

IMEP eAlert: Swine Influenza

Swine Influenza and You

Posted: April 29, 2009

What is swine flu?

Swine Influenza (swine flu) is a respiratory disease of pigs caused by type A influenza viruses that causes regular outbreaks in pigs. People do not normally get swine flu, but human infections can and do happen. Swine flu viruses have been reported to spread from person-to-person, but in the past, this transmission was limited and not sustained beyond three people.

Are there human infections with swine flu in the U.S. ?

In late March and early April 2009, cases of human infection with swine influenza A (H1N1) viruses were first reported in Southern California and near San Antonio , Texas . Other U.S. states have reported cases of swine flu infection in humans and cases have been reported internationally as well. An updated case count of confirmed swine flu infections in the United States is kept at <http://www.cdc.gov/swineflu/investigation.htm>_CDC and local and state health agencies are working together to investigate this situation.

Is this swine flu virus contagious?

CDC has determined that this swine influenza A (H1N1) virus is contagious and is spreading from human to human. However, at this time, it not known how easily the virus spreads between people.

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?

Spread of this swine influenza A (H1N1) virus 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.

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.

What should I do to keep from getting the flu?

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.

Are there medicines to treat swine flu?

Yes. CDC recommends the use of oseltamivir or zanamivir for the treatment and/or prevention of infection with these swine influenza viruses. Antiviral drugs are prescription medicines (pills, liquid or an inhaler) that fight against the flu by keeping flu viruses from reproducing in your body. If you get sick, antiviral drugs can make your illness milder and make you feel better faster. They may also prevent

serious flu complications. For treatment, antiviral drugs work best if started soon after getting sick (within 2 days of symptoms).

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.

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 and then touches their own eyes, mouth or nose before washing their hands.

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 handwashing will help you reduce the chance of getting contamination from these common surfaces.

What can I do to protect myself from getting sick?

There is no vaccine available right now to protect against swine flu. There are everyday actions that can help prevent the spread of germs that cause respiratory illnesses like influenza. Take these everyday steps to 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, especially after you cough or sneeze. Alcohol-based hand cleaners are also effective.
- Avoid touching your eyes, nose or mouth. Germs spread this way.
- Try to avoid close contact with sick people.
- If you get sick with influenza, CDC recommends that you stay home from work or school and limit contact with others to keep from infecting them.

What is the best way to keep from spreading the virus through coughing or sneezing? If you are sick, limit your contact with other people as much as possible. Do not go to work or school if ill. Cover your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick. Put your used tissue in the waste basket. 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.

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

Washing your hands often will help protect you from germs. Wash with soap and water. or clean with alcohol-based hand cleaner. we recommend 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.

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

How serious is swine flu infection?

Like seasonal flu, swine flu in humans can vary in severity from mild to severe. Between 2005 until January 2009, 12 human cases of swine flu were detected in the U.S. with no deaths occurring. However, swine flu infection can be serious. In September 1988, a previously healthy 32-year-old pregnant woman in Wisconsin was hospitalized for pneumonia after being infected with swine flu and died 8 days later. A swine flu outbreak in Fort Dix, New Jersey occurred in 1976 that caused more than 200 cases with serious illness in several people and one death.

Can I get swine influenza from eating or preparing pork?

No. Swine influenza viruses are not spread by food. You cannot get swine influenza from eating pork or pork products. Eating properly handled and cooked pork products is safe.

What do we know about human-to-human spread of swine flu?

In September 1988, a previously healthy 32-year-old pregnant woman was hospitalized for pneumonia and died 8 days later. A swine H1N1 flu virus was detected. Four days before getting sick, the patient visited a county fair swine exhibition where there was widespread influenza-like illness among the swine.

In follow-up studies, 76% of swine exhibitors tested had antibody evidence of swine flu infection but no serious illnesses were detected among this group. Additional studies suggest that one to three health care personnel who had contact with the patient developed mild influenza-like illnesses with antibody evidence of swine flu infection.

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.

What other examples of swine flu outbreaks are there?

Probably the most well known is an outbreak of swine flu among soldiers in Fort Dix , New Jersey in 1976. The virus caused disease with x-ray evidence of pneumonia in at least 4 soldiers and 1 death; all of these patients had previously been healthy. The virus was transmitted to close contacts in a basic training environment, with limited transmission outside the basic training group. The virus is thought to have circulated for a month and disappeared. The source of the virus, the exact time of its introduction into Fort Dix , and factors limiting its spread and duration are unknown. The Fort Dix outbreak may have been caused by introduction of an animal virus into a stressed human population in close contact in crowded facilities during the winter. The swine influenza A virus collected from a Fort Dix soldier was named A/New Jersey/76 (Hsw1N1).

Is the H1N1 swine flu virus the same as human H1N1 viruses?

No. The H1N1 swine flu viruses are antigenically very different from human H1N1 viruses and, therefore, vaccines for human seasonal flu would not provide protection from H1N1 swine flu viruses.

Swine Flu in Pigs**How does swine flu spread among pigs?**

Swine flu viruses are thought to be spread mostly through close contact among pigs and possibly from contaminated objects moving between infected and uninfected pigs. Herds with continuous swine flu infections and herds that are vaccinated against swine flu may have sporadic disease, or may show only mild or no symptoms of infection.

What are signs of swine flu in pigs?

Signs of swine flu in pigs can include sudden onset of fever, depression, coughing (barking), discharge from the nose or eyes, sneezing, breathing difficulties, eye redness or inflammation, and going off feed.

How common is swine flu among pigs?

H1N1 and H3N2 swine flu viruses are endemic among pig populations in the United States and something that the industry deals with routinely. Outbreaks among pigs normally occur in colder weather months (late fall and winter) and sometimes with the introduction of new pigs into susceptible herds. Studies have shown that the swine flu H1N1 is common throughout pig populations worldwide, with 25 percent of animals showing antibody evidence of infection. In the U.S. studies have shown that 30 percent of the pig population has antibody evidence of having had H1N1 infection. More specifically, 51 percent of pigs in the north-central U.S. have been shown to have antibody evidence of infection with swine H1N1. Human infections with swine flu H1N1 viruses are rare. There is currently no way to differentiate antibody produced in response to flu vaccination in pigs from antibody made in response to pig infections with swine H1N1 influenza.

While H1N1 swine viruses have been known to circulate among pig populations since at least 1930, H3N2 influenza viruses did not begin circulating among US pigs until 1998. The H3N2 viruses initially were introduced into the pig population from humans. The current swine flu H3N2 viruses are closely related to human H3N2 viruses.

Is there a vaccine for swine flu?

Vaccines are available to be given to pigs to prevent swine influenza. There is no vaccine to protect humans from swine flu. The seasonal influenza vaccine will likely help provide partial protection against swine H3N2, but not swine H1N1 viruses.

Antiviral Drugs and Swine Influenza

Antiviral Drugs

Antiviral drugs are prescription medicines (pills, liquid or an inhaler) with activity against influenza viruses, including swine influenza viruses. Antiviral drugs can be used to treat swine flu or to prevent infection with swine flu viruses. These medications must be prescribed by a health care professional. Influenza antiviral drugs only work against influenza viruses -- they will not help treat or prevent symptoms caused by infection from other viruses that can cause symptoms similar to the flu.

There are four influenza antiviral drugs approved for use in the United States (oseltamivir, zanamivir, amantadine and rimantadine). The swine influenza A (H1N1) viruses that have been detected in humans in the United States and Mexico are resistant to amantadine and rimantadine so these drugs will not work against these swine influenza viruses. Laboratory testing on these swine influenza A (H1N1) viruses so far indicate that they are susceptible (sensitive) to oseltamivir and zanamivir.

Benefits of Antiviral Drugs

Treatment: If you get sick, antiviral drugs can make your illness milder and make you feel better faster. They may also prevent serious influenza complications. For treatment, antiviral drugs work best if started as soon after getting sick as possible, and might not work if started more than 48 hours after illness starts.

Prevention: Influenza antiviral drugs also can be used to prevent influenza when they are given to a person who is not ill, but who has been or may be near a person with swine influenza. When used to prevent the flu, antiviral drugs are about 70% to 90% effective. When used for prevention, the number of days that they should be used will vary depending on a person's particular situation.

CDC Recommendation

CDC recommends the use of oseltamivir or zanamivir for the treatment and/or prevention of infection with swine influenza viruses.

- Oseltamivir (brand name Tamiflu ®) is approved to both treat and prevent influenza A and B virus infection in people one year of age and older.
- Zanamivir (brand name Relenza ®) is approved to treat influenza A and B virus infection in people 7 years and older and to prevent influenza A and B virus infection in people 5 years and older.

Recommendations for using antiviral drugs for treatment or prevention of swine influenza will change as we learn more about this new virus.