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## H1N1 (swine) Flu Questions and Answers

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### **What is H1N1 (swine) flu?**

H1N1 flu is a new influenza virus that was first detected in April 2009 in people in Illinois and elsewhere in the United States. This virus is spreading from person-to-person worldwide, probably in much the same way regular seasonal influenza viruses spread. On June 11, 2009, the World Health Organization signaled that a pandemic of H1N1 flu was underway.

### **Why is H1N1 flu sometimes called “swine flu?”**

This virus was originally referred to as “swine flu” because laboratory testing showed many of the genes in this new virus were very similar to influenza viruses that normally occur in pigs (swine) in North America. But further study has shown that this new virus is very different from what normally circulates in North American pigs. It has two genes from flu viruses that normally circulate in pigs in Europe and Asia and bird (avian) genes and human genes.

### **How does H1N1 virus spread?**

Spread of H1N1 virus is thought to occur in the same way that seasonal flu spreads. Flu viruses are spread mainly from person-to-person through coughing or sneezing by people with influenza. Sometimes people may become infected by touching something – such as a surface or object – with flu viruses on it and then touching their mouth or nose.

### **What are the signs and symptoms of this virus in people?**

The symptoms of H1N1 flu in people include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills and fatigue. Some people may have vomiting and diarrhea. People may be infected with the flu, including H1N1 and have respiratory symptoms without a fever. Severe illnesses and death has occurred as a result of illness associated with this virus.

### **How severe is illness associated with H1N1 flu?**

Illness with the new H1N1 virus has ranged from mild to severe. While most people who have been sick have recovered without needing medical treatment, hospitalizations and deaths from infection with this virus have occurred.

About 70 percent of people who have been hospitalized with H1N1 virus have had one or more medical conditions previously recognized as placing people at “high risk” of serious seasonal flu-related complications. This includes pregnancy, diabetes, heart disease, asthma and kidney disease.

One thing that appears to be different from seasonal influenza is that adults older than 64 years do not yet appear to be at increased risk of H1N1-related

complications. Laboratory studies have shown that no children and very few adults younger than 60 years old have existing antibodies to H1N1 flu virus; however, about one-third of adults older than 60 may have antibodies against this virus. It is unknown how much, if any, protection may be afforded against H1N1 flu by any existing antibody.

### **How does H1N1 flu compare to seasonal flu in terms of its severity and infection rates?**

With seasonal flu, we know that seasons vary in terms of timing, duration and severity. Seasonal influenza can cause mild to severe illness, and at times can lead to death. Each year, in the United States, on average 36,000 people die from flu-related complications and more than 200,000 people are hospitalized from flu-related causes. Of those hospitalized, 20,000 are children younger than 5 years old. More than 90 percent of deaths and about 60 percent of hospitalization occur in people older than 65.

H1N1 flu has caused greater disease burden in people younger than 25 years of age than older people. At this time, there are few cases and few deaths reported in people older than 64 years old, which is unusual when compared with seasonal flu. However, pregnancy and other previously recognized high risk medical conditions from seasonal influenza appear to be associated with increased risk of complications from H1N1 flu. These underlying conditions include asthma, diabetes, suppressed immune systems, heart disease, kidney disease, neurocognitive and neuromuscular disorders, and pregnancy.

### **How long can an infected person spread this virus to others?**

People infected with seasonal and H1N1 flu shed virus and may be able to infect others from one day before getting sick to five to seven days after. This can be longer in some people, especially children and people with weakened immune systems.

## **Prevention and Treatment**

### **What can I do to protect myself from getting sick?**

First and most important: wash your hands. Try to stay in good general health. Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids and eat nutritious food. Try not touch surfaces that may be contaminated with the flu virus. Avoid close contact with people who are sick.

### **When is it expected that the 2009 H1N1 vaccine will be available?**

The 2009 H1N1 vaccine is first expected to be available in October in limited supplies.

**Will the seasonal flu vaccine also protect against H1N1 flu?**

No. The seasonal flu vaccine does not protect against H1N1 flu.

**Can the seasonal vaccine and the H1N1 vaccine be given at the same time?**

Yes, with the exception of the seasonal nasal spray vaccine and the H1N1 nasal spray vaccines. Administering the seasonal nasal spray and H1N1 nasal spray at the same visit is NOT recommended because of concerns about competition between the two vaccine viruses. Doses of these two vaccines should be separated by four weeks.

**How can I find out where I can get the H1N1 vaccine for myself and my family members?**

Call your local health department or health care provider.

**Where will the H1N1 vaccine be available?**

Vaccine will be available in a combination of settings, such as vaccination clinics organized by local health departments, health care provider offices, schools, and other private settings, such as pharmacies and workplaces.

**Will two doses of H1N1 vaccine be required?**

The U.S. Food and Drug Administration (FDA) has approved the use of one dose of H1N1 flu vaccine for persons 10 years of age and older, and two doses for children 6 months to 9 years of age. As with seasonal vaccine, children ages 6 months through 35 months will receive two doses of H1N1 flu vaccine that contains one-half the dose used for older children and adults.

**What will be the recommended interval between the first and second dose for children 9 years of age and under?**

An interval of 21 to 28 days between the first and second vaccination is currently recommended.

**Who will be recommended to receive the 2009 H1N1 vaccine?**

CDC's Advisory Committee on Immunization Practices (ACIP) has recommended that certain groups of the population receive the H1N1 vaccine when it first becomes available. These target groups include pregnant women, people who live with or care for children younger than 6 months of age, health care and emergency medical services personnel, persons between the ages of 6 months and 24 years, and people 25 through 64 years of age who are at higher risk for H1N1 because of chronic health disorders or compromised immune systems.

The committee recommended that once the demand for vaccine for these target groups has been met at the local level, programs and providers should begin

vaccinating everyone from ages 25 through 64 years. Current studies indicate the risk for infection among persons age 65 or older is less than the risk for younger age groups. Therefore, as vaccine supply and demand for vaccine among younger age groups is being met, programs and providers should offer vaccination to people over the age of 65.

**Do those that have been previously vaccinated against the 1976 swine influenza need to get vaccinated against H1N1 influenza?**

The 1976 swine flu virus and the H1N1 virus are different enough that it's unlikely a person vaccinated in 1976 will have full protection from H1N1 flu. People vaccinated in 1976 should still be given the H1N1 vaccine.

**Will this vaccine be made differently than the seasonal influenza vaccine?**

No. This vaccine will be made using the same processes and facilities that are used to make the currently licensed seasonal influenza vaccines.

**What can I do to prevent the spread of H1N1 flu?**

Take the following everyday steps to help prevent the spread of germs that cause respiratory illnesses like influenza and protect your health:

- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
- Wash your hands often with soap and water. If soap and water are not available, use an alcohol-based hand rub.\*
- Avoid touching your eyes, nose or mouth. Germs spread this way.
- Try to avoid close contact with sick people.
- If you are sick with flu-like illness, stay home for at least 24 hours after your fever is gone except to get medical care or for other necessities. (Your fever should be gone without the use of a fever-reducing medicine.) Keep away from others as much as possible to keep from making others sick.

**Other important actions that you can take are:**

- Follow public health advice regarding school closures, avoiding crowds and other social distancing measures.
- Be prepared in case you get sick and need to stay home for a week or so; a supply of over-the-counter medicines, alcohol-based hand rubs (for when soap and water are not available), tissues and other related items could help you to avoid the need to make trips out in public while you are sick and contagious.

**What is the best way to keep from spreading the virus through coughing or sneezing?**

Keep away from others as much as possible. Cover your mouth and nose with a tissue when coughing or sneezing. Put your used tissue in the waste basket. Then, clean your hands, and do so every time you cough or sneeze.

**If I have a family member at home who is sick with H1N1 flu, should I go to work?**

Employees who are well but who have an ill family member at home with H1N1 flu can go to work as usual. These employees should monitor their health every day and take precautions, including washing their hands often with soap and water, especially after they cough or sneeze. If soap and water are not available, they should use an alcohol-based hand rub. If they become ill, they should notify their supervisor and stay home. Employees who have an underlying medical condition or who are pregnant should call their health care provider for advice, because they might need to receive influenza antiviral drugs to prevent illness.

**What is the best technique for washing my hands to avoid getting the flu?**

Washing your hands often will help protect you from germs. When you wash your hands -- with soap and warm water -- wash for 15 to 20 seconds. When soap and water are not available, alcohol-based disposable hand wipes or gel sanitizers may be used. If using gel, rub your hands until the gel is dry. The gel doesn't need water to work; the alcohol in it kills the germs on your hands.

**What should I do if I get sick?**

If you live in areas where people have been identified with H1N1 flu and become ill with influenza-like symptoms, including fever, body aches, runny or stuffy nose, sore throat, nausea, or vomiting or diarrhea, you should stay home and avoid contact with other people. Stay home for at least 24 hours after your fever is gone except to get medical care or for other necessities. Your fever should be gone without the use of a fever-reducing medicine. If you are a health care worker, you need to stay home longer.

Stay away from others as much as possible to keep from making others sick. Staying at home means that you should not leave your home except to seek medical care. This means avoiding normal activities, including work, school, travel, shopping, social events and public gatherings.

If you have severe illness or you are at high risk for flu complications, contact your health care provider or seek medical care. Your health care provider will determine whether flu testing or treatment is needed.

If you become ill and experience any of the following warning signs, seek emergency medical care.

**In children, emergency warning signs that need urgent medical attention include:**

- Fast breathing or trouble breathing
- Bluish or gray skin color
- Not drinking enough fluids
- Severe or persistent vomiting
- Not waking up or not interacting
- Being so irritable that the child does not want to be held
- Flu-like symptoms improve, but then return with fever and worse cough

**In adults, emergency warning signs that need urgent medical attention include:**

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting
- Flu-like symptoms improve but then return with fever and worse cough

**Are there medicines to treat H1N1 infection?**

Yes, the FDA approved drugs for treatment of H1N1 infection are oseltamivir (trade name Tamiflu®) and zanamivir (trade name Relenza®)

Most people ill with influenza will recover without complications. Some people are at highest risk of influenza-related complications and are recommended for treatment with influenza antiviral drugs this season. They include:

- People with more severe illness, such as those hospitalized with suspected or confirmed influenza
- People with suspected or confirmed influenza who are at higher risk for complications
  - Children younger than 2 years old
  - Adults 65 years and older
  - Pregnant women
  - People with certain chronic medical or immunosuppressive conditions
- People younger than 19 years of age who are receiving long-term aspirin therapy

Children 2 years to 4 years old are more likely to require hospitalization or urgent medical evaluation for influenza compared with older children, although

the risk is much lower than for children younger than 2 years old. Children aged 2 years to 4 years without high-risk conditions and who are not severely ill do not necessarily require antiviral treatment.

Children and adults with suspected influenza who have evidence of serious illness should also receive prompt antiviral therapy, regardless of previous health or age.

### **Who is lower priority for treatment with influenza antiviral drugs?**

Treatment with influenza antiviral drugs is generally not needed for people who are not at higher risk for complications or do not have severe influenza, such as those requiring hospitalization. However, any suspected influenza patient who presents with emergency warning signs (e.g., difficulty breathing or shortness of breath) or signs of lower respiratory tract illness or worsening illness should seek medical care promptly receive antiviral therapy when indicated.

Doctors may treat some people who are not in a high-risk group based on their clinical judgment. In addition, doctors also may decide that treatment is not needed for some who are in a high risk group based on their clinical judgment.

## Contamination and Cleaning

### **How long can influenza virus remain viable on objects (such as books and doorknobs)?**

Studies have shown that influenza virus can survive on environmental surfaces and can infect a person for two to eight hours after being deposited on the surface.

### **What kills influenza virus?**

Influenza virus is destroyed by heat (167-212°F [75-100°C]). In addition, several chemical germicides, including chlorine, hydrogen peroxide, detergents (soap), iodophors (iodine-based antiseptics), and alcohols are effective against human influenza viruses if used in proper concentration for a sufficient length of time.

### **What if soap and water are not available and alcohol-based products are not allowed in my facility?**

If soap and water are not available and alcohol-based products are not allowed, other hand sanitizers that do not contain alcohol may be useful.

### **What surfaces are most likely to be sources of contamination?**

Germs can be spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose or mouth. Droplets from a cough or sneeze of an infected person move through the air. Germs can be spread when a person touches respiratory droplets from another person on a

surface like a desk, for example, and then touches their own eyes, mouth or nose before washing their hands.

**How should waste disposal be handled to prevent the spread of influenza virus?**

To prevent the spread of influenza virus, it is recommended that tissues and other disposable items used by an infected person be thrown in the trash. Additionally, persons should wash their hands with soap and water after touching used tissues and similar waste.

**What household cleaning should be done to prevent the spread of influenza virus?**

To prevent the spread of influenza virus it is important to keep surfaces (especially bedside tables, surfaces in the bathroom, kitchen counters and toys for children) clean by wiping them down with a household disinfectant according to directions on the product label.

**How should linens, eating utensils and dishes of persons infected with influenza virus be handled?**

Linens, eating utensils and dishes belonging to those who are sick do not need to be cleaned separately, but importantly these items should not be shared without washing thoroughly first.

Linens (such as bed sheets and towels) should be washed by using household laundry soap and tumbled dry on a hot setting. Individuals should avoid "hugging" laundry prior to washing it to prevent contaminating themselves. Individuals should wash their hands with soap and water or alcohol-based hand rub immediately after handling dirty laundry.

Eating utensils should be washed either in a dishwasher or by hand with water and soap.

Exposures Not Thought to Spread H1N1 Flu

**Can I get infected with 2009 H1N1 virus from eating or preparing pork?**

No. H1N1 viruses are not spread by food. You cannot get infected with H1N1 virus from eating pork or pork products. Eating properly handled and cooked pork products is safe.

**Is there a risk from drinking water?**

Tap water treated by conventional disinfection processes does not likely pose a risk for transmission of influenza viruses. Current drinking water treatment regulations provide a high degree of protection from viruses. No research has been completed on the susceptibility of H1N1 flu virus to conventional drinking water treatment processes. However, recent studies have demonstrated that free

chlorine levels typically used in drinking water treatment are adequate to inactivate highly pathogenic H5N1 avian influenza. It is likely that other influenza viruses, such as H1N1, would also be similarly inactivated by chlorination. To date, there have been no documented human cases of influenza caused by exposure to influenza-contaminated drinking water.

**Can H1N1 flu virus be spread through water in swimming pools, spas, water parks, interactive fountains and other treated recreational water venues?**

Influenza viruses infect the human upper respiratory tract. There has never been a documented case of influenza virus infection associated with water exposure. Recreational water that has been treated at CDC recommended disinfectant levels does not likely pose a risk for transmission of influenza viruses. No research has been completed on the susceptibility of H1N1 influenza virus to chlorine and other disinfectants used in swimming pools, spas, water parks, interactive fountains and other treated recreational venues. However, recent studies have demonstrated that free chlorine levels recommended by CDC (1–3 parts per million [ppm or mg/L] for pools and 2–5 ppm for spas) are adequate to disinfect avian influenza A (H5N1) virus. It is likely that other influenza viruses such as H1N1 virus would also be similarly disinfected by chlorine.

**Can 2009 H1N1 influenza virus be spread at recreational water venues outside of the water?**

Yes. Recreational water venues are no different than any other group setting. The spread of this 2009 H1N1 flu is thought to be happening in the same way that seasonal flu spreads. Flu viruses are spread mainly from person to person through coughing or sneezing of people with influenza. Sometimes people may become infected by touching something with flu viruses on it and then touching their mouth or nose.