# Key Facts About Influenza (Flu)

## What is Influenza (Flu)?

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

## Flu Symptoms

Influenza (flu) can cause mild to severe illness, and at times can lead to death. Flu is different from a cold. Flu usually comes on suddenly. People who have 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 (tiredness)
- 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.

For more information visit Flu and COVID-19 Symptoms

## How Flu Spreads

Most experts believe that flu viruses spread mainly by tiny 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 get flu by touching a surface or object that has flu virus on it and then touching their own mouth, nose or possibly their eyes.

## How Many People Get Sick with Flu Every Year?

A 2018 CDC study published in Clinical Infectious Diseases looked at the percentage of the U.S. population who were sickened by flu using two different methods and compared the findings. Both methods had similar findings, which suggested that on average, about 8% of the U.S. population gets sick from flu each season, with a range of between 3% and 11%, depending on the season.

### Why is the 3% to 11% estimate different from the previously cited 5% to 20% range?

The commonly cited 5% to 20% estimate was based on a study that examined both symptomatic and asymptomatic influenza illness, which means it also looked at people who may have had the flu but never knew it because they didn't have any symptoms. The 3% to 11% range is an estimate of the proportion of people who have symptomatic flu illness.

### Who is most likely to be infected with influenza?

The same CID study found that children are most likely to get sick from flu and that people 65 and older are least likely to get sick from influenza. Median incidence values (or attack rate) by age group were 9.3% for children 0-17 years, 8.8% for adults 18-64 years, and 3.9% for adults 65 years and older. This means that children younger than 18 are more than twice as likely to develop a symptomatic flu infection than adults 65 and older.

### How is seasonal incidence of influenza estimated?

Influenza virus infection is so common that the number of people infected each season can only be estimated. These statistical estimations are based on CDC-measured flu hospitalization rates that are adjusted to produce an estimate of the total number of influenza infections in the United States for a given flu season.

The estimates for the number of infections are then divided by the census population to estimate the seasonal incidence (or attack rate) of influenza.

### Does seasonal incidence of influenza change based on the severity of flu season?

Yes. The proportion of people who get sick from flu varies. A paper published in CID found that between 3% and 11% of the U.S. population gets infected and develops flu symptoms each year. The 3% estimate is from the 2011-2012 season, which was an H1N1-predominant season classified as being of low severity. The estimated incidence of flu illness during two seasons was around 11%; 2012-2013 was an H3N2-predominant season classified as being of moderate severity, while 2014-2015 was an H3N2 predominant season classified as being of high severity.

Table 1. Estimates of the Incidence of Symptomatic Influenza by Season and Age-Group, United States, 2010–2016

| Season | Predominant Virus(es) | Season Severity | Incidence, %, by Age Group | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 0-4 yrs | 5-17 yrs | 18-49 yrs | 50-64 yrs | ≥65 yrs | All Ages |
| 2010-11 | A/H3N2, A/H1N1pdm09 | Moderate | 14.1 | 8.4 | 5.3 | 8.1 | 4.3 | 6.8 |
| 2011-12 | A/H3N2 | Low | 4.8 | 3.6 | 2.5 | 3.1 | 2.3 | 3.0 |
| 2012-13 | A/H3N2 | Moderate | 18.6 | 12.7 | 8.9 | 14.3 | 9.9 | 11.3 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2013-14 | A/H1N1pdm09 | Moderate | 12.4 | 7.2 | 9.2 | 13.0 | 3.4 | 9.0 |
| 2014-15 | A/H3N2 | High | 15.0 | 12.7 | 7.8 | 12.9 | 12.4 | 10.8 |
| 2015-16 | A/H1N1pdm09 | Moderate | 11.1 | 7.4 | 7.1 | 11.0 | 3.5 | 7.6 |
| Median | | | 13.2 | 7.9 | 7.4 | 12.0 | 3.9 | 8.3 |

## Period of Contagiousness

You may be able to spread flu to someone else before you know you are sick, as well as while you are sick.

- People with flu are most contagious in the first 3-4 days after their illness begins.
- Some otherwise healthy adults may be able to infect others beginning 1 day **before** symptoms develop and up to 5 to 7 days **after** becoming sick.
- Some people, especially young children and people with weakened immune systems, might be able to infect others for an even longer time.

## Onset of Symptoms

The time from when a person is exposed and infected with flu to when symptoms begin is about 2 days, but can range from about 1 to 4 days.

## Complications of Flu

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

## People at High Risk from Flu

Anyone can get flu (even healthy people), and serious problems related to flu can happen at any age, but some people are at high risk of developing serious flu-related complications if they get sick. This includes people 65 years and older, people of any age with certain chronic medical conditions (such as asthma, diabetes, or heart disease), pregnant women, and children younger than 5 years.

## Preventing Seasonal Flu

The first and most important step in preventing flu is to get a flu vaccine each year. Flu vaccine has been shown to reduce flu related illnesses and the risk of serious flu complications that can result in hospitalization or even death. CDC also recommends everyday preventive actions (like staying away from people who are sick, covering coughs and sneezes and frequent handwashing) to help slow the spread of germs that cause respiratory (nose, throat, and lungs) illnesses, like flu.

## Diagnosing Flu

It is very difficult to distinguish flu from other viral or bacterial respiratory illnesses based on symptoms alone. There are tests available to diagnose flu. More information is available: Diagnosing Flu.

## Treating Flu

There are influenza antiviral drugs that can be used to treat flu illness.

More information is available: "Seasonal Influenza, More Information."

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