

AVIAN INFLUENZA

WHAT IS AVIAN (BIRD) INFLUENZA (FLU)?

Avian Influenza occurs naturally in birds. Wild birds carry the viruses in their intestines, but usually do not get sick from them. Bird flu is highly contagious in birds and can make domesticated birds like chickens, ducks and turkeys very sick and kill them.

SYMPTOMS IN HUMANS

Typical flu symptoms (fever, headache, muscle aches, cough, sore throat)

Eye infections

Pneumonia

Acute respiratory distress

HOW DOES BIRD FLU SPREAD?

Infected birds shed the virus and susceptible birds become infected. It is believed that most cases of bird flu infections in humans have resulted from contact with infected poultry or contaminated surfaces.

HOW IS BIRD FLU TREATED IN HUMANS?

The same anti-viral medications that work with human flu can work for bird flu. However, flu viruses can become resistant to these drugs, so these medications do not always work. Check with your physician about specific treatment.

IS THERE A BIRD FLU VACCINE?

An experimental H5N1 vaccine has been made, however, it is not on the market to be used as of yet.

WHAT IS THE RISK TO PEOPLE IN THE UNITED STATES FROM THE H5N1 BIRD FLU OUTBREAK IN ASIA?

The current risk to Americans is low. The H5N1 virus has not been found in the United States. There have been no human cases of H5N1 flu in the United States. It is possible for travelers to countries in Asia to become infected. The Centers for Disease Control and Prevention (CDC) recommends that travelers to countries in Asia with known outbreaks of H5N1 influenza avoid poultry farms, contact with animals in live food markets, and any surface that appears to be contaminated with poultry or animal feces.

DO BIRD FLU VIRUSES INFECT HUMANS?

Bird flu viruses do not usually infect humans, but several cases of human infection with bird flu viruses have occurred since 1997. Avian Influenza A (H5N1) virus is the subtype that has infected humans in Asia. As of October 10, 2005, the World Health Organization (WHO) reported 117 confirmed cases of H5N1 bird flu in humans. Sixty of those people have died. Most of these cases occurred from contact with infected poultry or contaminated surfaces; however, it is thought that a few cases of human to human spread of H5N1 may have occurred.

WHAT IS AN AVIAN INFLUENZA A (H5N1) VIRUS?

Influenza A (H5N1) virus is an influenza A virus subtype that occurs mainly in birds. Outbreaks of influenza H5N1 have occurred in poultry in Asian countries. Human infections of influenza H5N1 have been reported in Thailand, Vietnam, Indonesia and Cambodia. So far, the spread of H5N1 virus from person to person has been rare; although it is thought that a few cases of human to human spread of H5N1 have occurred. However, all influenza viruses have the ability to change and scientists are concerned that it could one day spread from person to person easily. Because humans do not normally get H5N1 influenza, they would have very little or no protection against it. If the H5N1 virus were able to infect people and spread easily from person to person, a pandemic could occur. No one can predict when and if a pandemic will occur, but experts from around the world are watching the situation in Asia closely and are preparing for the possibilities.

FOR MORE INFORMATION, PLEASE CONTACT:

Denton County Health Department
<http://dentoncounty.com/heart>

Texas Department of Health
<http://www.tdh.state.tx.us>

Centers for Disease Control and Prevention
<http://www.cdc.gov>

DENTON COUNTY HEALTH DEPARTMENT

Ten Things to Know About Pandemic Influenza

1. Pandemic (widespread) influenza is different from avian influenza (bird flu).

Avian influenza (bird flu) is the name for a large group of different influenza viruses that usually affects birds. Sometimes these bird viruses can make pigs and humans sick; however, most avian influenza viruses do not make humans sick. Sometimes though, avian influenza viruses change and become able to easily make people sick. When this happens, there is an influenza pandemic happens. During an influenza pandemic, flu outbreaks happen all over the world. Right now there is an outbreak of avian influenza called H5N1 that is happening in Asia. It is possible that it will change into a kind of flu that can pass from human to human. Once this happens, it will no longer be a bird virus; it will be a human influenza virus.

2. Influenza pandemics have happened in the past.

A pandemic happens when a new influenza virus makes people sick and starts spreading as easily as normal influenza -- by coughing and sneezing. Because the virus is new, our bodies cannot fight it off. This makes it likely that people who get sick will be sicker than they would be with normal influenza. An influenza pandemic does not happen very often, but it does happen. Three pandemics have happened in the past 100 years: "Spanish influenza" in 1918, "Asian influenza" in 1957, and "Hong Kong influenza" in 1968. The 1918 pandemic killed about 40-50 million people worldwide. It was one of the deadliest disease outbreaks in human history. The other two pandemics were not as bad, with about 2 million deaths in 1957 and 1 million deaths in 1968.

3. The world may see pandemic soon.

Health professionals have been looking at a new and very severe avian influenza virus -- called the H5N1 strain -- for almost eight years. While it usually affects birds, the H5N1 strain infected some people in Hong Kong in 1997, 18 people got the disease, 6 of them died. Since mid-2003, this virus has caused the largest and worst spread of disease in chickens, turkeys, and ducks ever. In December 2003, some people started to get sick from the infected birds. Since then, over 100 humans have become sick in four Asian countries (Cambodia, Indonesia, Thailand, and Viet Nam), and more than half of these people have died. Most of these people were healthy children and young adults. Right now the virus does not jump easily from birds to humans or spread easily from human to human. If H5N1 changes to a form the spreads easily from humans to humans, like normal human influenza, a widespread outbreak could start.

4. All countries will be affected.

If we have a new influenza virus that spreads easily from person to person, it will spread all over the world. To help stop or slow the spread of the virus, countries might close borders and stop travel. The past pandemics traveled worldwide in 6 to 9 months, even when most international travel was by ship. Because we have international air travel today, the virus could spread quicker, possibly reaching all continents in less than 3 months.

5. Widespread illness will happen.

Because people have never been sick with the virus, more people are expected to get sick than during normal flu season – people do not have immunity to fight off the illness. Health professionals think that most of the world’s population will need medical care. Few countries have the staff, facilities, equipment, and hospital beds needed to deal with large numbers of people getting sick at the same time.

6. There will not be enough medical supplies.

There will not be enough vaccine and antiviral drugs for everyone who needs it. These are the two most important medical treatments for lowering illness and deaths during a pandemic. Vaccine is the first line of defense to protect people, but right now there is not a vaccine. Health professionals are concerned that even when a vaccine is made there will not be enough for everyone.

7. Some people will die.

The number of people that could die is decided by four different things: the number of people who get sick, the strength of the virus, the type of people affected, and how well control measures work. No one can say how many people will die until the virus starts to make people sick.

8. The financial and community impact will be big.

Many people getting sick at one time will cause large numbers of people to be absent from work. This will be hard for the finances of the people and for the businesses. The biggest impact will happen when large numbers of people are absent from essential service jobs, such as power, transportation, and communication.

9. Every country needs to be prepared.

The World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) have recommended that everyone create a plan to prepare for pandemic influenza. The Texas Department of State Health Services and the Denton County Health Department have created pandemic influenza plans that can be used if needed.

10. WHO will let the world know when there is a pandemic is beginning.

WHO works closely with government and public health organizations so they can know when and if things change with the influenza virus.

For More Information

World Health Organization, www.who.int
Centers for Disease Control and Prevention, www.cdc.gov

DENTON COUNTY HEALTH DEPARTMENT

Avian Influenza Frequently Asked Questions

What is avian influenza?

Avian influenza, or “bird flu,” is a contagious disease caused by a virus that normally only infects birds. Wild birds carry the virus in their intestines, but usually do not get sick. In domestic poultry (chickens, ducks, and turkeys), bird flu is very contagious and can make them very sick. Infection with the avian influenza virus causes two main forms of disease, distinguished by low and high extremes. The “low pathogenic” form commonly causes only mild symptoms (ruffled feathers, drop in egg production) and may go unnoticed. The “highly pathogenic” form spreads quickly through domestic birds. It can cause disease that affects multiple internal organs and can kill high numbers of infected birds.

Do bird flu viruses infect humans?

Bird flu viruses do not usually infect humans. The virus does not spread easily from birds to humans. Since 2002, more than 100 human cases have occurred in Eastern Asia; however, this is a small number compared to the large number of birds affected and the many opportunities for human exposure.

How are bird flu viruses different from human flu viruses?

There are many different subtypes of type A flu viruses. The subtypes are different because of the proteins on the surface of the flu A virus (hemagglutinin [HA] and neuraminidase [NA] proteins). There are 16 different HA subtypes and 9 different NA subtypes of flu A viruses. Many different combinations of HA and NA proteins are possible. Each combination is a different subtype. All subtypes of flu A viruses can be found in birds. However, when we talk about “bird flu” viruses, we are referring to the flu A subtypes that continue to occur mainly in birds. They do not usually infect humans, even though we know they can do so. When we talk about “human flu” viruses we are referring to those subtypes that occur widely in humans. There are only three known subtypes of human flu viruses (H1N1, H1N2, and H3N2). Influenza A viruses are constantly changing, and they might adapt over time to infect and spread among humans.

What are the symptoms of bird flu in humans?

Symptoms of bird flu in humans have ranged from typical flu-like symptoms (fever, cough, sore throat, and muscle aches) to eye infections, pneumonia, severe respiratory diseases, and other severe and life-threatening complications. Symptoms may vary according to the strain.

How is avian influenza treated in humans?

Two drugs, oseltamivir (commercially known as Tamiflu) and zanamivir (commercially known as Relenza) can reduce the severity and duration of the illness caused by seasonal influenza. For human cases of H5N1, the drugs may increase a person’s chance of survival, if administered early, but data is limited. The H5N1 virus is expected to be susceptible to the neuraminidase inhibitors. M2 inhibitors, amantadine and rimantadine, could be used against pandemic influenza, but drug resistance can develop rapidly and could limit their effectiveness. Antibiotics may be used for secondary bacterial infections that often times develop.

Which countries have been affected by outbreaks in poultry?

From mid-December 2004 through February 2005, poultry outbreaks caused by the H5N1 virus were reported in eight Asian nations (listed in order of reporting): the Republic of Korea, Viet Nam, Japan, Thailand, Cambodia, Lao People's Democratic Republic, Indonesia, and China. Most of these countries had never before experienced an outbreak of highly pathogenic avian influenza in their histories. In early August 2004, Malaysia reported its first outbreak of H5N1 outbreak in poultry, becoming the ninth Asian nation affected. Russia reported its first outbreak in poultry in late July 2005, followed by reports of disease in adjacent parts of Kazakhstan in early August. Deaths of wild birds from highly pathogenic H5N1 were reported in both countries. Almost simultaneously, Mongolia reported the detection of H5N1 in dead migratory birds. In October 2005, H5N1 was confirmed in poultry in Turkey and Romania. Japan, the Republic of Korea, and Malaysia have announced that the outbreaks have been controlled and are now considered disease free. Severity varies in other areas.

What are the risks to human health?

H5N1 in the poultry populations poses two main risks to human health. The first is the risk of direct infection when the virus passes from poultry to humans, resulting in very severe disease. The second risk, of even greater concern, is that the virus may change into a form that is highly infectious for humans and spreads easily from person to person. This could cause an influenza pandemic throughout the world (a global outbreak).

What about the pandemic risk?

A pandemic can start when three conditions are met: a new influenza virus subtype emerges; it infects humans, causing serious illness; and it spreads easily and is sustainable among humans. H5N1 has met the first two criteria: it is a new virus subtype and it has infected more than 100 humans, killing more than half of them. However, as of yet, H5N1 cannot spread from person to person and does not infect humans easily.

How do people become infected?

Direct contact with infected poultry, or surfaces and objects contaminated by their feces, is considered the main route for human infection. Exposure is considered most likely during slaughter, defeathering, butchering, and preparing poultry for cooking. There is no evidence that properly cooked poultry or eggs can be a source of infection. It is recommended that people traveling to areas where bird flu has infected humans should avoid bird farms and live animal markets.

For More Information

World Health Organization (WHO), www.who.int
Centers for Disease Control and Prevention (CDC), www.cdc.gov
Texas Department of State Health Services (DSHS), www.dshs.state.tx.us
Denton County Health Department (DCHD), www.dentoncounty.com/health

Preparing For Pandemic Influenza — What You Can Do

A pandemic is a global disease outbreak. An influenza pandemic occurs when a new influenza A virus emerges for which there is little or no immunity in the human population, begins to cause serious illness and then spreads easily person-to-person worldwide. The federal government, states, communities and industry are taking steps to prepare for and respond to an influenza pandemic.

A pandemic is likely to be a prolonged and widespread outbreak that could require temporary changes in many areas of society, such as schools, work, transportation and other public services. An informed and prepared public can take appropriate actions to decrease their risk during a pandemic.

Communities, Businesses, and Individuals Should:

- Develop preparedness plans as you would for other public health emergencies.
- Participate and promote public health efforts in your state and community.
- Talk with your local public health officials and health care providers; they can supply information about the signs and symptoms of a specific disease outbreak.
- Implement prevention and control actions recommended by your public health officials and providers.
- Adopt business/school practices that encourage sick employees/students to stay home.
- Anticipate how to function with a significant portion of the workforce/school population absent due to illness or caring for ill family members.
- Practice good health habits, including eating a balanced diet, exercising daily, and getting sufficient rest and take these commonsense steps to stop the spread of germs.
 - Wash hands frequently with soap and water.
 - Cover cough and sneezes with a tissue.
 - Stay away from others as much as possible if you are sick.
- Stay informed about pandemic influenza and be prepared to respond.
 - Consult www.pandemicflu.gov frequently for updates on national and international information on pandemic influenza.
 - Use national and local pandemic hotlines that will be established in the eventuality of a global influenza outbreak.
 - Listen to radio and television and read media stories about pandemic flu.

U.S. Department of Health and Human Services

www.pandemicflu.gov

Travel Tips for Avian Influenza affected areas

Centers for Disease Control and Prevention (CDC) has not recommended that the general public avoid travel to any of the countries affected by H5N1 Avian Influenza. Persons who visit the areas with reports of outbreaks of H5N1 among poultry or of human H5N1 cases can reduce their risk of infection by observing the following measures:

Before any international travel to an area affected by H5N1 avian influenza

- Visit CDC's Travelers' Health website on Southeast Asia at <http://www.cdc.gov/travel/seasia.htm> to educate yourself and others who may be traveling with you about any disease risks and CDC health recommendations for international travel in areas you plan to visit. For other information about avian influenza, see this website: <http://www.cdc.gov/flu/avian/index.htm>.
- Be sure you are up to date with all your vaccinations, and see your doctor or health-care provider, ideally 4-6 weeks before travel, to get any additional vaccination medications or information you may need.
- Assemble a travel health kit containing basic first aid and medical supplies. Be sure to include a thermometer and alcohol-based hand gel for hand hygiene.
- Identify in-country health-care resources in advance of your trip.
- Check your health insurance plan or get additional insurance that covers medical evacuation in case you become sick.

During travel to an affected area

- Avoid all direct contact with poultry, including touching well-appearing, sick, or dead chickens and ducks. Avoid places such as poultry farms and bird markets where live poultry are raised or kept, and avoid handling surfaces contaminated with poultry feces or secretions.
- As with other infectious illnesses, one of the most important preventive practices is careful and frequent handwashing. Cleaning your hands often with soap and water removes potentially infectious material from your skin and helps prevent disease transmission. Waterless alcohol-based hand gels may be used when soap is not available and hands are not visibly soiled.
- Influenza viruses are destroyed by heat; therefore, as a precaution, all foods from poultry, including eggs and poultry blood, should be thoroughly cooked.
- If you become sick with symptoms such as a fever, difficulty breathing, or cough, or with any illness that requires prompt medical attention, a U.S. consular officer can assist you in locating medical services and informing your family or friends. Inform your health care provider of any possible exposures to avian influenza. You should defer further travel until you are free of symptoms, unless your travel is health-related.

After your return

- Monitor your health for 10 days.
- If you become ill with fever and develop a cough, sore throat, or difficulty breathing or if you develop any illness with fever during this 10-day period, consult a health-care provider. ***Before you visit a health-care setting, tell the provider the following: 1) your symptoms, 2) where you traveled, and 3) if you have had direct contact with poultry. This way, he or she can be aware that you have traveled to an area reporting avian influenza.***

- Do not travel while ill, unless you are seeking medical care. Limiting contact with others as much as possible can help prevent the spread of an infectious illness.