaccine previously.
- Children younger than 6 months of age (influenza vaccine is not approved for use in this age group).
- People who have a moderate or severe illness with a fever should wait to get vaccinated until their symptoms lessen.

If you have questions about whether you should get a flu vaccine, consult your health care provider.