Understanding the Different Types of Flu

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Even though it's a common illness, confusion abounds about what [influenza](https://www.verywellhealth.com/influenza-the-flu-4013643) is and is not. Part of this stems from the many types of flu that exist—influenzas A, B, C, and D—and talk of subtypes and strains. Some types of flu are more likely to be serious than others, as well.1﻿

Any type of flu virus has the potential to create an [epidemic turned pandemic](https://www.verywellhealth.com/difference-between-epidemic-and-pandemic-2615168), causing mass outbreaks of illness in humans around the world in a relatively short amount of time. In the past, some flu pandemics have caused very severe illness and killed millions of people. Others have been less serious.

Worried about the new coronavirus? [Learn about COVID-19, including symptoms and how it's diagnosed.](https://www.verywellhealth.com/coronavirus-overview-4783291)

Flu Naming Conventions

When new flu strains make headlines, they're often referred to by more complicated alpha-numeric names like H1N1. Those names are classifications based on subtypes, genetic lineages, strains, clades, and even more.2﻿

Influenza A Naming Conventions

Most of the flu names you're likely familiar with are types of influenza A—the most significant one when it comes to human illness. Influenza A comes in two subtypes and many strains.

The **subtypes** are classified by the specific combination of two proteins that are attached to them:2﻿

* H, for hemagglutinin protein
* N, for neuraminidase protein

When naming the influenza, researchers will look at the subtype of hemagglutinin and the subtype of neuraminidase on that particular virus. There are 18 different subtypes of hemagglutinin and 11 different subtypes of neuraminidase, which means the there are a number of different ways the two proteins can be paired. Still, only about 66% of the possible combinations of H and N have been found in nature.2﻿

B Naming Convention

Influenza B, the other type of virus that can have a serious effect on the human population, is classified by genetic lineage as opposed to subtype:

* B/Yamagata
* B/Victoria

So, for example, you may hear about an influenza B (Victoria) or B (Yamagata) virus.

Breaking It Down Further

You don't hear about these designations on the news, but after subtypes and lineages, scientists further classify flu viruses into groups and subgroups, also called clades and subclades.

All of these classifications are important when it comes to how they impact you and what vaccines will or won't work against them.

When you know how many different variations of the flu virus exist, and that new ones are mutating all the time, it's easier to understand why scientists have a tough time predicting the next big strain.

Verywell / Gary Ferster

[Overview of Influenza A and B](https://www.verywellhealth.com/what-is-influenza-a-770484)

What Type Causes the Seasonal Flu?

Three types of flu viruses—A, B, and C—[cause](https://www.verywellhealth.com/cold-flu-causes-4689139) seasonal influenza. Influenza D may also have the potential to do so if the potential for future transmission from animals to humans comes to fruition.

Seasonal flu is the type of influenza that typically causes illness for just a few months out of the year. Flu season is different depending on where you are in the world. In the United States, it usually falls between October and April.

Influenza A

Type A influenza is usually responsible for the majority of seasonal flu cases and typically causes the most severe cases. It is found in humans and in animals. Influenza A is spread from person to person by people who are already infected.1﻿

Touching objects the infected person has touched (doorknobs, faucets, phones) or even being in the same room as the person, especially if they are coughing or sneezing, is enough to become infected yourself.

Based on the number of subtypes and strains, influenza A could theoretically have 198 different combinations, but 131 have been identified.2﻿

These viruses are the ones you hear about that tend to [mutate](https://www.verywellhealth.com/what-are-antigenic-drift-and-shift-770400) rapidly, which keeps scientists busy trying to predict their course and create the right vaccine to protect people from the next mutated form.

An influenza A infection may last for about one to two weeks.

Influenza B

Type B flu is found primarily in humans. It has the potential to be very dangerous, but cases are typically less severe than with influenza A. Influenza B viruses can cause epidemics but not pandemics (spread of infection across large parts of the planet).

Like the A virus, illness caused by influenza B may persist for a week or two.

Influenza C

Type C flu, which affects only humans, is much milder than types A and B. It typically causes mild respiratory illnesses and it is not known to have caused any seasonal flu epidemics.

Most people who contract influenza C will experience symptoms similar to those of a cold. Even so, influenza C can become serious in:

* Infants
* Elderly people
* People with severely compromised immune symptoms

In healthy people, influenza C usually goes away on its own in three to seven days. Influenza C outbreaks can sometimes co-exist with influenza A pandemics.1﻿

Influenza D

In 2011, influenza D virus was isolated from swine and cattle. It's been reported in multiple countries, suggesting worldwide distribution.

To date, the influenza D virus has not demonstrated the ability to be passed from animals to humans, although scientists suggest that such a jump may be possible.﻿3﻿

| **Type** | **Who Gets It** | **Infectiousness** | **Case Severity** | **Distribution** |
| --- | --- | --- | --- | --- |
| **A** | Humans and animals | High | Potentially high | Can cause pandemics |
| **B** | Humans | High | Somewhat less sever than A | Can cause epidemics |
| **C** | Humans | Less than A & B | Typically mild | Doesn't cause epidemics |
| **D** | Cattle, swine | Low | Typically mild | Believed to be worldwide |

H1N1 Swine Flu

In the spring of 2009, scientists [discovered](https://www.verywellhealth.com/h1n1-swine-flu-diagnosis-4163091) a new influenza A virus in Mexico and named H1N1 (also known as [swine flu](https://www.verywellhealth.com/h1n1-swine-flu-treatment-4163092)).

[H1N1 influenza](https://www.verywellhealth.com/what-is-h1n1-swine-flu-770496) is a combination of human, swine, and bird flu. It became the first flu pandemic the world had seen in more than 40 years. It's technically an influenza A virus but is so mutated that it's not the same as the influenza A that causes seasonal flu.4﻿

Research suggests that the influenza H1N1 may not be as new as some have suggested. Genetic analyses have linked it to the [1918 flu pandemic](https://www.verywellhealth.com/what-is-h1n1-swine-flu-770496) which killed over 50 million people, including 675,000 in the United States.5﻿

[Understanding Swine Flu (H1N1 Flu)](https://www.verywellhealth.com/what-is-h1n1-swine-flu-770496)

H5N1 Bird Flu

H5N1 is the strain of influenza known as the bird or avian flu. Typically, it's transmitted between birds, but it can be passed from bird to human. It does not appear to spread from person to person.

When it *does* infect humans, bird flu is associated with very serious illness, multi-organ failure, and high death rates.6﻿ In fact, bird flu has killed more than half of the people who have been infected with it.

Although the risk of contracting bird flu is low, doctors have grave concerns about the potential of H5N1 to mutate and cause a worldwide pandemic. Increasing rates of H5N1 infections in Egypt suggest that widespread human-to-human transmission may be possible.7﻿

[Overview of Bird Flu](https://www.verywellhealth.com/bird-flu-and-other-influenza-1958928)

What About the Stomach Flu?

What many call the stomach flu is actually not flu at all. Rather, it is [gastroenteritis](https://www.verywellhealth.com/how-long-does-the-stomach-flu-last-770284), which is in no way related to the influenza virus. Influenza is a respiratory illness. While it can cause vomiting and diarrhea, especially in children, it is always accompanied by respiratory symptoms.

What Types of Flu Do Vaccines Prevent?

Flu vaccines are customized each year to protect against the strains researchers believe are most likely to circulate among humans that season. Every year, the vaccine contains:8﻿

* One influenza A virus (H1N1)
* One influenza A virus (H3N2)
* One or two influenza B viruses

The vaccine only protects you from the specific strains it contains. It doesn't contain C or D viruses, and it doesn't protect against other viral illnesses with similar symptoms, which often spread during flu season.