



# Influenza

Last Edited: 4/28/2009

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## Current News - "Swine Flu"

**NOTE: It is important to keep updated on current recommendations and risk assessment as more is learned about the current outbreak of swine flu. Here is what is known thus far:**

Human cases of an influenza A (H1N1) - known swine flu - have been identified in several states and in other countries. This is a new influenza A virus that has not been identified in people before, and human-to-human transmission of the virus appears to be ongoing. Some facts:

- The [World Health Organization](#) has elevated the Pandemic Influenza Alert Phase to 4 to indicate there is now sustained human-to-human transmission of the swine flu.
- The current swine flu outbreak is due to human-to human transmission, not swine-to-human transmission. There is no current swine health crisis due to this influenza.
- The 2009 Swine Flu is a **new** virus that is a mix of viruses. This virus **does not contain** the deadly Highly Pathogenic Avian Flu virus H5N1.
- The **symptoms** of swine flu in people are expected to be similar to the symptoms of regular human seasonal flu 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.
- **Is there a vaccine?** Currently, 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.
- **Is Pork safe to eat?** Swine influenza viruses **are not** transmitted by food. You **cannot** get swine influenza from eating pork or pork products. Eating properly handled and cooked pork and pork products are safe. Cooking pork to an internal temperature of 160°F kills the swine flu virus as it does other bacteria and viruses. The current outbreak of swine flu raises awareness of biosecurity issues for swine producers and thus the recommendations for producers from [pork.org](#).

As of April 28, 2009, of the confirmed cases of swine influenza A (H1N1) virus infection in the United States, only two case-patients have been hospitalized and none have died. This has not been the case in Mexico, where Mexican health officials have reported several hundred suspect cases, including several deaths associated with confirmed swine influenza A (H1N1) virus infection. In Mexico, many patients have experienced rapidly progressive pneumonia, respiratory failure requiring mechanical ventilation and acute respiratory distress syndrome (ARDS). To date the U.S. experience has been vastly different from that of Mexico. Gathering information to explain these differences is a high priority in the ongoing investigation.

**Can this outbreak be a Pandemic?** Yes, novel influenza A virus infections in humans, including swine influenza A (H1N1) virus do represent a pandemic threat. Individuals and communities must recognize and understand the historical precedent for the emergence of a pandemic influenza virus, a virus which could have waves of disease with different morbidity and mortality. That is to say this may not be the only outbreak of this disease and levels of morbidity and mortality can and may change in subsequent waves or outbreaks. The elevation of the Pandemic Alert Phase to 4, by WHO is an indication of the potential for an pandemic.



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**How to protect yourself and your family?** Follow these basic steps of health hygiene:

- **Avoid close contact.** Avoid close contact with people who are sick. When you are sick, keep your distance from others to protect them from getting sick too
- **Stay home when you are sick.** If possible, stay home from work, school, and errands when you are sick. You will help prevent others from catching your illness.
- **Cover your mouth and nose.** Cover your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick.
- **Clean your hands.** Washing your hands often will help protect you from germs.
- **Avoid touching your eyes, nose or mouth.** Germs are often spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose, or mouth.
- **Practice other good health habits.** Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food.

EDEN will be updating this page with swine flu information and the recently confirmed human cases. Please check back as information gets posted and updates are made. If you have any questions or comments regarding the issue or page content, please contact [Kim Cassel](#) or [Abigail Borron](#).

For more detailed information on Swine Flu, please refer to these suggested resources

#### USDA -

- [Swine Influenza \(Flu\)](#)
- [Statement by Secretary of Agriculture Vilsack Regarding Human Cases of Swine Influenza A \(H1N1\)](#)
- [Frequently Asked Questions Swine and Human Cases of Swine Influenza A \(H1N1\) - 4/26/09](#)

CDC - [Swine Influenza: General Information](#) (the following links are included on this page):

- [Swine Flu and You](#)
- [Swine Flu Video Podcast](#)
- [Key Facts about Swine Influenza \(Swine Flu\)](#)
- [Swine Flu in Pigs and People](#)

World Health Organization - [Swine Influenza](#) (the following links are included on this page):

- [Latest Information](#)
- [Swine Influenza questions and answers](#)

#### EDEN Member Institution Pages

- Clemson University - [Clemson Livestock Poultry Health Response to Influenza A, "the swine flu"](#)

## What is the connection between swine flu, avian flu and pandemic influenza?

Influenza is a disease caused by a virus. Every winter, "the flu" attacks, infecting the respiratory tract and causing generalized symptoms (fever, chills, and aches) in the people and animals it affects. Most people recover completely, but every year "seasonal flu" is responsible for about 36,000 deaths in the U.S., depending on the strain of virus and the immune system of the infected individual.

An influenza pandemic is a global outbreak of disease that occurs when a new influenza A virus appears in the human population, it causes serious human illness, and spreads easily from person to person worldwide. Because people have little or no immune protection from such new viruses, there can be high levels of illness, death, social disruption, and economic loss. The last major flu pandemic occurred in 1918 and killed as many as 40 million people worldwide, including more than 500,000 in the United States.

Avian influenza refers to any influenza virus that affects birds. Birds are considered to be the reservoirs for most influenza viruses, and sometimes can show symptoms from flu just as human's do—sneezing, lack of appetite, nasal discharge. Occasionally, a new and more lethal virus emerges—such as the subtype of influenza virus that has caused substantial poultry deaths in China, Viet Nam, Indonesia, Egypt and other countries. There is concern, it is the current strain of Highly Pathogenic Avian Influenza H5N1 (HPAI H5N1) circulating in these countries that could mutate or change such that transmission occurs easily human-to-

human and thus spark a pandemic. Nearly all of the human deaths that have occurred to date from HPAI H5N1 have been the result of close contact with diseased or dead birds or bird products. Current statistics on human cases of HPAI H5N1 are found on [WHO](#), with 421 people infected and 257 deaths.

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.

Experts have said HPAI H5N1 could be the next pandemic, once the virus has sustained human-to-human transmission, or another virus could emerge with pandemic potential. The current outbreak of swine flu has turned our attention away HPAI H5N1 to the newly emerged swine flu virus. April 27, 2009 the World Health Organization elevated the [Pandemic Alert Phase](#) from 3, predominant animal cases and few human cases, to Phase 4 or sustained human-to-human transmission.

## What impact would a pandemic influenza outbreak have in the United States?

The severity of the next pandemic cannot be predicted, but modeling studies suggest that its effect in the United States could be severe. As previously indicated, a pandemic as severe as the 1918 pandemic virus could result in up to 2.2 million deaths and 10 million hospitalizations in the United States. Additionally a disease outbreak of this magnitude would have severe social, economic and political consequences, including a disruption of basic services and functions in the areas of health care, public education, food distribution, government services, business and manufacturing, transportation, etc. A disruption in international travel and trade could have serious global economical and societal consequences.

## Are we prepared? How can we prepare? Is there an effective vaccine for Swine Flu or Avian Flu?

### Are we prepared?

Since 2006, the United States Department of Health and Human Services has been working to develop a national preparedness plan and monies have been given to states to assist in their Pandemic Influenza planning and preparation. Individual state plans may be found at [Pandemic.gov](#)

The Department of Health and Human Services has issued a draft report on actions the nation should take to prepare for a potential pandemic influenza outbreak. Some of its recommendations are listed on the page - "[The Nation Prepares](#)"

### How can we prepare?

Preparing for Pandemic Influenza is unlike planning and preparing for other disasters as the pandemic disaster will be global, not local or regional. There will be few local, state or national resources to rely on for help as many people will be sick or home sick caring for sick family members. The duration of a pandemic disaster will not be short-term and will come in waves. To be prepared for Pandemic Influenza is to be prepared for any disaster.

If you have not prepared, [Pandemic.gov](#) has checklists to assist individuals, families, schools, businesses, child-care facilities, and community groups plan and prepare for pandemic influenza. The site [Ready America](#) also has information for families on building a disaster kit, making a communication plan and being informed about disasters in your local area. Detailed information on family planning and preparation maybe found on the following EDEN Institution Pages including holding family planning meetings, food and water needs and storage, cooking and cleaning with no utilities, workplace issues and saving for an emergency.

### EDEN Institution Pages On Pandemic Preparedness

[New Mexico State University](#)

[South Dakota State University](#)

## [Utah State University](#)

Additional EDEN resources for Pandemic Planning and Preparation include: [Ready Business – Preparing a Disaster Business Plan](#), [Pandemic Preparedness for a Business](#), and [Pandemic Preparedness for Faith-Based Organizations](#).

### Are there vaccines to protect us?

**Swine Flu Vaccine.** Vaccines are available to be given to pigs to prevent swine influenza. At this time, 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. 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.

**H5N1 Flu Vaccine.** At this time there is no vaccine for H5N1. This too is a new virus and our current vaccines will not afford protection. But unlike the swine flu, the main mode of transmission is animal to human, not human-to-human, thus there is not a significant threat to humans.

Flu vaccines have to be made specifically for the particular virus that is causing a flu outbreak. Steps will be taken to produce a vaccine to protect against a new pandemic strain of flu as quickly as possible, but a vaccine is unlikely to be available for the first wave of illness. A pandemic flu outbreak is likely to occur in two or more waves of infection several months apart, each lasting about two to three months. In past outbreaks each subsequent wave has tended to be more severe. Depending on the timing of the second and subsequent waves of a flu pandemic, scientists may be able to develop a vaccine so that people can get vaccinated after the first wave.

### Internet Resources

[Centers for Disease Control and Prevention \(CDC\)](#)

[United States Department of Health and Human Services -- Pandemic.gov](#)

[Ready America](#)

**University of Minnesota Center for Infectious Disease Research & Policy (CIDRAP)**

- [Pandemic Influenza](#)
- [Avian Influenza](#)

[World Health Organization](#)

**National Institute of Allergies and Infectious Diseases (NIAID)**

- [NIAID: Focus on the Flu](#) Web site for media and consumers

## What is the distinction between pandemic influenza and seasonal outbreaks of the flu?

**Influenza**, or the **flu**, is a viral infection of the lungs. There are two main types of the influenza virus, A and B. Each type includes many different strains, and new strains emerge periodically. *Seasonal outbreaks* of the flu are caused by strains of the influenza virus similar to those of past years. Some people may build up immunity, and there are also vaccines for each year's flu season. Up to 10 percent of the population can be impacted by seasonal outbreaks of the flu, and the very young, the very old and people with certain chronic diseases are most at risk for a serious illness. In the United States between 30,000 to 50,000 people die annually as a result of a seasonal outbreak of the flu.

#### Related EDEN Learning Opportunity

[Pandemic Preparedness for Businesses](#) - Intended for people interested in helping small- and medium-sized businesses survive a potential pandemic.

A *pandemic* is an outbreak of a disease that occurs in many different countries at the same time. An *epidemic* is an infectious disease that spreads very rapidly. Pandemic influenza is a global epidemic of the disease that occurs when a new influenza A virus appears in humans and then spreads easily and rapidly from person to person worldwide. Because people have never been exposed to this new virus, everyone is susceptible. The symptoms of pandemic influenza are similar to those of seasonal flu but are usually more severe and can lead to a

more serious illness. Not all outbreaks of pandemic influenza have the same degree of severity - some are far more serious than others. Three pandemic outbreaks occurred during the past century. The most recent was the Hong Kong flu in 1968-69 resulting in 1- 4 million deaths globally. The most severe outbreak was the Spanish Flu in 1918-19 resulting in 20-40 million deaths globally. The Center for Disease Control and Prevention (CDC) has estimated that a pandemic as severe as the 1918 pandemic virus would cause between 0.9 and 2.2 million deaths and between 4 million and 10 million hospitalizations in the United States. Globally between 180 million to 360 million deaths are possible. Unlike seasonal outbreaks of the flu, all segments of the population are at risk to become seriously ill and die during a pandemic influenza outbreak.

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