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Editorial

A common virus infection which will be deadly, especially in high-risk groups. The flu attacks the lungs, nose and throat. Young children, older adults, pregnant women and other people with chronic disease or weak immune systems are at high risk. Symptoms include fever, chills, muscle aches, cough, congestion, runny nose, headaches and fatigue. Flu is primarily treated with rest and fluid intake to permit the body to fight the infection on its own. Paracetamol may help cure the symptoms but NSAIDs should be avoided. An annual vaccine can help prevent the flu and limit its complications. There are two main kinds of influenza (flu) virus: Types A and B. The influenza A and B viruses that routinely spread in people (human influenza viruses) are responsible for seasonal flu epidemics annually. Influenza A viruses are often weakened into sub-types relying on the genes that structure the surface proteins.

Types of Influenza Viruses

There are four sorts of influenza viruses: A, B, C and D. Human influenza A and B viruses cause seasonal epidemics of disease (known because the flu season) almost every winter within the us. Influenza A viruses are the sole influenza viruses known to cause flu pandemics, i.e., global epidemics of flu disease. a plague can occur when a replacement and really different influenza an epidemic emerges that both infects people and has the facility to spread efficiently between people. Influenza type C infections generally cause mild illness and aren't thought to cause human flu epidemics. Influenza D viruses primarily affect cattle and aren't known to infect or cause illness in people.

Influenza A viruses are divided into subtypes supported two proteins on the surface of the virus: hemagglutinin (H) and neuraminidase (N). There are 18 different hemagglutinin subtypes and 11 different neuraminidase subtypes (H1 through H18 and N1 through N11, respectively). While there are potentially 198 different influenza A subtype combinations, only 131 subtypes are detected in nature. Current subtypes of influenza A viruses that routinely circulate in people include: A(H1N1) and A(H3N2). Influenza A subtypes are often further weakened into different genetic "clades" and "sub-clades." See the "Influenza Viruses" graphic below for a clear depiction of these classifications. Clades and sub-clades are often alternatively

called "groups" and "sub-groups," respectively. An influenza clade or group may be a further subdivision of influenza viruses (beyond subtypes or lineages) supported the similarity of their HA gene sequences. Clades and subclades are shown on phylogenetic trees as groups of viruses that sometimes have similar genetic changes (i.e., nucleotide or amino acid changes) and have one common ancestor represented as a node within the tree. Dividing viruses into clades and subclades allows flu experts to trace the proportion of viruses from different clades in circulation. Note that clades and sub-clades that are genetically different from others aren't necessarily antigenically different (i.e., viruses from a specific clade or sub-clade won't have changes that impact host immunity as compared to other clades or sub-clades). Currently circulating influenza A(H1N1) viruses are associated with the pandemic 2009 H1N1 virus that emerged within the spring of 2009 and caused a flu pandemic. This virus, scientifically called the "A(H1N1)pdm09 virus," and more generally called "2009 H1N1," has continued to circulate seasonally since then. These H1N1 viruses have undergone relatively small genetic changes and changes to their antigenic properties (i.e., the properties of the virus that affect immunity) over time. Of all the influenza viruses that routinely circulate and cause illness in people, influenza A(H3N2) viruses tend to vary sooner, both genetically and antigenically. Influenza A(H3N2) viruses have formed many separate, genetically different clades in recent years that also co-circulate.

Influenza Vaccine Viruses

One influenza A(H1N1), one influenza A(H3N2), and one or two influenza B viruses (depending on the vaccine) are included in each season's influenza vaccines. Getting a flu vaccine can protect against flu viruses that are just like the viruses went to make vaccine. Information about this season's vaccine are often found at Preventing Seasonal Flu with Vaccination. the simplest thanks to prevent seasonal flu is to urge vaccinated per annum. This page has resources to assist answer your questions on the flu vaccine. Seasonal flu vaccines don't protect against influenza C or D viruses. additionally, flu vaccines won't protect against infection and illness caused by other viruses that can also cause influenza-like symptoms.

There are many other viruses besides influenza which will end in influenza-like illness (ILI) that spread during flu season.