

## **Human Flu Fact Sheet**

Information kindly supplied by CSL Pharmaceuticals.

[www.csl.com.au/What\\_Is\\_Flu.asp](http://www.csl.com.au/What_Is_Flu.asp)

(Use this link to ensure that you have the most up-to-date information.)

### **What is influenza?**

- Influenza, most commonly known as the flu, is a highly contagious respiratory illness caused by a virus.
- In most cases, people with the flu experience headaches, muscle aches, fever, weakness and a cough, but sometimes can have no symptoms at all.
- A serious case of infection can cause various respiratory syndromes, disorders affecting the lung, heart, brain, liver, kidneys and muscles, and can also cause severe primary viral and secondary bacterial pneumonia.
- Influenza can also cause death due to serious complications that can occur in the very young, the elderly and those suffering from other underlying disease.
- Influenza can occur as isolated cases, in epidemics or in pandemics.
- While we often call the common cold the flu, the common cold is rarely due to the influenza virus. True influenza causes a much more severe illness than the usual cold.

### **How does it spread?**

- The influenza virus is spread through the tiny droplets from an affected person's cough or sneeze and also through hand to hand contact. It is easy to catch in crowded areas and in confined spaces.

### **How many types of viruses are there?**

- There are three types of influenza viruses: A, B and C.
- Type A viruses can infect people, birds, pigs, horses, seals and whales, but wild birds are the natural hosts. There are many sub-types of this virus.
- Type B viruses are normally found only in humans and can cause human epidemics. They have not caused pandemics.
- Type C viruses cause mild illness in humans and do not cause epidemics or pandemics.

### **What are the influenza virus strains?**

- Types A and B flu viruses are grouped into further strains, of which there are many.
- Influenza virus strains are simply a way of describing the composition of the viruses so that vaccines can be developed to target the particular flu virus circulating in the community.
- New strains of influenza viruses appear and replace older strains. This process occurs through a type of change called antigenic "drift".

### Why does the virus change each year?

- Each year, the circulating flu viruses tend to change. The protection the body makes after vaccination or after having the flu builds immunity to certain strains of the virus and not others.
- This means that strains not covered in the vaccine in one year may appear or increase in the following year.
- When a new strain of human influenza virus emerges, the antibody protection previously developed after infection or vaccination may not provide protection against the new strain.

### Can the flu be prevented?

- Yes, vaccination is the most effective protection against influenza infection.
- Unlike other infectious diseases, the flu virus changes and different varieties occur each year. As a result, vaccines also need to change on a yearly basis to ensure they are effective against the circulating strain.
- Twice a year the World Health Organisation (WHO) selects and recommends three vaccine strains to develop for the forthcoming season in southern or northern hemispheres. These strains are selected as a result of analysis of circulating strains in the community by over 100 national flu centres around the world.
- In Australia, the Australian Influenza Vaccine Committee determines the final vaccine formulation.
- All people in the following high risk groups should be vaccinated with a new vaccine each year:
  - all adults aged 65 years and over
  - Aboriginal and Torres Strait Islander adults aged 50 years and over
  - adults and children with chronic diseases affecting the heart and lungs, or that require regular medical follow up
  - residents of nursing homes and other long-term care facilities
  - children and teenagers (six months to 18 years) on long-term aspirin therapy
  - people infected with HIV
  - health-care workers and staff of nursing homes and long-term facilities who care for people at high risk
  - babies less than six months old who live in a household with a person who fits into any of the categories above
  - travellers, especially those in the above risk groups, if travelling to the northern hemisphere between October to March
  - pregnant women and women planning pregnancy during the flu season
  - doctors, nurses and others caring for high-risk people should be vaccinated. Medical nurses looking after patients with immunity problems should also be vaccinated.

### **How many people die from the flu in Australia each year?**

- It is not possible to provide an accurate calculation of the number of deaths caused by influenza in Australia each year as many deaths caused by the flu and its complications are recorded on a death certificate as being due to other things, such as pneumonia for example.
- The best available data from the Australian Institute of Health and Welfare and other sources suggests that the number of deaths due to influenza and its complications in 2002 was between 56 (representing flu as the underlying cause of death) and 3084 (total deaths attributed to flu/pneumonia as the leading cause in a death from multiple causes).

### **What is the difference between a “bad flu season” and a pandemic?**

- A “bad flu season” or seasonal outbreak (also known as an epidemic) is caused by sub-types of the flu virus that already exist in the community. This means that there is already a level of immunity in the community. Because we know or can predict which viruses are circulating each year, we can also vaccinate people for it.
- Pandemics are different from seasonal outbreaks or epidemics of influenza.
- Unlike the ordinary flu, which occurs every winter in Australia, a pandemic is a global outbreak of disease that can occur at any time of the year when an entirely new virus (sub-type) emerges in the human population.
- A pandemic flu virus can spread rapidly to affect most countries and regions of the world with as much as a quarter of the world’s population affected.
- Past influenza pandemics have led to high levels of illness, death, social disruption and economic loss.

### **What causes a pandemic?**

- Pandemics of flu are due to the emergence of a new flu virus, or a sub-type of the virus that has not been seen for a long time, and is markedly different from recently circulating strains.
- Pandemic influenza occurs periodically throughout history, causing widespread illness and death and can overwhelm medical systems. These viruses are highly contagious and because they are new, there is no pre-existing immunity.