

# **2009 H1N1 Flu ("Swine Flu") and You**

Information Last Updated November 3, 2009 11:45 AM EST

(Dates for Latest Update for Individual Questions Noted)

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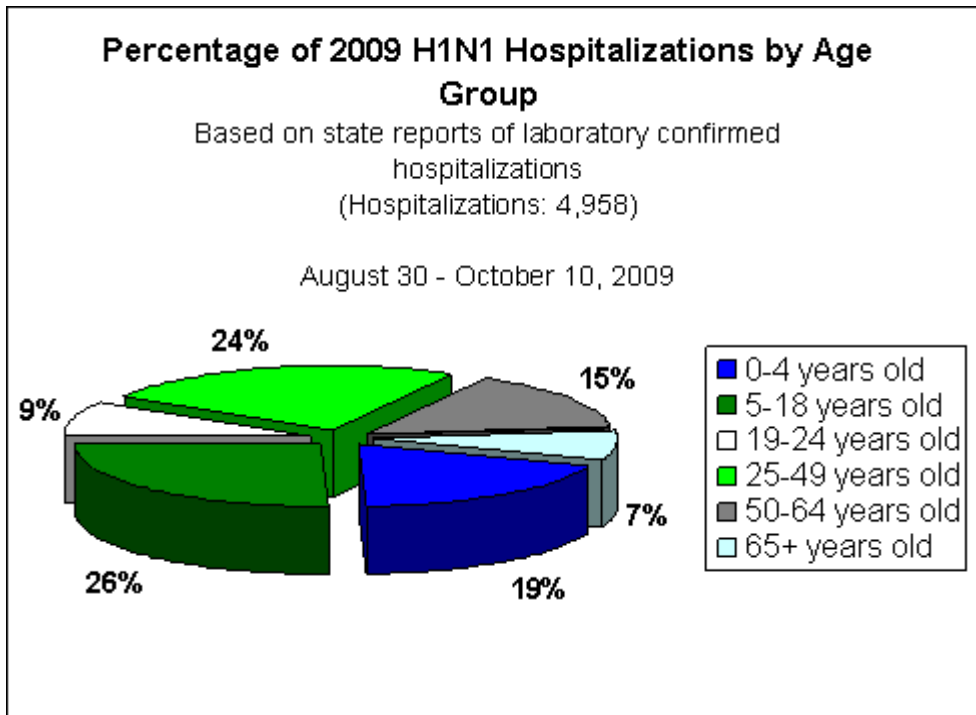
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# H1N1 Hospitalizations

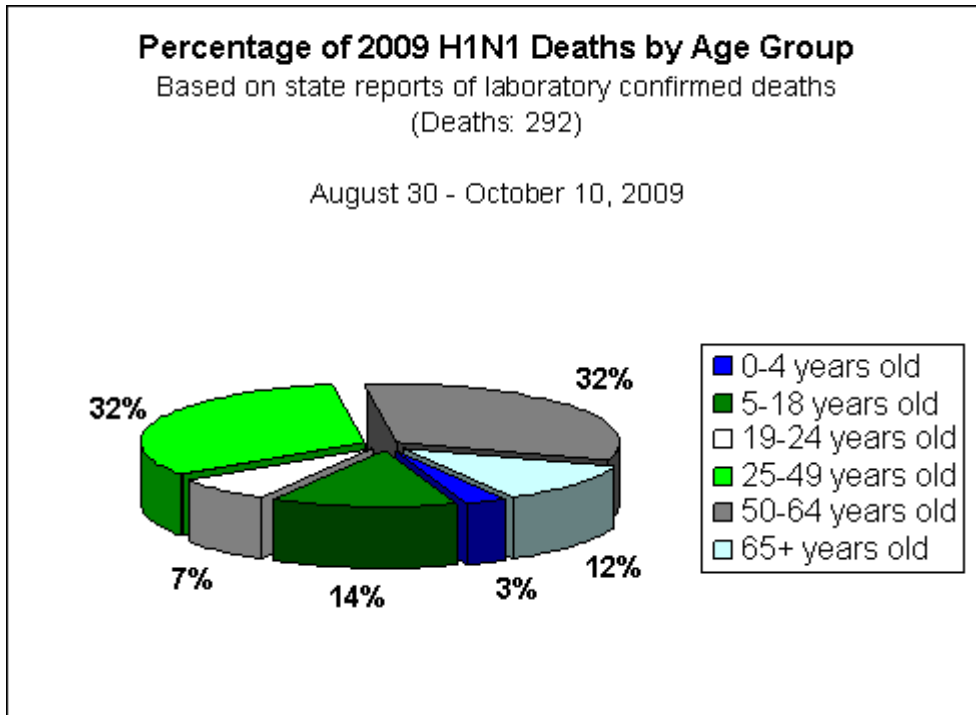
## What percentage of hospitalizations for 2009 H1N1 flu occur in different age groups in the United States? October 20

The percentage of hospitalizations for 2009 H1N1 flu in the United States varies by age group. From August 30, 2009 through October 10, 2009, states reported 4,958 laboratory-confirmed 2009 H1N1 hospitalizations to CDC. The percentage of 2009 H1N1 related hospitalizations that occurred among those 0 to 4 years old was 19%; among those 5 years to 18 years was 25%; among people 19 years to 24 years was 9%; among those 25 years to 49 years was 24%; among people 50 to 64 years was 15%; and among people 65 years and older was 7%. For a graphical representation of this data, please see the chart below.



**What percentage of deaths for 2009 H1N1 flu occur in different age groups in the United States? October 20**

The percentage of deaths for 2009 H1N1 flu in the United States varies by age group. From August 30, 2009 through October 10, 2009, states reported 292 laboratory-confirmed 2009 H1N1 deaths to CDC. The percentage of 2009 H1N1 related deaths that occurred among people 0 years to 4 years was 3%; among those 5 years to 18 years was 14%; among people 19 to 24 years was 7%; among people 25 to 49 years was 33%; among people 50-64 years was 32%; and among people 65 years and older was 12%. For a graphical representation of this data, please see the chart below.

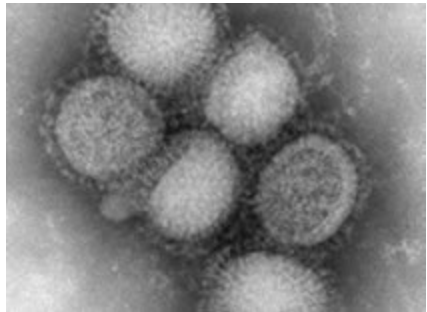


# 2009 H1N1 Flu Defined

## What is 2009 H1N1 (swine flu)?

2009 H1N1 (sometimes called “swine flu”) is a new influenza virus causing illness in people. This new virus was first detected in people in the United States in April 2009. This virus is spreading from person-to-person worldwide, probably in much the same way that regular seasonal influenza viruses spread. On June 11, 2009, the World Health Organization (WHO) signaled that a pandemic of 2009 H1N1 flu was underway.

## Why is 2009 H1N1 virus sometimes called “swine flu”?



This virus was originally referred to as “swine flu” because laboratory testing showed that 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. Scientists call this a “quadruple reassortant” virus.

# 2009 H1N1 Flu in Humans

## Are there human infections with 2009 H1N1 virus in the U.S.?

Yes. Human infections with 2009 H1N1 are ongoing in the United States. Most people who have become ill with this new virus have recovered without requiring medical treatment. CDC routinely works with states to collect, compile and analyze information about influenza, and has done the same for the new H1N1 virus since the beginning of the outbreak.

## Is 2009 H1N1 virus contagious?

The 2009 H1N1 virus is contagious and is spreading from human to human.

## How does 2009 H1N1 virus spread?

Spread of 2009 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 2009 H1N1 flu virus 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 2009 H1N1 and have respiratory symptoms without a fever. Severe illnesses and deaths have occurred as a result of illness associated with this virus.

### **How severe is illness associated with 2009 H1N1 flu virus?**

Illness with 2009 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.

In seasonal flu, certain people are at “high risk” of serious complications. This includes people 65 years and older, children younger than five years old, pregnant women, and people of any age with certain chronic medical conditions. About 70 percent of people who have been hospitalized with this 2009 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.

Young children are also at high risk of serious complications from 2009 H1N1, just as they are from seasonal flu. And while people 65 and older are the least likely to be infected with 2009 H1N1, if they get sick, they are also at “high risk” of developing serious complications from their illness.

CDC laboratory studies have shown that no children and very few adults younger than 60 years old have existing antibody to 2009 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 2009 H1N1 flu by any existing antibody.

### **How does 2009 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. Over 90% of deaths and about 60 percent of hospitalization occur in people older than 65.

When the 2009 H1N1 outbreak was first detected in mid-April 2009, CDC began working with states to collect, compile and analyze information regarding the 2009 H1N1 flu outbreak, including the numbers of confirmed and probable cases and the ages of these people. The information analyzed by CDC supports the conclusion that 2009 H1N1 flu has caused greater disease burden in people younger than 25 years of age than older people. At this time, there are relatively fewer cases and deaths reported in people 65 years and older, 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 this 2009 H1N1. 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 2009 H1N1 flu shed virus and may be able to infect others from 1 day before getting sick to 5 to 7 days after. This can be longer in some people, especially children and people with weakened immune systems and in people infected with the new H1N1 virus.

## **2009 H1N1 Hospitalizations in People with Asthma**

### **What does CDC know about hospitalizations among people with asthma who get 2009 H1N1 flu? November 3, 2009**

People with asthma are at higher risk for serious complications from influenza (flu), including 2009 H1N1 flu. This can place people with asthma at higher risk of hospitalization when they have 2009 H1N1 flu. CDC monitors 2009-H1N1 related hospitalizations, including among people with asthma, through the Emerging Infections Program (EIP).

### **What is the Emerging Infections Program (EIP)? November 3, 2009**

The EIP Influenza Project conducts surveillance for laboratory-confirmed influenza (flu) related hospitalizations in children (persons younger than 18 years) and adults in 62 counties covering 13 metropolitan areas of 10 states. Cases are identified by reviewing hospital laboratory and admission databases and infection control logs for children and adults with a documented positive influenza test\* conducted as a part of routine patient care. EIP estimated hospitalization rates are reported every week during the flu season.

\*Tests used by EIP to confirm influenza infection include viral culture, direct/indirect fluorescent antibody assay (DFA/IFA), real-time reverse transcriptase polymerase chain reaction (rRT-PCR), or a commercial rapid antigen test.

### **What percentage of people hospitalized with 2009 H1N1 flu have asthma? November 3, 2009**

According to Emerging Infections Program (EIP) data collected from April 15 through October 27, 2009, 32% of people hospitalized with 2009 H1N1 had asthma. Among adults hospitalized with 2009 H1N1, 30% had asthma, whereas 35% of hospitalized children with 2009 H1N1 had asthma.

## **What percentage of people hospitalized with asthma and 2009 H1N1 are admitted to an Intensive Care Unit (ICU)? November 3, 2009**

According to Emerging Infections Program (EIP) data collected from April 15 - October 27, 2009, 21% of hospitalized adults with asthma and a 2009 H1N1 infection and 18% of hospitalized children with asthma and a 2009 H1N1 infection were admitted to an ICU. No significant differences in the number of ICU admissions were noted between 2009 H1N1 infected people hospitalized with or without asthma.

# **Prevention & Treatment**

## **What can I do to protect myself from getting sick? October 8, 2009**

This season, there is a seasonal flu vaccine to protect against seasonal flu viruses and a 2009 H1N1 vaccine to protect against the 2009 H1N1 influenza virus (sometimes called “swine flu”). A flu vaccine is the first and most important step in protecting against flu infection.

There are also everyday actions that can help prevent the spread of germs that cause respiratory illnesses like the flu.

### **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. 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, CDC recommends you stay home for at least 24 hours after 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?**

If you are sick with flu-like illness, CDC recommends that you 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. 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 2009 H1N1 flu, should I go to work?**

Employees who are well but who have an ill family member at home with 2009 H1N1 flu can go to work as usual. These employees should monitor their health every day, and take everyday precautions including covering their coughs and sneezes and 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.

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

Washing your hands often will help protect you from germs. 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.

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

For information about what to do if you get sick with flu-like symptoms this season, see What To Do If You Get Sick: 2009 H1N1 and Seasonal Flu. A downloadable file containing this information also is available at:

[http://www.cdc.gov/flu/freeresources/2009-10/pdf/what\\_to\\_do\\_if\\_you\\_get\\_sick.pdf](http://www.cdc.gov/flu/freeresources/2009-10/pdf/what_to_do_if_you_get_sick.pdf) 

## **What are “EMERGENCY WARNING SIGNS” that should signal anyone to seek medical care urgently?**

### **In children:**

- 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:**

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting

## **Are there medicines to treat 2009 H1N1 infection?**

Yes. There are drugs your doctor may prescribe for treating both seasonal and 2009 H1N1 called “antiviral drugs.” These drugs can make you better faster and may also prevent serious complications. This flu season, antiviral drugs are being used mainly to treat people who are very sick, such as people who need to be hospitalized, and to treat sick people who are more likely to get serious flu complications. Your health care provider will decide whether antiviral drugs are needed to treat your illness. Remember, most people with 2009 H1N1 have had mild illness and have not needed medical care or antiviral drugs and the same is true of seasonal flu.

## **What is CDC’s recommendation regarding "swine flu parties"?**

"Swine flu parties" are gatherings during which people have close contact with a person who has 2009 H1N1 flu in order to become infected with the virus. The intent of these parties is for a person to become infected with what for many people has been a mild disease, in the hope of having natural immunity 2009 H1N1 flu virus that might circulate later and cause more severe disease.

CDC does not recommend "swine flu parties" as a way to protect against 2009 H1N1 flu in the future. While the disease seen in the current 2009 H1N1 flu outbreak has been mild for many people, it has been severe and even fatal for others. There is no way to predict with certainty what the outcome will be for an individual or, equally important, for others to whom the intentionally infected person may spread the virus.

CDC recommends that people with 2009 H1N1 flu avoid contact with others as much as possible. If you are sick with flu-like illness, CDC recommends that you 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.) Stay away from others as much as possible to keep from making others sick.

## **Contamination & 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 2 to 8 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 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 2009 H1N1 Flu**

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

No. 2009 H1N1 viruses are not spread by food. You cannot get infected with novel 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 that has been 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 2009 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 2009 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 2009 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 2009 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 2009 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.

## **H1N1 Vaccine--3 Forms of Vaccine**

### **Nasal spray**

**How it works:** This form contains a live H1N1 virus that has been weakened. This virus creates immunity and can't cause healthy people to get sick.

**The problem:** Because the virus is alive, the spray cannot be given to many people, including infants, pregnant women, or children with underlying health conditions. Those are the same groups who are most at risk for swine flu. Unfortunately, most of the immunizations that became available early on were nasal spray, meaning high-risk patients couldn't be treated.

### **Multi-dose vial**

**How it works:** Comes in a large vial containing enough for several doses. Providers use their own syringes to withdraw shots and give them to patients. This form contains a killed virus and is safe to give to high-risk groups.

**The problem:** Some parents fear this form because it contains traces of a mercury-based preservative called Thimerosal. Federal health officials say numerous studies have shown it doesn't have adverse health effects. But many pediatricians' offices who had asked for single-shot syringes have so far gotten mostly multi-dose vials or nasal spray, which is frustrating for some of their patients.

### **Pre-filled syringe**

**How it works:** This form also contains a killed virus. It comes in individual syringes containing a single dose and is considered good for children, especially toddlers and those with chronic health conditions.

**The problem:** The individual shots have been particularly scarce.

## Helping Children Avoid Swine Flu

- Wash children's hands frequently and thoroughly. Remind children to use soap and water and rub their hands for as long as it takes to silently sing "Happy Birthday" (about 30 seconds). If soap and water are not available, an alcohol-based hand sanitizer is also adequate.
- Avoid infected individuals
- Instruct children not to share drinks, food, or personal items like pencils or clothing at school or daycare
- Keep children with flu-like symptoms home from school or daycare until they are fever free for at least 24 hours (when no fever-reducing medications are used)
- Encourage children to cough into their folded elbow instead of into their hands

Read more at [Flu.gov](http://Flu.gov) and [PandemicFlu.gov](http://PandemicFlu.gov)

*Note: Much of the information in this document is based on studies and past experience with seasonal (human) influenza. CDC believes the information applies to 2009 H1N1 (swine) viruses as well, but studies on this virus are ongoing to learn more about its characteristics. This document will be updated as new information becomes available.*

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### **\*\*CDC Video on YouTube is Available—“Symptoms of Swine Flu”**

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## **Additional Information for Your Protection:**

While you are still healthy and not showing any symptoms of H1N1 infection, in order to prevent proliferation, aggravation of symptoms and development of secondary infections, some very simple steps, not fully highlighted in most official communications, can be practiced:

1. **Frequent hand-washing** (well highlighted in all official communications).
2. **"Hands-off-the-face" approach.** Resist all temptations to touch any part of face (unless you want to eat or bathe).
3. **Gargle twice a day** with warm salt water (use Listerine if you don't trust salt) **H 1N1 takes 2-3 days after initial infection** in the throat or nasal cavity to proliferate and show characteristic symptoms. Simple gargling prevents proliferation. In a way, gargling with salt water has the similar effect on a healthy individual that Tamiflu has on an infected one. Many doctors agree, "Don't underestimate this simple, inexpensive and powerful preventative method."
4. **Clean your nostrils at least once every day** with warm salt water. Not everybody may be good at Jala Neti or Sutra Neti (neti pots), but blowing the nose hard once a day and swabbing both nostrils with cotton buds dipped in warm salt water is very effective in bringing down viral population. Medi-Rinse is a popular brand of neti pot dispenser. You can also find neti pots at your local pharmacy. Educational videos on the proper use of neti pots are available on the internet.
5. **Boost your natural immunity** with foods that are rich in Vitamin C or with Vitamin C supplements. If you have to supplement with Vitamin C tablets, make sure that it also has Zinc to boost absorption.
6. **Drink as much of warm liquids** (tea, coffee, etc) as you can. Drinking warm liquids has the same effect as gargling, but in the reverse direction. They wash off proliferating viruses from the throat into the stomach where they cannot survive, proliferate or do any harm.

## Tips When Cleaning or Having Your Home Cleaned:

1. Similar to standard precautions practiced in hospitals for the purpose of infection control, the use of latex or neoprene gloves by your house cleaners or yourself can help to control contamination as long as the gloves are taken off and disposed of properly. Proper hand washing immediately afterwards is critical as well.
2. EPA registers pesticide products, including disinfectants. As part of the registration process, EPA evaluates the product efficacy to make sure the public health label claims are accurate. **Currently, over 500 disinfectant products are registered for use on hard, non-porous surfaces against influenza A viruses.** EPA believes, based on available scientific information, that **the currently registered influenza A virus products will be effective against the 2009-H1N1 flu strain and other influenza A virus strains on hard, non-porous surfaces.** For safe and effective use of these products, always follow label instructions for these products, paying special attention to the product's dilution rate (if applicable) and contact time.
3. Choose a product whose label states that it is effective against "Influenza A virus" and lists your specific site of concern, such as: farm premises, hospitals and other healthcare facilities, schools, offices or homes. These products are widely available and can be purchased at drugstores, supermarkets, and home maintenance/repair stores, among others.
4. Check out [Flu.gov](http://Flu.gov) for FRAUDULENT H1N1 Products! Also find information on approved Facemasks and N95 Respirators to wear in the event you are in contact with or caring for a person with a confirmed case of 2009 H1N1 (Swine Flu).

**End of Special Report on 2009 H1N1 (Swine Flu).**