

# **Asian Bird Flu**

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## **What is “Asian Bird Flu”?**

“Asian Bird Flu” is the name commonly used in the media to describe a deadly form of avian influenza virus that is currently causing a serious outbreak in multiple Asian countries. This Asian strain of avian influenza is also known as H5N1 avian influenza virus and is a type of highly pathogenic avian influenza virus (HPAI) that causes a severe disease in poultry. The Asian Bird Flu is unusual because it is extremely deadly for poultry, it has spread to many different countries in Asia (at least 11), has caused disease outbreaks in wild birds, and it has caused a number of human infections and deaths. These features make this strain of avian influenza different from and more dangerous than any other outbreak of avian influenza that we have seen in the last 60 years. Avian influenza is normally a virus that infects wild water birds, but it normally does not cause disease in this group of birds. The virus on rare occasions has spread to poultry species, like chickens, turkeys, and domestic ducks, where it can cause mild to severe disease. The mild form is known as Low Pathogenicity Avian Influenza or LPAI, and typically causes a respiratory infection in chickens and other poultry species.

## **Avian influenza in humans**

We normally do not consider avian influenza to be a virus that can spread from birds to people (a zoonotic infection), but the Asian Bird Flu virus has resulted in the infection of over 100 people in Southeast Asia, primarily in Thailand and Vietnam. Almost all of the infected people have had close, direct contact with live poultry infected with Asian Bird Flu. Most poultry in Southeast Asia are produced as backyard or village poultry where people and birds have frequent contact. Birds infected with Asian Bird Flu can shed large amounts of virus in feces and other bodily secretions that can, under rare circumstances, result in human infections. Importantly, the transmission of Asian Bird Flu from birds to humans is extremely rare. However, if the virus starts to be transmitted efficiently from humans to humans, then a human pandemic of influenza may occur. Public health officials are working on plans for control of any large scale human outbreak with vaccines and antiviral medications, but prevention would be the preferred solution.

## **Controlling the spread of Asian Bird Flu in Asia**

Highly pathogenic avian influenza virus is a particularly infectious disease in poultry, but in the past many outbreaks have been completely controlled through the close interaction of government officials and the poultry industry. The current situation in Asia however presents unique challenges for control. First, the virus is present in a large geographic region, and a large percentage of poultry is the backyard or village chicken type. Secondly, the virus is present in wild birds. Finally, many of the countries in the region are economically underdeveloped, which hampers their ability to respond to disease outbreaks. Control of Asian Bird Flu in poultry will require not only close cooperation of Asian officials, but additional outside support will be needed to eliminate the virus from the region. These control efforts include placing quarantines, vaccination programs, and improved diagnostic programs to identify infected poultry flocks.

### **Can I get avian influenza from eating or handling poultry products?**

There is no danger of acquiring Asian Bird Flu from properly cooked poultry or poultry products. Avian influenza virus is easily destroyed by the heat of normal cooking. Additionally, infected or even suspect poultry would not be sold in the U.S. because of our existing USDA food inspection system. In the unlikely possibility that infected poultry was processed for food, standard good food handling practices of washing hands after handling raw poultry would greatly reduce the chance of a food related disease outbreak.

The U.S. does not have Asian Bird Flu and we do not legally import poultry from any of the affected Asian countries. Virtually all of the chicken and turkey sold in the United States is produced in the United States, and the U.S. is one of the major poultry exporters in the world.

### **Preventing the Introduction of Asian Bird Flu into the U.S.**

Considerable effort has been made to both prevent the introduction of Asian Bird Flu into the U.S. poultry industry as well as to prepare a response if it did become introduced into the country. This has included participation and action by federal and state governments, the poultry industry, poultry trade groups, scientists, and public health officials. The most likely scenarios for introduction of Asian Bird Flu into the U.S. includes: 1) Movement of infected poultry or poultry products. 2) Movement by wild birds 3) Purposeful or agroterrorist introduction 4) Human infection and spread.

#### *Movement of infected poultry or poultry products*

The importation of birds or bird products from the affected area has been banned or placed under strict control by the U.S. government, and none of the affected countries in Southeast Asia are permitted to export poultry products to the United States. Virtually all of the chicken and turkey sold in the United States is produced in the United States. Illegal or inadvertent movement (smuggled birds, food on airplanes, etc) remains a threat, but the USDA/APHIS has inspectors at all major entry points into the U.S.

#### *Movement by Wild Birds*

One of the unique features of the Asian Bird Flu is that wild birds can be infected, and increasing evidence suggests that they can spread the virus within and between countries. Control of wild bird movements, particularly migrating birds, is not possible. There exists some overlap of migrating birds from the infected countries and North American birds, but the risk of movement of the virus by this route is not known. Surveillance programs to test wild birds for Asian Bird Flu are ongoing and increasing to provide an early warning system whether wild birds pose a risk to the U.S. poultry.

#### *Purposeful or Agroterrorist Introduction*

The purposeful introduction of animal diseases remains a threat to our agricultural industry. Efforts for rapid detection and eradication, as outlined below, are one of our primary ways to mitigate any disease outbreak.

### *Human Infection and Spread*

If Asian Bird Flu starts to infect large numbers of humans, then humans may pose a threat to infecting our poultry flocks with the virus. This scenario is unlikely at this time because the virus is poorly transmitted between people.

### **Current or Future Response Plans for Asian Bird Flu in the U.S.**

Monitoring and surveillance for avian influenza, including Asian Bird Flu, is performed constantly at many different levels within the poultry industry. Diagnostic testing is performed by state and federal government (USDA-APHIS), and private laboratories. Many of these laboratories participate in the National Animal Health Laboratory Network, which provides testing for foreign animal diseases throughout the U.S. Most poultry companies participate in a state mandated or National Poultry Improvement Plan (NPIP) Avian Influenza surveillance programs. The policy of the poultry industry and state and federal governments is to eradicate avian influenza outbreaks as quickly as possible after detection. This is performed by the rapid detection of infected flocks and then the quarantine and ultimately the humane euthanasia of any flocks where virulent avian influenza virus has been identified. All birds are humanely euthanized according to AVMA standards and disposed of through environmentally sound methods.

Additionally, the modern type of animal production used in the United States is actually more protective of birds, their health and well being than more traditional systems such as the free running village chickens in Asia. This protective status is due to improvements to poultry housing, selective breeding for disease resistance, protection from potential disease carriers such as wild birds and more importantly, continuous health oversight by poultry veterinarians.

Preparedness is the key to a successful response to Asian Bird Flu or any other foreign animal disease in poultry. The USDA has recently invested in implementing improved rapid diagnostics for avian influenza, provided multiple training courses on diagnostics and control of avian influenza, and they have developed a vaccine bank to allow vaccination to be a control method if needed. Additional research and training are still required to adequately prepare for future outbreaks.