WHAT YOU NEED TO KNOW AND DO ABOUT AVIAN INFLUENZA (BIRD FLU)

AVIAN INFLUENZA IN BIRDS

WHAT IS AVIAN INFLUENZA?

The H5N1 virus (most commonly known as avian influenza or bird flu), is an influenza A virus subtype that is generally found in birds, but has also been detected in some humans in recent years. Generally, avian flu viruses are divided into two groups based on their ability to cause disease: highly pathogenic avian influenza (HPAI) virus spreads rapidly, may cause serious disease and result in high mortality rates (up to 100% within 48 hours), while low pathogenic avian influenza (LPAI) can cause mild disease that may be undetected or show no symptoms at all in some species of birds. The H5N1 virus is a highly pathogenic type of avian flu, and has been detected in over 60 countries worldwide.

WHICH BIRDS CARRY THE VIRUS?

Avian influenza can kill domesticated birds, including chickens, ducks, geese, and turkeys. Wild birds have also been infected with avian influenza, but many did not show symptoms. The current H5N1 virus that is circulating has caused mortality in 40 species of animals, including geese, storks, egrets, herons, and falcons, and some mammals.

HOW DOES IT SPREAD?

Even though you cannot see it, the H5N1 virus can live in the feces (droppings), saliva, mucous, and blood of infected birds, and spread among birds and animals through ingestion or inhalation of the droppings. Virus can also be excreted from the eyes, nose and mouth of infected birds. Anything that touches the droppings, saliva, mucous or blood of infected poultry can carry the virus. This could be shoes, clothing, cages, egg bins, knives, cutting boards, or other tools. Droppings and mucous can also stick to the feathers and feet of poultry -- even if you cannot see it -- and the virus can be spread that way, too.

WHAT ARE THE CONTROL MEASURES IN BIRDS?

The most common practice to contain the spread of the virus after an outbreak is culling of all infected or exposed birds, proper disposal of carcasses, and the quarantining and rigorous disinfection of farms and poultry markets. Vaccination has also been used but has proven to be expensive and less reliable outside of commercial settings, and the vaccine requires regular updating.

The virus has been shown to be weakened or destroyed by heat, by common disinfectants, and by bleach solution. That is why hand washing with soap and thoroughly cooking any poultry meat are often recommended ways to prevent the transmission of the virus.

However, if poultry appears sick or is dead do not prepare it for cooking or consumption. Dispose of the poultry properly.
WHAT CAN PEOPLE DO TO REDUCE THE RISK OF AN AVIAN INFLUENZA OUTBREAK?

There are several key behaviors that people can take to prevent avian influenza outbreaks among their poultry. These include:

- Protecting their healthy flocks from the introduction of new poultry by quarantining new poultry for at least 14 days;
- Keeping poultry in a closed building – or in a cage or fenced-in area – away from other animals;
- Not allowing poultry to roam and mingle with birds from other areas;
- Cleaning up yards and coops daily to remove droppings (feces);
- Cleaning off their shoes before entering their homes from the farmyard;
- Washing tires from bicycles or other vehicles before they enter the farm area to remove the feces or other infected particles.

WHAT SHOULD I DO IF I THINK MY FLOCK IS INFECTED WITH AVIAN INFLUENZA?

Call the relevant authorities immediately. Because the signs of avian influenza are so variable, it is important to get the help of an expert for diagnosis. Keep family members away from the birds. If you are instructed to handle or dispose of a dead or infected bird, you should wear protective equipment (such as gloves and masks) and place the dead birds into a bag. Dead birds should not be disposed of in a river or a pond, or left in the yard. Protective clothing or equipment should be kept away from other people and thoroughly disinfected after use – or discarded.

AVIAN INFLUENZA IN PEOPLE

ARE PEOPLE AT RISK FOR AVIAN INFLUENZA?

To date, most human cases have been limited to people who have had contact with infected poultry or contaminated surfaces. Many of these human cases have occurred in rural or suburban areas where households keep small poultry flocks.

WHY IS THERE SO MUCH CONCERN ABOUT THIS VIRUS?

This virus has been deemed dangerous because it has already crossed the species barrier and infected humans, and because it has been detected in a large number of countries throughout the world. Since November 2003, over 400 cases of human infection with highly pathogenic avian influenza A (H5N1) viruses have been reported by more than a dozen countries in Asia, Africa, the Pacific, Europe and the Near East.

WHAT IS THE DIFFERENCE BETWEEN SEASONAL FLU AND AVIAN INFLUENZA?

These are different viruses. Avian influenza is transmitted from bird-to-bird and from bird-to-human, but at this point, does not effectively spread from human-to-human. That is one of the reasons it is being watched so carefully to see if the virus changes – or mutates – and can be transmitted from human to human. Unlike normal seasonal influenza, where infection causes mild respiratory symptoms in most people, H5N1 has been found to cause more severe symptoms and leads to a faster deterioration in condition.

CAN WE TREAT AVIAN INFLUENZA?

Currently, there are two medications (antivirals) that are given to people with seasonal influenza that reduce symptoms like aches and pains – they may also shorten the length of the illness and help prevent its spreading. These medications’ brand names are Tamiflu and Relenza and their generic names are oseltamivir and zanamivir.
Studies suggest that they may have the same effect in addressing avian influenza in humans. However, influenza viruses can become resistant to these drugs, so these medications may not always be effective.

**IS THERE AN AVIAN INFLUENZA VACCINE FOR PEOPLE?**

WHO and the US Government are investing in the research and development of vaccines to prevent catching the H5N1 virus and medications to treat the H5N1 virus in people. There are several studies being conducted to test the vaccines but these are not ready for wide distribution. In addition, due to production issues, it is not likely that an effective vaccine would be widely available until several months after an outbreak, and is unlikely to be available or affordable for wide distribution to general populations.

**WILL A REGULAR FLU SHOT PROTECT AGAINST AVIAN INFLUENZA?**

No. The annual flu vaccination will not provide protection against avian influenza. Current vaccines protect only against circulating human strains.

**WHAT ARE THE SYMPTOMS OF AVIAN INFLUENZA IN PEOPLE?**

The symptoms are similar to those of other forms of influenza, including fever, sore throat, cough, headache, trouble breathing, and muscle and chest pains. These symptoms may vary in severity.

**WHAT SHOULD I DO IF I THINK I HAVE AVIAN INFLUENZA?**

Keep in mind that people get respiratory infections quite regularly, and that the chances that your symptoms are from avian influenza are extremely low. If you live in (or have recently visited) an area where avian influenza in humans has been reported and you are experiencing any of the symptoms listed above, you should seek medical advice and tell your health care provider of your recent travel and activities, including any visits to farms or markets in outbreak areas.

If you are sick, you should also stay home if you can, and keep a distance from other family members who are sick. Remember to cover your mouth and nose when coughing or sneezing and to wash your hands with soap and water regularly.

**I'M TRAVELING TO A REGION WHERE AVIAN INFLUENZA HAS BEEN REPORTED. WHAT SHOULD I DO TO PROTECT MYSELF FROM THE VIRUS?**

Although the risk of infection to travelers to areas affected by avian influenza is currently considered low, people can reduce their risk of infection by avoiding situations where they may have contact with poultry farms, live bird markets, or any surfaces that appear to be contaminated with feces from poultry or other animals. Travelers should also ensure that all uncooked poultry and eggs are handled hygienically with careful attention to hand washing after handling. Proper cooking destroys the virus in poultry and eggs. You can also discuss the risk of avian influenza with your health care provider as part of your routine pre-travel health checks.

**WHAT CAN PEOPLE DO TO REDUCE THEIR RISK OF AVIAN INFLUENZA?**

There are several key behaviors that people who come in close contact with poultry can adopt to reduce their risk of contracting the virus. These include:

- Cleaning up yards and coops daily to remove droppings (feces);
- Washing their hands with soap and water before and after handling birds;
• Changing clothing after feeding poultry or cleaning areas where they are kept;
• Cleaning off their shoes before entering their homes from the farmyard;
• Not allowing poultry in the house or allowing children to play with poultry.

IS IT SAFE TO BUY AND EAT CHICKEN?

Yes. In countries where avian influenza has been reported, healthy poultry and poultry products should be properly cooked and handled during food preparation. Normal temperatures used for cooking (70 degrees C for at least 30 minutes) will kill the virus. People need to be sure that all parts of the poultry are fully cooked (no “pink” parts) and that eggs are also properly cooked (no ‘runny’ yolks). Do not eat birds that have recently been sick and died.

• When slaughtering or preparing poultry or eggs, some additional actions include:
  • Washing hands well with soap and water before and after you touch raw poultry or eggs;
  • Washing knives, cutting boards, plates and other tools with soap and water after using them to slaughter or prepare poultry;
  • Keeping raw and cooked poultry and eggs separate, using different chopping boards and utensils for each; and not using the same utensils for preparing poultry that you use for other foods unless you wash them well with soap and water (or disinfectant/bleach solution);

PANDEMIC RISK

WHAT IS PANDEMIC INFLUENZA?

An influenza pandemic occurs when a new form of an influenza virus starts spreading. Because it is a new virus, people have no resistance to it and it therefore spreads easily from person to person worldwide. People are also more likely to become sick in a short period of time. Previous influenza pandemics have led to widespread disease and death.

HOW IS PANDEMIC INFLUENZA DIFFERENT FROM AVIAN INFLUENZA?

Avian Influenza is a strain of the influenza virus (H5N1) that is generally found in birds, but has also infected some people. Pandemic influenza will occur when this virus, or another new strain of the influenza virus, changes into a strain that easily infects and spreads among humans.

HOW IS PANDEMIC INFLUENZA DIFFERENT FROM SEASONAL INFLUENZA?

There are several key differences between pandemic and seasonal influenza. Seasonal outbreaks of the flu are caused by flu viruses that are already circulating among people, so people have some resistance to them. Pandemic influenza is caused by a new strain of the virus that people have no resistance to. Because people have no resistance to it, pandemic influenza is likely to infect many more people and cause complications in more otherwise healthy people than seasonal influenza.

WHAT ARE THE CHANCES THAT THE H5N1 AVIAN INFLUENZA VIRUS COULD CAUSE A HUMAN PANDEMIC?

The risk of pandemic influenza is serious. But there are several critical steps that must occur before a human pandemic can happen. These include: a new influenza virus subtype emerges; it infects humans, causing serious illness; and it spreads easily and sustainably among humans. The current H5N1 virus has met the first two criteria,
but it has not yet efficiently and sustainably infected humans. The risk that the H5N1 virus will acquire this ability remains as long as there are opportunities for human infection. We cannot predict when a pandemic will occur, or how severe it will be, but with each human case the risk becomes greater.

**HOW CAN PANDEMIC INFLUENZA BE SPREAD FROM PERSON TO PERSON?**

Pandemic influenza can be spread the same way seasonal influenza is spread - by coughing, sneezing, or touching something that has come in contact with the virus from people’s sneezes or coughs. One person can give influenza to another person if they are in close contact (generally within an arm’s length). Influenza can spread easily in places where there are many people in close contact. People with influenza can spread the disease even before they have symptoms.

**WHY IS A PANDEMIC SUCH A DREADED EVENT?**

Influenza pandemics generate dread because they are unpredictable and most people have never experienced illness to this degree. In addition, the threat of the infection spreading quickly, the severity of the disease, and number of anticipated deaths are staggering.

**CAN A PANDEMIC BE AVERTED?**

Yes. That is why so much attention by governments and the health professionals is being placed on how to prevent and control the virus. Leading international health organizations such as the World Health Organization (WHO) and the Food and Agriculture Organization (FAO), along with donor nations, such as the US, Great Britain and Japan, have committed financial and human resources to conduct research that will help reduce the threat and minimize the effects of an influenza pandemic.

**IS THE WORLD ADEQUATELY PREPARED?**

WHO has urged all countries to develop preparedness plans, and to take the pandemic threat seriously. In August 2005, WHO sent all countries a document outlining recommended strategic actions for responding to the avian influenza pandemic threat. Recommended actions aim to strengthen national preparedness, reduce opportunities for a pandemic virus to emerge, improve the early warning system, delay initial international spread, and accelerate vaccine development.

**WHAT CAN THE MEDIA DO TO KEEP THEIR COMMUNITIES CALM DURING A PANDEMIC OUTBREAK?**

The first step is to make sure that information being reported is correct and that it comes from a credible source. During a national emergency such as an influenza pandemic the media plays an important role in helping to maintain calm and reduce panic. It does this by continued broadcasting and by stopping rumors and misinformation. Staying in contact with local authorities and experts will help give you access to correct information. The pandemic influenza situation may change rapidly. Keeping people updated through community announcements, television and radio broadcasts, and newspapers helps to eliminate fear. Reliable information is reassuring.

**WHERE CAN I FIND MORE INFORMATION ABOUT PANDEMIC INFLUENZA?**

There are several regularly updated websites that you can visit that have in-depth information on the pandemic influenza planning and response. These are the World Health Organization’s Epidemic and Pandemic Management Response web site ([http://www.who.int/csr/en/](http://www.who.int/csr/en/)) and the U.S. Government’s Centers for Disease Control and Prevention (CDC) ([www.pandemicflu.gov](http://www.pandemicflu.gov)).