

## **SWINE INFLUENZA**

**(The Following information is provided by CDC)**

### **Swine Influenza and You**

#### **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 is 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.

**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.

## **Key Facts about Swine Influenza (Swine Flu)**

### **Swine Flu**

#### **What is Swine Influenza?**

Swine Influenza (swine flu) is a respiratory disease of pigs caused by type A influenza virus that regularly causes outbreaks of influenza in pigs. Swine flu viruses cause high levels of illness and low death rates in pigs. Swine influenza viruses may circulate among swine throughout the year, but most outbreaks occur during the late fall and winter months similar to outbreaks in humans. The classical swine flu virus (an influenza type A H1N1 virus) was first isolated from a pig in 1930.

#### **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.

### **Swine Flu in Humans**

#### **Can humans catch swine flu?**

Swine flu viruses do not normally infect humans. However, sporadic human infections with swine flu have occurred. Most commonly, these cases occur in persons with direct exposure to pigs (e.g. children near pigs at a fair or workers in the swine industry). In addition, there have been documented cases of one person spreading swine flu to others. For example, an outbreak of apparent swine flu infection in pigs in Wisconsin in 1988 resulted in multiple human infections, and, although no community outbreak resulted, there was antibody evidence of virus transmission from the patient to health care workers who had close contact with the patient.

#### **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.

#### **What are the symptoms of swine flu in humans?**

The symptoms of swine flu in people are expected to be similar to the symptoms of regular human [seasonal influenza](#) and include fever, lethargy, lack of appetite and coughing. Some people with swine flu also have reported runny nose, sore throat, nausea, vomiting and diarrhea.

#### **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.

### **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.

### **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 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 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.

Related Links

[INFLUENZA: Pigs, People and Public Health \(Fact Sheet\)](#)

## **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. Influenza antiviral drugs work best when started soon after illness onset (within two 2 days), but treatment with antiviral drugs should still be considered after 48 hours of symptom onset, particularly for hospitalized patients or people at high risk for influenza-related complications.

**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.

Clinicians should consider treating any person with confirmed or suspected swine influenza with an antiviral drug. Visit: <http://www.cdc.gov/swineflu/recommendations.htm> for specific recommendations.

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

April 25, 2009 18:30 ET

*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.htm](http://www.ninds.nih.gov/disorders/reyes_syndrome/reyes_syndrome.htm)

- 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)
Acetaminophen	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 products for treating flu symptoms, see the FDA website: [http://www.fda.gov/fdac/features/2005/105\\_buy.htm](http://www.fda.gov/fdac/features/2005/105_buy.htm)

## **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 who 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](http://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.