

# SEASONAL INFLUENZA

## ABOUT THE ILLNESS

### 1. What is seasonal influenza?

Influenza, also known as the flu is a contagious disease that is caused by the influenza virus. It attacks the respiratory tract in humans (nose, throat and lungs). Unlike many other viral respiratory infections, such as the common cold, the flu causes severe illness and life-threatening complications in many people. The strains of circulating viruses in the community change with time and therefore would vary from year to year.

### 2. What are the signs and symptoms of the seasonal flu?

Influenza is a respiratory illness, can come on suddenly and may include these symptoms:

- Fever
- Headache
- Tiredness (can be extreme)
- Dry cough
- Sore throat
- Nasal congestion
- Body aches

These symptoms are often referred to as “flu-like symptoms”.

Children can have additional gastro-intestinal symptoms, such as nausea, vomiting and diarrhoea, but these symptoms are uncommon in adults.

### 3. What are the complications of the seasonal flu?

Some of the complications caused by the flu include bacterial pneumonia, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes. Children may get sinus problems and ear infections as complications from the flu. The elderly and those with chronic medical conditions are at highest risk for serious complications of flu.

### 4. How do I know if I have the seasonal flu?

It is very difficult to tell the difference between the flu and many other viral diseases based on symptoms alone. Tests may be done to confirm or exclude that an illness is influenza or some other viral illness. In addition, a doctor’s examination will be

required to determine whether someone has complications resulting from the flu.

## **ABOUT THE CAUSE**

### **5. What causes the seasonal flu?**

The Influenza virus causes the flu. There are 3 types of Influenza viruses – types A, B and C. Influenza types A or B viruses cause epidemics of disease. Influenza type C usually causes a mild respiratory disease and are not thought to cause epidemics. A flu vaccination can prevent illness from Influenza types A and B but does not protect against type C.

### **6. Then what is bird flu or swine flu?**

Wild birds are the primary natural reservoir for all subtypes of influenza A viruses and are thought to be the source of influenza A viruses in all other animals. Influenza B viruses circulate widely only among humans. While it is unusual for people to get influenza infections directly from animals, occasionally human infections and outbreaks caused by certain bird influenza viruses have been reported. In 1997 and early 2003, human infections with bird or avian influenza A (H5N1) virus were reported by Hong Kong Department of Health. Human Swine flu is a respiratory disease of pigs caused by type A influenza viruses that causes regular outbreaks in pigs. However, the human swine flu (H1N1) has now emerged as worldwide pandemic rapidly this year and has now replaced seasonal influenza virus as the main circulating influenza virus in Hong Kong, representing over 80% of all circulating influenza viruses.

[http://www.chp.gov.hk/files/pdf/SSFm\\_15\\_10\\_09.pdf](http://www.chp.gov.hk/files/pdf/SSFm_15_10_09.pdf)

### **7. What do the newspapers mean when they refer to the types of influenza viruses as “H5N1” or “H1N1” ?**

Influenza A viruses are divided into “subtypes” based on 2 proteins on the surface of the virus: the hemagglutinin (H) and the neuraminidase (N). There are 15 different “H” subtypes and 9 different “N” subtypes. A combination of different “H” and “N” proteins on the surface of the influenza virus describes different types of influenza A viruses. Since this classification applies to all influenza A viruses, you might find the name “H1N1 strain” in both seasonal flu virus and the recent emerged human swine H1N1 virus. In other word, H1N1 can “appear” in seasonal flu virus of H1N1 strain and human swine virus H1N1 strain.

## **8. What is “Stomach Flu”?**

Many people use the term “Stomach Flu” to describe illnesses with nausea, vomiting, or diarrhoea. Many different viruses, bacteria or even parasites can cause these symptoms. While vomiting, diarrhoea, and being nauseous can sometimes be related to the flu – particularly in children – these problems are rarely the main symptoms of influenza. The flu is a respiratory disease and not a stomach or intestinal disease. It is important that you understand this so that you do not expect to be free of intestinal symptoms should you get an influenza vaccination.

## **ABOUT TREATMENT**

### **9. What is the treatment for Influenza?**

Influenza is usually self-limiting with recovery in 2-7 days. Anti-fever medicine and cough syrup are useful in relieving symptoms. Aspirin should not be used in children or teenagers with symptoms of the flu because it may cause Reye’s Syndrome which is a rare complication involving the central nervous system and the liver. Antibiotics need not be used unless the illness is complicated by bacterial infection. There are also anti-viral medications available to treat influenza. If taken within the first 2 days of illness, these medications can shorten the duration of influenza illness by about day, but cannot cure the illness outright. These drugs differ substantially in adverse effects and must be prescribed by a physician.

### **10. Are there any tests to diagnose influenza?**

A number of tests can help in the diagnosis of influenza. These tests include taking samples from a throat swab, nasal wash or nasal aspirates and are done within the first 3- 4 days of your illness. These tests are not 100% accurate. Because the tests are sometimes incorrectly negative or incorrectly positive, they should not be used routinely. These tests are most useful when a doctor needs the results to help with diagnosis and treatment decisions, particularly in patients that are hospitalised.

### **11. What should I do for my family members or myself if we get the flu?**

Influenza is caused by a virus, so antibiotics (such as penicillin) don’t work to cure it. You are recommended to do the following:

- Rest
- Drink plenty of fluids
- Avoid using alcohol and tobacco (eg. cigarettes and cigars)
- Take medication to relieve the symptoms of flu

- Seek medical advice if there is high fever, if you or your family members have chronic medical conditions, if the member of the family is very young or elderly, or if you suspect complications of influenza

The best way to prevent the flu is to get an influenza vaccine (flu shot) before the flu season.

## **ABOUT THE SPREAD**

### **12. How long is the incubation period (How soon will I get sick if I am exposed to the flu virus)?**

The time from when a person is exposed to flu virus to when symptoms begin is about 1-4 days, with an average of about 2 days.

### **13. When is the seasonal influenza season in Hong Kong?**

In Hong Kong, influenza is more prevalent in February-March and July-August.

### **14. How is seasonal influenza spread?**

The flu is spread, or transmitted, when a person who has the flu coughs, sneezes, or spitting and sends the flu virus into the air, and other people inhale the virus. This type of infection is called an airborne infection. The virus enters the nose, throat, or lungs of a person and begins to multiply, causing symptoms of influenza. Influenza may, less often, be spread when a person touches a surface that has flu viruses on it – a door handle, for example – and then touches his or her nose or mouth.

### **15. What is an airborne infection?**

Airborne infection refers to a disease that is carried or transported by the air. It differs from droplet infection in that droplet infection requires that the germ be carried within a drop of liquid that is carried through the air. Airborne infections are more infectious than droplet infections.

### **16. How contagious is seasonal influenza?**

A person can spread the flu starting one day before he or she feels sick. Adults can continue to pass the flu virus to others for another 3 to 7 days after symptoms start. Children can pass the virus for longer than 7 days. Symptoms start 1 to 4 days after the virus enters the body. Some persons can be infected with the flu virus but have no symptoms. During this time, those persons can still spread the virus to others.

## **ABOUT PREVENTION**

### **17. Is there a way to prevent infection?**

The following are suggested ways to prevent catching the flu virus:

- Maintain good personal and environmental hygiene
- Keep hands clean and wash hands properly
- Wash your hands when there are respiratory secretions on them, eg. After sneezing.
- Cover your nose and mouth while sneezing or coughing and dispose of nasal and mouth discharge properly. Do not spit.
- Good body resistance helps to prevent influenza infection. This can be achieved
- Through a balanced diet, regular exercise, adequate rest, reduce stress and avoid smoking.
- During the “flu season”, it is better to avoid crowded public places where the ventilation is not good.
- By far the best way to prevent the flu is for individuals, especially persons at high risk for serious complications from the flu, to get a flu shot each year.

## **ABOUT INFLUENZA VACCINATION**

### **18. Are there vaccines against seasonal and human swine influenza and how do they differ?**

There are now vaccines against both seasonal flu and human swine flu.

The seasonal influenza vaccine is prepared according to the strains prevalent in the community each year, as recommended by the World Health Organisation. Recommended strains used in the 2009–2010 human seasonal flu vaccine (northern hemisphere winter) are as follows:

- A/Brisbane/59/2007(H1N1)-like virus;
- A/Brisbane/10/2007 (H3N2)-like virus;
- B/Brisbane/60/2008-like virus.

Note that the A/Brisbane/59/2007 H1N1 virus differs from the human swine H1N1 virus. The human swine H1N1 virus is not part of the seasonal influenza vaccine and hence and seasonal influenza vaccine does not provide protection against the human swine flu H1N1 virus.

Human swine flu has now become the most prevalent circulating flu virus worldwide. Vaccines against the human swine flu H1N1 have also been developed. This human swine flu vaccine is a stand-alone vaccine and the human swine flu vaccine is

stand-alone vaccines and is different from the seasonal influenza vaccine. The government is currently undergoing the procurement of human swine flu vaccines.

**19. How effective is the influenza vaccination in preventing influenza?**

The seasonal flu vaccine is 70-90% effective in preventing influenza among healthy adults if it is administered at least 2 weeks before exposure and if there is a good match between the vaccine and the influenza strain causing illness. Vaccine effectiveness is lower for older persons, but can be significantly reduce their chances of serious illness or death from influenza. The efficacy of the human swine H1N1 vaccine is also believed to be at the range of 70-90 percent.

**20. Who should get an influenza vaccination?**

People at high risk for complications of the flu and people in close contact with them (including household members) should get the vaccine. Anyone who wants to lower his or her chances of getting the flu can get a flu shot.

**21. Can I have an influenza vaccination if I am pregnant?**

Pregnancy can increase the risk for complications from the flu, and pregnant women are more likely to be hospitalized from complications of the flu than non-pregnant women of the same age. Because the flu shot is made from inactivated viruses (the viruses are killed), many experts consider flu shots safe during any stage of pregnancy.

According to the recommendations from the Centre of Disease Control (CDC) as well as from the Centre of Health Protection of Hong Kong (CHP), inactivated seasonal influenza vaccine is recommended for all stages of pregnant women. There is no evidence indicating that inactivated influenza vaccine is teratogenic even if given during 1<sup>st</sup> trimester.

However, safety and effectiveness of the new human swine flu vaccines (live attenuated or inactivated) have not been established in pregnant women due to insufficient clinical data for this new vaccine.

**22. Is it safe for me to have seasonal influenza vaccination if I am breast-feeding?**

It is safe to get a flu shot if you are breastfeeding. A flu shot cannot cause flu in either you or your baby.

**23. Who are the people at high risk for complications from seasonal influenza?**

A yearly flu shot is recommended for the following groups of people who are at increased risk for serious complications from the flu:

- Persons aged >50 years
- Residents of nursing homes and other long-term care facilities that house persons of any age who have long-term illnesses
- Adults and children > 6 months of age who have chronic heart or lung conditions, including asthma
- Adults and children > 6 months of age who need regular medical care or had to be in a hospital because of metabolic diseases (like diabetes), chronic kidney disease, or weakened immune system (including immune system problems caused by medicine or by infection with human immunodeficiency virus or HIV)
- Children and teenagers (aged 6 months to 18 years) who are on long-term aspirin therapy and therefore could develop Reye's Syndrome after the flu
- Pregnant women at all stage
- People in close contact with any persons belonging to the high risk groups
- Healthcare workers and other workers in a healthcare work environment including clinics, hospitals and elderly homes

#### **24. Who should NOT get a seasonal influenza vaccination?**

The following groups should not get a flu shot before talking with their doctor:

- People who have a severe allergy to hen's eggs (this includes individuals who on ingestion of eggs develop swelling of the tongue, lips or experience acute respiratory distress or collapse)
- People who have had a severe reaction to a flu shot in the past
- People who previously developed Guillain-Barre Syndrome (GBS) in the 6 weeks after getting a shot (a disease of the nervous system resulting in muscle weakness or paralysis)
- People with known allergy to neomycin, gentamicin or any other excipient of the vaccine - thiomersal, polysorbate 80, octoxinol 9 and traces of formaldehyde.
- People with a moderate to severe acute illness, with or without fever.

#### **25. Why do I need to get vaccinated every year?**

Flu viruses change from year to year and because of this, you need to be aware of the following:

- First, you can get the flu more than once during your lifetime. The natural protection or immunity that you develop after catching a particular strain of influenza virus does not necessarily protect you against another strain of influenza virus.
- Secondly, a vaccine made against one flu virus may not protect against the newer viruses. That is why the influenza vaccine is updated each year by the World

Health Organization (WHO) to include current circulating viruses every year.

- A third reason to get influenza vaccination every year is that after you get a flu shot, your immunity to the flu declines over time and may be too low to provide protection after one year.

**26. When should I get vaccinated with the seasonal flu vaccine?**

Seasonal flu vaccinations for the year generally become available in the second half of the year, before winter arrives in the Northern Hemisphere.

**27. How long does it take for my body to develop antibodies against influenza after I am vaccinated?**

Once you get a flu shot, it takes about 2 weeks for antibodies to develop in the body and provide you with protection against influenza virus infection. In the meantime, you are still at risk of catching the flu. That is why it is much better to get vaccinated before the flu season starts.

**28. Can I catch influenza even after being vaccinated?**

Yes. The ability of an influenza vaccination being able to protect a person depends on 2 things:

- The age and health status of the person getting the vaccination and
- The similarity or “match” between the virus strains in the vaccine and those viruses in circulation.

When the “match” between the vaccine and the circulating strains of viruses is close, the flu vaccine prevents influenza in about 70-90% of healthy persons younger than age 65 years.

**29. Will the seasonal influenza vaccine protect me against catching a cold, and other illnesses?**

Many people think that the flu is any illness with fever or cold-like symptoms (runny nose, cough, etc.), or any illness with intestinal symptoms (vomiting, nausea, diarrhoea, etc). Please note that the influenza vaccine only protects against illness caused by influenza viruses, and not against other conditions such as fever, colds or gastrointestinal complaints caused by other viruses.

**30. Will the seasonal influenza vaccine give me the flu?**

The influenza vaccine is made from inactivated or killed flu viruses, and cannot therefore cause the flu and does not cause flu illness.

**31. What are the side effects that could occur with a seasonal influenza vaccination?**

- Soreness, redness, or swelling where the injection was given
- Fever (low grade)
- Aches

If these problems occur, they begin soon after the injection and usually last 1 to 2 days.

**32. Can severe problems occur?**

- Life-threatening allergic reactions are very rare. These reactions tend to occur among persons with a severe allergy to eggs, because the viruses used in the influenza vaccine are grown in chicken eggs. People who have had a severe reaction to eggs or to flu shot in the past should not get a flu shot before seeing a doctor.
- Guillain-Barre Syndrome (GBS) – This condition is characterised by fever, nerve damage and muscle weakness. A study done in 1976 suggests that 1 out of 1 million vaccinated persons may be at risk of GBS associated with the vaccine. Most people eventually recover completely or nearly completely, but some people have permanent nerve damage.

**FURTHER INFORMATION**

**33. Where do I get further information on influenza?**

For further information, you may refer to the following:

1. Hong Kong Department of Health website: <http://www.info.gov.hk/dh>
2. World Health Organization (WHO) website: <http://www.who.int/en/>
3. Centres for Disease Control and Prevention (CDC): <http://www.cdc.gov/>
4. Centre of Health Protection (CHP): <http://www.chp.gov.hk/>