
Interim Guidance for Swine influenza A (H1N1): Taking Care of a Sick Person in Your Home

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This document provides interim guidance and will be updated as needed.

Swine influenza A virus infection (swine flu) can cause a wide range of symptoms, including fever, cough, sore throat, body aches, headache, chills and fatigue. Some people have reported diarrhea and vomiting associated with swine flu. People with swine flu also can have vomiting and diarrhea. Like seasonal flu, swine flu in humans can vary in severity from mild to severe. Severe disease with pneumonia, respiratory failure and even death is possible with swine flu infection. Certain groups might be more likely to develop a severe illness from swine flu infection, such as persons with chronic medical conditions. Sometimes bacterial infections may occur at the same time as or after infection with influenza viruses and lead to pneumonias, ear infections, or sinus infections.

The following information can help you provide safer care at home for sick persons during a flu pandemic.

How Flu Spreads

The main way that influenza viruses are thought to spread is from person to person in respiratory droplets of coughs and sneezes. This can happen when droplets from a cough or sneeze of an infected person are propelled through the air and deposited on the mouth or nose of people nearby. Influenza viruses may also be spread when a person touches respiratory droplets on another person or an object and then touches their own mouth or nose (or someone else's mouth or nose) before washing their hands.

People with swine flu who are cared for at home should:

- check with their health care provider about any special care they might need if they are pregnant or have a health condition such as diabetes, heart disease, asthma, or emphysema
- check with their health care provider about whether they should take antiviral medications
- stay home for 7 days after the start of illness and fever is gone
- get plenty of rest
- drink clear fluids (such as water, broth, sports drinks, electrolyte beverages for infants) to keep from being dehydrated
- cover coughs and sneezes. Clean hands with soap and water or an alcohol-based hand rub often and especially after using tissues and after coughing or sneezing into hands.
- avoid close contact with others – do not go to work or school while ill
- be watchful for emergency warning signs (see below) that might indicate you need to seek medical attention

Medications to Help Lessen Symptoms of the Flu

Check with your healthcare provider or pharmacist for correct, safe use of medications

Antiviral medications can sometimes help lessen influenza symptoms, but require a prescription. Most people do not need these antiviral drugs to fully recover from the flu. However, persons at higher risk for severe flu complications, or those with severe flu illness who require hospitalization, might benefit from antiviral medications. Antiviral medications are available for persons 1 year of age and older. Ask your healthcare provider whether you need antiviral medication.

Influenza infections can lead to or occur with bacterial infections. Therefore, some people will also need to take antibiotics. More severe or prolonged illness or illness that seems to get better, but then gets worse again may be an indication that a person has a bacterial infection. Check with your healthcare provider if you have concerns.

Warning! Do *not* give aspirin (acetylsalicylic acid) to children or teenagers who have the flu; this can cause a rare but serious illness called Reye's syndrome. For more information about Reye's syndrome, visit the National Institute of Health website at http://www.ninds.nih.gov/disorders/reyes_syndrome/reyes_syndrome.html

- Check ingredient labels on over-the-counter cold and flu medications to see if they contain aspirin.
- Teenagers with the flu can take medicines *without* aspirin, such as acetaminophen (Tylenol®) and ibuprofen (Advil®, Motrin®, Nuprin®), to relieve symptoms.
- Children younger than 2 years of age should not be given over-the-counter cold medications without first speaking with a healthcare provider.
- The safest care for flu symptoms in children younger than 2 years of age is using a cool-mist humidifier and a suction bulb to help clear away mucus.
- Fevers and aches can be treated with acetaminophen (Tylenol®) or ibuprofen (Advil®, Motrin®, Nuprin®) or nonsteroidal anti-inflammatory drugs (NSAIDs). Examples of these kinds of medications include:

Generic Name	Brand Name(s)
	Tylenol®

Ibuprofen	Advil®, Motrin®, Nuprin®
Naproxen	Aleve

- Over-the-counter cold and flu medications used according to the package instructions may help lessen some symptoms such as cough and congestion. Importantly, these medications will not lessen how infectious a person is.
- Check the ingredients on the package label to see if the medication already contains acetaminophen or ibuprofen before taking additional doses of these medications—don't double dose! Patients with kidney disease or stomach problems should check with their health care provider before taking any NSAIDs.

Check with your health care provider or pharmacist if you are taking other over-the-counter or prescription medications not related to the flu. For more information on

When to Seek Emergency Medical Care

Get medical care right away if the sick person at home:

- has difficulty breathing or chest pain
- has purple or blue discoloration of the lips
- is vomiting and unable to keep liquids down
- has signs of dehydration such as dizziness when standing, absence of urination, or in infants, a lack of tears when they cry
- has seizures (for example, uncontrolled convulsions)
- is less responsive than normal or becomes confused

Steps to Lessen the Spread of Flu in the Home

When providing care to a household member who is sick with influenza, the most important ways to protect yourself and others who are not sick are to:

- keep the sick person away from other people as much as possible (see “placement of the sick person at home”)
- remind the sick person to cover their coughs, and clean their hands with soap and water or an alcohol-based hand rub often, especially after coughing and/or sneezing.
- have everyone in the household clean their hands often, using soap and water or an alcohol-based hand rub
- ask your healthcare provider if household contacts of the sick person, particularly those contacts that may have chronic health conditions, should take antiviral medications such as oseltamivir (Tamiflu®) or zanamivir (Relenza®) to prevent the flu.

Placement of the sick person

- Keep the sick person in a room separate from the common areas of the house. (For example, a spare bedroom with its own bathroom, if that's possible.) Keep the sickroom door closed.
- Unless necessary for medical care, persons with the flu should not leave the home when they have a fever or during the time that they are most likely to spread their infection to others (7 days after onset of symptoms in adults, and 10 days after onset of symptoms in children).
- If persons with the flu need to leave the home (for example, for medical care), they should cover their nose and mouth when coughing or sneezing and wear a loose-fitting (surgical) mask if available.
- Have the sick person wear a surgical mask if they need to be in a common area of the house near other persons.
- If possible, sick persons should use a separate bathroom. This bathroom should be cleaned daily with household disinfectant (see below).

Protect other persons in the home

- The sick person should not have visitors other than caregivers. A phone call is safer than a visit.
- If possible, have only one adult in the home take care of the sick person.
- Avoid having pregnant women care for the sick person. (Pregnant women are at increased risk of influenza-related complications and immunity can be suppressed during pregnancy).
- All persons in the household should clean their hands with soap and water or an alcohol-based hand rub frequently, including after every contact with the sick person or the person's room or bathroom.
- Use paper towels for drying hands after hand washing or dedicate cloth towels to each person in the household. For example, have different colored towels for each person.

- If possible, consideration should be given to maintaining good ventilation in shared household areas (e.g., keeping windows open in restrooms, kitchen, bathroom, etc.).
- Antivirals can be used to prevent the flu, so check with your healthcare provider to see if some persons in the home should use antiviral medications.

If you are the caregiver

- Avoid being face-to-face with the sick person.
- When holding small children who are sick, place their chin on your shoulder so that they will not cough in your face.
- Clean your hands with soap and water or use an alcohol-based hand rub after you touch the sick person or handle used tissues, or laundry.
- Caregivers might catch flu from the person they are caring for and then the caregiver might be able to spread the flu to others before the caregiver shows symptoms. Therefore, the caregiver should wear a mask when they leave their home to keep from spreading flu to others in case they are in the early stages of infection.
- Talk to your health care provider about taking antiviral medication to prevent the caregiver from getting the flu.
- **Monitor yourself and household members for flu symptoms and contact a telephone hotline or health care provider if symptoms occur.**

Using Facemasks or Respirators

- Avoid close contact (less than about 6 feet away) with the sick person as much as possible.
- If you must have close contact with the sick person (for example, hold a sick infant), spend the least amount of time possible in close contact and try to wear a facemask (for example, surgical mask) or N95 disposable respirator.
- An N95 respirator that fits snugly on your face can filter out small particles that can be inhaled around the edges of a facemask, but compared with a facemask it is harder to breathe through an N95 mask for long periods of time. More information on facemasks and respirators can be found at www.cdc.gov/swineflu
- Facemasks and respirators may be purchased at a pharmacy, building supply or hardware store.
- Wear an N95 respirator if you help a sick person with respiratory treatments using a nebulizer or inhaler, as directed by their doctor. Respiratory treatments should be performed in a separate room away from common areas of the house when at all possible.
- Used facemasks and N95 respirators should be taken off and placed immediately in the regular trash so they don't touch anything else.
- Avoid re-using disposable facemasks and N95 respirators if possible. If a reusable fabric facemask is used, it should be laundered with normal laundry detergent and tumble-dried in a hot dryer.
- After you take off a facemask or N95 respirator, clean your hands with soap and water or an alcohol-based hand sanitizer.

Household Cleaning, Laundry, and Waste Disposal

- Throw away tissues and other disposable items used by the sick person in the trash. Wash your hands after touching used tissues and similar waste.
- Keep surfaces (especially bedside tables, surfaces in the bathroom, and toys for children) clean by wiping them down with a household disinfectant according to directions on the product label.
- 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.
- Wash linens (such as bed sheets and towels) by using household laundry soap and tumble dry on a hot setting. Avoid "hugging" laundry prior to washing it to prevent contaminating yourself. Clean your hands with soap and water or alcohol-based hand rub right after handling dirty laundry.
- Eating utensils should be washed either in a dishwasher or by hand with water and soap.

For More Information

The Centers for Disease Control and Prevention (CDC) Hotline (1-800-CDC-INFO) is available in English and Spanish, 24 hours a day, 7 days a week.



Frequently Asked Questions About Swine Influenza

What is swine influenza?

Swine Influenza (swine flu) is a respiratory disease of pigs caused by some influenza viruses. Rarely, a type of flu virus with some genetic material from pigs develops that can also cause disease in humans.

Can humans catch swine flu?

Yes, in past cases, infection was due to close exposure to pigs. But the cases we are seeing now are not from direct human contact with pigs. These cases appear to be passed directly from person-to-person through coughing or sneezing, just like regular seasonal flu. You cannot catch swine flu from eating pork or pork products.

Why are we just hearing about this type of influenza now?

This type of influenza is what's known as a "novel," or new strain. It is not unusual for public health to discover a new strain of influenza. This is why public health laboratories and public health staff, including the Los Angeles County Department of Public Health, are constantly monitoring the health of the population to quickly detect, monitor and treat new and emerging diseases.

I got a flu vaccine for this season. Will this protect me from swine flu?

Experts do not believe that this season's influenza vaccine will protect against swine flu. However, because flu season is coming to an end, the spread of influenza from person-to-person is becoming less likely.

To protect against swine flu and other infectious illnesses, Public Health recommends that individuals continue to practice good hygiene throughout the year. This includes frequent hand washing, especially after using the restroom and before eating, covering your nose and mouth when you cough or sneeze, avoiding touching your hands to your eyes, nose and mouth, and staying home when sick. It is also strongly recommended that all individuals receive the flu vaccine every fall, in order to protect against other strains of influenza.

What are the symptoms of swine flu in humans?

The symptoms of swine flu in people are the same as symptoms of regular seasonal influenza and include fever, lethargy, sore throat, dry cough, muscle aches, and lack of appetite. Symptoms may also include runny nose, sore throat and, less commonly, nausea, vomiting and diarrhea. The recent reports of swine flu in the United States suggests that overall, the cases are mild to moderate in severity. However, preliminary reports from Mexico of flu caused by this identical virus indicate that more severe cases are common.

How do I know if I have swine flu?

You cannot tell just by the symptoms, as they are similar to regular seasonal influenza. A doctor will need to collect a respiratory specimen within the first 4 to 5 days of illness. If swine flu is



suspected, this specimen will then be sent to the LA County Department of Public Health Laboratory for testing. In the meantime, individuals who are sick should care for themselves at home, in the same way they would with a regular bout of influenza.

How is swine flu treated?

Swine flu is treated in the same way as regular flu – with good hygiene practices and plenty of rest at home, away from work or school. This type of flu may be treated with an antiviral medication if it is started early. However, nobody should take this or any other prescription medication without first talking to their doctor.

Why are all of the cases so far mostly among children?

Influenza is not officially confirmed without laboratory testing of specimens. These cases of swine flu happen to have been confirmed mostly in children. It is expected that both children and adults would be at equal risk of catching swine flu, and it appears that both children and adults have equal, high chances of recovery. Both children and adults are urged to practice good hygiene habits, such as hand washing, to avoid catching any kind of illness or spreading illness to others. Also, it is important that children who are sick stay home from school to prevent the spread of illness.

Is swine flu like avian flu? Do I need to wear a face mask or avoid travel?

Unless you are sick, you do not need to wear a face mask or avoid travel. It is recommended that those who are sick avoid travel in order to recover and to avoid passing the illness on to others. Face masks for the general public in order to reduce the chance of catching influenza are not necessary.

What is Public Health doing about this?

Public Health is actively working with the California Department of Public Health and the Centers for Disease Control and Prevention (CDC) to detect cases of swine flu that may occur in Los Angeles County. It is also working with emergency rooms, physicians, hospitals, and schools to carefully monitor for any signs of swine flu in LA County.

Want more information?

For more information and updates, you can check the Centers for Disease Control and Prevention website at www.cdc.gov/flu/swine .

Swine Flu Virus Infections in Pigs

Swine influenza is a respiratory disease of pigs caused by **type A influenza viruses** and has a major economic impact on the swine industry in the United States. Flu outbreaks in pigs are common, especially during winter months. Swine flu can result in high rates of illness in herds.

Signs of swine flu in pigs may include:

- coughing (“barking”)
- discharge from the nose
- sneezing
- breathing difficulties
- going off feed

- High fevers in infected pigs are common, and can result in reduced fertility or elevated abortion rates among sows.
- Studies have shown that 30% to 50% of commercial U.S. swine have been infected with swine flu.
- Pigs most commonly get infected with flu viruses from other pigs (swine flu), but also can get infected with flu viruses from birds (avian flu), and from people (human flu). This cross-species spread of flu viruses can lead to new types of flu viruses.
- The number of subtypes and strains of flu virus circulating among U.S. herds has complicated swine flu vaccine programs and resulted in increased economic loss from illness in pigs.



Qs & As about Swine Flu

Q How does swine flu spread among pigs?

A Swine flu viruses are thought to 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 might have sporadic disease, or may show only mild or no signs of infection.

Q Can swine flu infections be prevented in pigs?

A Swine flu infections can be potentially prevented by:

- Vaccinating herds
- Using good biosecurity measures
- Encouraging good hygiene practices among workers
- Using proper ventilation systems

Q What about flu vaccines for pigs?

A Flu vaccines for pigs can help, but are not 100% effective. One reason is that several different strains of flu can infect pigs and vaccines might not protect against all strains.

Q How can veterinarians help?

A Veterinarians can help to develop management strategies to reduce the spread of flu among herds and to prevent the spread of flu viruses between pigs, people, and birds.

Q Can people catch swine flu from eating pork?

A There is no evidence to show that swine influenza can be transmitted through food. Eating properly handled and cooked pork and pork products is safe. Cooking pork to an internal temperature of 160°F kills bacteria and viruses.

What You Can Do

First, wash your hands frequently after exposure to animals and avoid contact with ill appearing animals. If you or your family becomes ill with flu-like symptoms, **let your doctor know** if you have been around pigs that could have the flu. A nose or throat swab is needed to determine if you might be infected with a swine flu virus.

Most cases of influenza in humans are caused by human flu viruses. However, in the unusual event that you are infected with a swine flu virus, the health department will want to talk with you about your illness and make sure that other people you live and work with are not sick with swine flu. Influenza medications are available to treat swine flu illness in people. These medicines should be started in the first 2 days of being ill to be most effective.

It is important to know if swine flu viruses are spreading among people so that public health authorities can work to prevent future cases.



Flu Can Spread from Pigs to People and from People to Pigs

- Swine flu viruses can infect humans, but this is not common.
- Human and swine flu viruses are different. People who get vaccinated for human flu can still get sick from swine flu. Pigs that have been vaccinated for swine flu can still get sick from human flu.
- Symptoms of swine flu in people are no different from symptoms that people get when they are infected with human flu viruses.
- People infected with flu typically have **fever** (often high), **cough**, **body aches**, **headaches**, **fatigue** and **runny or stuffy nose**. Vomiting and diarrhea may also occur.
- Recent studies have shown that **15% to 25% of swine farmers might have been infected with swine flu viruses**, as well as about 10% of veterinarians.
- Cases of swine flu have most commonly occurred in people with direct exposure to pigs, but some cases of human-to-human transmission have been reported.



For more information, visit

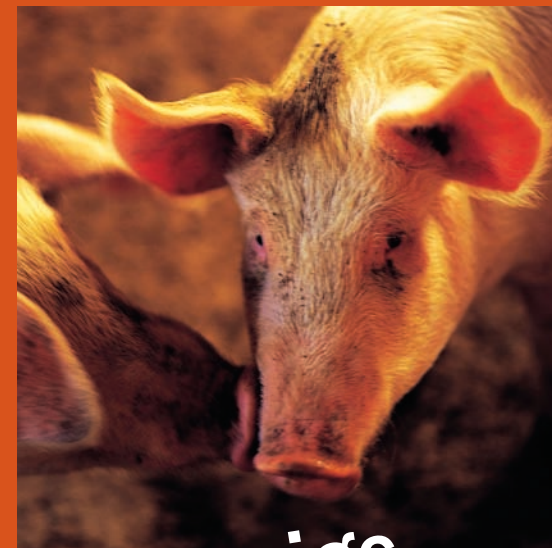
www.cdc.gov/flu/

www.avma.org/public_health/influenza/default.asp

www.pork.org/PorkScience/Documents/PUBLICHEALTH%20influenza.pdf

www.befoodsafe.gov

SWINE INFLUENZA (FLU)



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