

Q&A on Influenza

About the illness

1. What is 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.

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

Influenza is a respiratory illness that 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 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 the highest risk for serious

complications of flu.

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

The Influenza virus causes the flu. There are 3 types of Influenza viruses- Types A, B and C Influenza. Types A and 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. What is bird flu and swine flu?

Influenza A viruses are found in many different animals, including ducks, chickens, geese, pigs, wild birds, whales, horses, and seals.

Influenza B viruses circulate widely only among humans. 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.

While it is unusual for people to get influenza infections directly from animals, occasionally human infections and outbreaks caused by certain animal 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. The WHO announced the global swine flu (H1N1 pandemic) on 11th June 2009 and the pandemic was announced to have ended by the World Health Organization on the 10th August. Although H1N1 is no longer the dominating flu strain, it will not disappear altogether. Rather, it would be seen as behaving more like the seasonal flu activity.

Health officials globally are now seeing a mixed virus pattern: In addition to the H1N1 strain, an H3N2 flu strain (Perth) and Influenza B virus (Brisbane) also are circulating. All three strains are included in the 2010-2011 seasonal flu vaccine.

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.

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) would not 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 advise 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 influenza season in Hong Kong?

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

14. How is influenza spread?

The flu is spread, or transmitted, when a person who has the flu coughs, sneezes, or spits, thus sending the flu virus into the air, where other people may 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 influenza?

A person can spread the flu even 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.

17. Who are the people at high risk for complications from 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 stages
- Obese individual with body mass index > 30
- 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

About Prevention

18. 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, reduced 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

19. Is there a vaccine against influenza?

Yes there is a vaccine. It is referred to as an influenza vaccine or a flu shot. The influenza vaccine is prepared according to the strains prevalent in the community each year, as recommended by the World Health Organisation. The 2011 - 2012 influenza vaccine contains the following:

- A/California/7/2009 (H1N1)- like virus,
- A/Perth/16/2009 (H3N2)- like virus,
- B/Brisbane/60/2008- like virus

The H1N1 virus recommended for inclusion in the 2011-2012 seasonal influenza vaccine is a pandemic 2009 H1N1 virus and is the same vaccine virus as was used in the 2009 H1N1 monovalent vaccine.

20. How effective is the influenza vaccination in preventing influenza?

The 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.

21. Who should get an influenza vaccination?

Anyone who wants to lower his or her chances of getting the flu can get a flu shot. In particular, people at high risk for complications of the flu and people in close contact with them (including household members) should get the vaccine. The Scientific Committee on Vaccine Preventable Diseases under the Centre for Health Protection (CHP) of the Department of Health has recommended nine particular categories of people to receive vaccination against seasonal influenza for the 2010-11 influenza season as follows:

- Elderly persons living in residential care homes
- Long-stay residents of institutions for the disabled
- Persons aged 50 years or above

- Persons with chronic illnesses
- Persons who are obese with body mass index of 30
- Health care workers
- Children aged six months to five years
- Pregnant women at all stages
- Poultry workers
- Pig farmers and pig-slaughtering industry personnel.

22. Can I have an influenza vaccination if I am pregnant? Is it safe for me to have influenza vaccination if I am breast-feeding?

Pregnancy can change the immune system in the mother, as well as affect her cardiovascular system (heart and lung function). These changes may place pregnant women at increased risk of complications from the flu. In previous worldwide outbreaks of the flu (pandemics of 1918-19 and 1957-58), deaths among pregnant women were associated with the flu. Recent study showed that amongst the pregnant women, the group who did not receive flu vaccination is 22 times more likely to suffer from complication of flu than the group who had received flu vaccination.

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 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 1st trimester. As it would take 2 weeks before the antibodies are developed after the flu vaccination, all pregnant women are recommended to get a flu shot before the flu season, especially for those who have medical problems that increase their risk for complications from the flu.

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 should NOT get an 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

- develop swelling of the tongue, lips or experience acute respiratory distress or collapse ingestion of eggs)
- People who have had a severe reaction to a flu shot in the past
- People who have 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 excipients of the vaccine - Thiomersal, Polysorbate 80, Octoxinol 9 and traces of formaldehyde.
- People with a moderate to severe acute illness, with or without fever.

24. 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 you against the newer viruses. That is why the influenza vaccine is updated each year to include current viruses of the 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.

25. When should I get vaccinated?

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

26. 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.

27. 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.

28. Will the 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.

29. Will the 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.

30. What are the side effects that could occur with an influenza vaccination?

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

These problems may occur soon after the injection and should usually last 1 to 2 days.

31. 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 the 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.

32. What is the global experience about the safety of Flu vaccines containing H1N1 strains?

The most frequently reported adverse events were local discomfort at the injection sites and headaches. In most cases, there was no link found between the flu vaccine and Guillain-Barre Syndrome. There is no evidence of flu vaccine leading to fetal losses and take the vaccination remains the most effective method to prevent serious illness and death from 2009 H1N1 influenza infection.

Locally, the Centre of Health Protection has monitored the significant adverse events of human swine influenza vaccination history and the details can be found at the following link:

http://res.chp.gov.hk/seb/files/aefi_report_for_chp_web.pdf

Further information

33. Where do I get further information on influenza?

For further information, please refer to the following websites:

Hong Kong Department of Health website: <http://www.dh.gov.hk/>

World Health Organization (WHO) website: <http://www.who.int/en/index.html>

Centres for Disease Control and Prevention (CDC): <http://www.cdc.gov/>

Centre of Health Protection (CHP): <http://www.chp.gov.hk>

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