

HANDS-ON Health

Health Wave Newsletter, May 2009

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Swine Influenza A (H1N1)

Concerns about the human swine flu grow as the CDC reports additional cases of confirmed swine influenza and a number of hospitalizations of swine flu patients. With more countries reporting confirmed cases of swine flu, the World Health Organization has raised the worldwide pandemic alert level to Phase 5 (characterized by confirmed person-to-person spread of a new influenza virus able to cause "community-level outbreaks"). The increase in the pandemic alert phase indicates a strong signal that a pandemic is *imminent*.

While it is important to remain vigilant, it is also important to stay calm, get all of the facts and follow guidelines and recommendations made by the scientific community within government agencies.

This newsletter provides an overview of basic influenza information, followed by specific information about Swine Flu compiled from the Dept. of Health and Human Services, Centers for Disease Control and Prevention (CDC), and the National Institute of Allergy and Infectious Diseases (NIAID, NIH).

Check this site for updated case counts of confirmed swine flu infections in the United States:

<http://www.cdc.gov/swineflu/investigation.htm>

Overview of the Flu

Influenza, or flu, is a respiratory infection caused by several flu viruses. Flu viruses are classified as types A, B, and C, and type A has a number of subtypes. The flu is not the same as the common cold, nor is it related to what is commonly called the "stomach flu."

Seasonal Flu is the term used to refer to the flu outbreaks that occur yearly, mainly in the late fall and winter. It is estimated that between 5 and 20 percent of Americans come down with the flu every flu season.

Pandemic Flu refers to particularly virulent strains of flu that spread rapidly from person to person to create a world-wide epidemic (pandemic).

Swine Flu is a respiratory disease of pigs caused by type A influenza virus-

es that causes regular outbreaks in pigs. People do not normally get swine flu, but human infections can and do happen.

Avian (Bird) Flu In nature, the flu virus also occurs in wild aquatic birds such as ducks and shore birds. It does not normally spread from birds to humans. However, pigs can be infected by bird influenza (as well as by the form of influenza that affects humans) and can pass on the flu to humans.

Seasonal flu outbreaks usually begin suddenly and occur mainly in the late fall and winter. The disease spreads through communities, creating an epidemic. During the epidemic, the number of cases peaks in about 3 weeks and subsides after another 3 or 4 weeks. Half of the population of a community may be affected. *Because schools are an excellent place for flu*

In This Newsletter:

Overview of the Flu Acquaint yourself with the different types of influenza or flu; where they come from; how they are transmitted. (see pages 1-2)

Swine Influenza A (H1N1) Use the Question and Answer format (see pages 3-4) to get the facts on this latest outbreak

Print out the version of your choice, What Can You Do To Stay Healthy (see pages 5-6)

viruses to attack and spread, families with school-age children have more infections than other families, with an average of one-third of the family members infected each year.

Importance of Flu

Besides the rapid start of the outbreaks and the large numbers of people affected, the flu is an important disease because it can cause serious complications. Most people who get the flu get better within a week (although they may have a lingering cough and tire easily for a while longer). For elderly people, newborn babies, and people with certain chronic illnesses, however, the flu and its complications can be life-threatening.

Where Influenza Comes From

In nature, the flu virus is found in wild aquatic birds such as ducks and shore birds. It has persisted in these birds for millions of years and does not typically harm them. But the frequently mutating flu viruses can readily jump the species barrier from wild birds to domesticated ducks and then to chickens. From there, the next stop in the infectious chain is often pigs.

Pigs can be infected by both bird (avian) influenza and the form of influenza that infects humans. In a setting such as a farm where chickens, humans, and pigs live in close proximity, pigs act as an influenza virus mixing bowl. If a pig is infected with avian and human flu simultaneously, the two types of virus may exchange genes. Such a "reassorted" flu virus can sometimes spread from pigs to people.

Depending on the precise assortment of bird-type flu proteins that make it into the human population, the flu may be more or less severe.

In 1997, for the first time, scientists found that bird influenza skipped the pig step and infected humans directly. Alarmed health officials feared a pandemic. But, fortunately, the virus could not pass between people and thus did not spark an epidemic. Scientists speculate that chickens may now also have the receptor used by human-type viruses.

Cause

The first flu virus was identified in the 1930s. Since then, scientists have classified influenza viruses into types A, B, and C.

- Type A is the most common and usually causes the most serious epidemics.
- Type B outbreaks also can cause epidemics, but the disease it produces generally is milder than that caused by type A.
- Type C viruses, on the other hand, never have been connected with a large epidemic.

Transmission

- You can get the flu if someone around you who has the flu **coughs or sneezes**.
- You can get the flu simply **by touching a surface** like a telephone or door knob that has been contaminated by a touch from someone who has the flu.
- The viruses can **pass through the air and enter your body through your nose or mouth**.
- If you've touched a contaminated surface, they can pass **from your hand to your nose or mouth**.
- **You are at greatest risk of getting infected in highly populated areas, such as in crowded living conditions and in schools.**

ACCORDING TO THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC):

- 5 to 20 percent of Americans come down with the flu during each flu season, which typically lasts from November to March.
- Children are two to three times more likely than adults to get sick with the flu, and children frequently spread the virus to others.
- Although most people recover from the illness, CDC estimates that in the United States more than 200,000 people are hospitalized and about 36,000 people die from the flu and its complications every year.



Questions & Answers about swine flu

What is H1N1 (swine flu)?

H1N1 (swine flu) is a type of influenza (flu) virus that causes respiratory disease that can spread between people. Most people infected with this virus in the United States have had mild disease, but some have had more severe illness, and there has been at least one death. Young children, pregnant women, and people with chronic diseases like asthma, diabetes, or heart disease may be at higher risk for complications from this infection. More information about who may be at higher risk will be available when more is known about the disease.

How many swine flu viruses are there?

Like all influenza viruses, swine flu viruses change constantly. Pigs can be infected by avian influenza and human influenza viruses as well as swine influenza viruses. When influenza viruses from different species infect pigs, the viruses can reassort (i.e. swap genes) and new viruses that are a mix of swine, human and/or avian influenza viruses can emerge. Over the years, different variations of swine flu viruses have emerged. At this time, there are four main influenza type A virus subtypes that have been isolated in pigs: H1N1, H1N2, H3N2, and H3N1. However, most of the recently isolated influenza viruses from pigs have been H1N1 viruses.

How common is swine flu infection in humans?

In the past, CDC received reports of approximately one human swine influenza virus infection every one to two years in the U.S., but from December 2005 through February 2009, 12 cases of human infection with swine influenza have been reported.

How can human infections with swine influenza be diagnosed?

To diagnose swine influenza A infection, a respiratory specimen would generally need to be collected within the first 4 to 5 days of illness (when an infected person is most likely to be shedding virus). However, some persons, especially children, may shed virus for 10 days or longer. Identification as a swine flu influenza A virus requires sending the specimen to CDC for laboratory testing.

Can people catch swine flu from eating pork?

No. Swine influenza viruses are not transmitted by food. You can not get swine influenza from eating pork or pork products. Eating properly handled and cooked pork and pork products is safe. Cooking pork to an internal temperature of 160°F kills the swine flu virus as it does other bacteria and viruses.

What are the signs and symptoms of swine flu in people?

The symptoms of swine flu in people are similar to the symptoms of regular human flu and include **fever, cough, sore throat, body aches, headache, chills and fatigue**. Some people have reported diarrhea and vomiting associated with swine flu. In the past, severe illness (pneumonia and respiratory failure) and deaths have been reported with swine flu infection in people. Like seasonal flu, swine flu may cause a worsening of underlying chronic medical conditions.

How does swine flu spread?

Influenza viruses can be directly transmitted from pigs to people and from people to pigs. Human infection with flu viruses from pigs are most likely to occur when people are in close proximity to infected pigs, such as in pig barns and livestock exhibits housing pigs at fairs.

Human-to-human transmission of swine flu can also occur. This is thought to occur in the same way as seasonal flu occurs in people, which is mainly person-to-person transmission through coughing or sneezing of people infected with the influenza virus. People may become infected by touching something with flu viruses on it and then touching their mouth or nose.

How can someone with the flu infect someone else?

Infected people may be able to infect others beginning 1 day before symptoms develop and up to 7 or more days after becoming sick. That means that you may be able to pass on the flu to someone else before you know you are sick, as well as while you are sick.

How long can an infected person spread swine flu to others?

People with swine influenza virus infection should be considered potentially contagious as long as they are symptomatic and possible for up to 7 days following illness onset. Children, especially younger children, might potentially be contagious for longer periods.

How long can viruses live outside the body?

We know that some viruses and bacteria can live 2 hours or longer on surfaces like cafeteria tables, doorknobs, and desks. Frequent hand washing will help you reduce the chance of getting contamination from these common surfaces.

What medications are available to treat swine flu infections in humans?

There are four different antiviral drugs that are licensed for use in the US for the treatment of influenza: amantadine, rimantadine, oseltamivir and zanamivir. While most swine influenza viruses have been susceptible to all four drugs, the most recent swine influenza viruses isolated from humans are resistant to amantadine and rimantadine. At this time, CDC recommends the use of oseltamivir or zanamivir for the treatment and/or prevention of infection with swine influenza viruses.

What should I do if I get sick?

- If you live in areas where swine influenza cases have been identified and become ill with influenza-like symptoms, including fever, body aches, runny nose, sore throat, nausea, or vomiting or diarrhea, you may want to contact their health care provider, particularly if you are worried about your symptoms. Your health care provider will determine whether influenza testing or treatment is needed.

- If you are sick, you should stay home and avoid contact with other people as much as possible to keep from spreading your illness to others.
- 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 skin color
- Not drinking enough fluids
- 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
- Fever with a rash

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

CDC: Special Considerations for Children

Aspirin or aspirin-containing products (e.g. bismuth subsalicylate – Pepto Bismol) should not be administered to any confirmed or suspected ill case of swine influenza A (H1N1) virus infection aged 18 years old and younger due to the risk of Reye syndrome. For relief of fever, other anti-pyretic medications are recommended such as acetaminophen or non steroidal anti-inflammatory drugs.

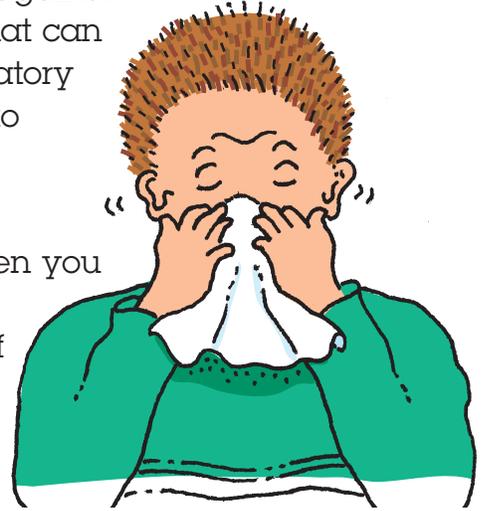
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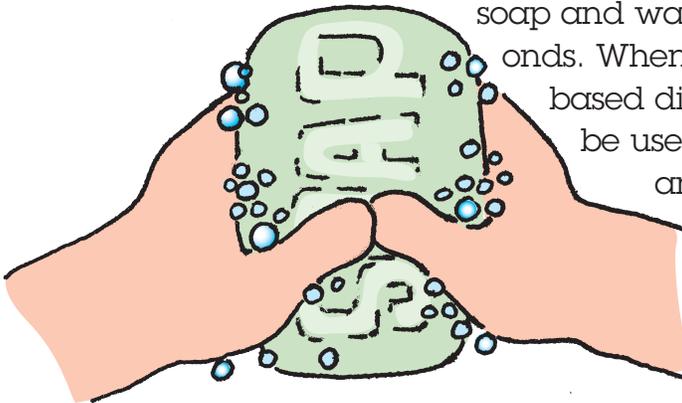
What You Can Do To Stay Healthy

There is no vaccine available right now to protect against swine flu. There are, however, everyday actions that can help prevent the spread of germs that cause respiratory illnesses like influenza. Take these everyday steps to protect your health:

1 Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it. Cover your cough or sneeze if you do not have a tissue; then, clean your hands, and do so every time you cough or sneeze.



2 Wash your hands often with soap and water, especially after you cough or sneeze. CDC recommends that when you wash your hands -- with soap and warm water -- that you wash for 15 to 20 seconds. When soap and water are not available, alcohol-based disposable hand wipes or gel sanitizers may be used. You can find them in most supermarkets and drugstores. 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.



3 Avoid touching your eyes, nose or mouth. Germs spread this way.

4 Try to avoid close contact with sick people. Influenza is thought to spread mainly person-to-person through coughing or sneezing of infected people.

5 If you do get sick with influenza, CDC recommends that you stay home from work or school and limit contact with others to keep from infecting them.



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