

Influenza Types

What is influenza?

Seasonal influenza is a respiratory illness caused by a virus. It causes mild to severe illness in most cases, but in some cases it can be fatal. Each year about 5-20% of Americans will get sick with seasonal influenza. About 36,000 of them will die.

Are there different types of influenza viruses?

There are three types of influenza viruses — A, B and C. Types A and B are subdivided further into strains, based on their makeup. For example, H3N2 is a subtype of influenza A. Influenza C viruses are not subtyped.

Which types of influenza viruses can infect people?

Humans can be infected with all three types of influenza viruses. Influenza A and B are the viruses that lead to seasonal flu. Influenza C causes mild illness in humans, but does not cause epidemics or pandemics.

Wild birds are the natural host for all known subtypes of influenza A viruses, but these birds don't usually become sick from the viruses. However, domestic poultry, such as turkeys and chickens, can become very sick and die from type A influenza viruses (also called avian influenza). Some avian influenza viruses can also cause serious disease and death in wild birds.

Are some influenza A strains more dangerous than others?

Avian influenza A virus strains are classified as either low pathogenic (LPAI) or highly pathogenic (HPAI) depending on their molecular makeup. Most avian influenza A viruses are low pathogenic, meaning they only cause mild illness in poultry. These low pathogenic viruses, though, have the capability to evolve into highly pathogenic viruses that will cause serious illness and death in poultry.

Low pathogenic viruses can cause mild illness in people, as well, such as conjunctivitis or flu-like illness. Highly pathogenic viruses, such as H5N1, can cause severe and fatal disease in humans.

Do the viruses change?

Influenza viruses are constantly changing through a gradual process called antigenic drift. Occasionally they also undergo a sudden change called antigenic shift. Influenza A viruses experience both kinds of changes, but influenza B viruses only evolve through the more gradual antigenic drift process.

Antigenic drift produces new viruses that may not be recognized by antibodies developed against other strains. This is why people can get "the flu" more than one time. They are actually being infected by a different influenza virus.

Antigenic shift is a more abrupt, major change that produces a brand new influenza A subtype not currently seen before among people. When a new subtype develops, begins to cause serious illness in people, and spreads easily from person-to-person, the next pandemic will occur.

How can I protect myself against influenza viruses?

The best protection against seasonal influenza is to get an annual flu vaccination. Each year experts make an educated estimate about which flu strains will be circulating in the coming year. They develop a vaccine to protect against three of the strains they believe will be most prevalent. The vaccine may differ each year, which is why people need to be vaccinated every year.