Avian Influenza (Bird Flu) Fact Sheet

What is avian influenza (bird flu)?

Avian influenza, also known as the “bird flu”, is an influenza A virus subtype, an infectious disease of animals that normally infects birds. Infection with avian influenza viruses causes two main forms of disease, distinguished by low and high extremes of virulence. The “low pathogenic” form usually causes only mild symptoms (ruffled feathers, a drop in egg production) and may go undetected. The highly pathogenic form spreads more rapidly through poultry flocks affecting multiple organs, and has a mortality rate that can reach 100%, usually within 48 hours.

How does avian influenza spread among birds?

Infected birds shed the influenza virus in their saliva, nasal secretions, and feces. Susceptible birds become infected when they have contact with contaminated excretions or with surfaces that are contaminated with excretions or secretions.

Does avian influenza infect humans?

The avian influenza viruses are highly species specific and do not usually infect humans. However, on rare occasions, the avian influenza viruses have crossed the species barrier to infect humans. Because all influenza viruses have the ability to change, scientists are concerned that H5N1 virus could be able to infect humans and spread easily from one person to another. Since the avian flu does not commonly infect humans, there is little or no immune protection against it in the human population and an influenza pandemic (worldwide outbreak of disease) could begin. As of 2003, there have been 173 confirmed cases of human infection with bird flu viruses resulting in 93 deaths. In the current outbreak, laboratory confirmed human cases have been reported in the following countries: Cambodia, China, Indonesia, Thailand, Vietnam, Turkey and Iraq.

How do humans become infected?

The cases of human infections of avian flu that have occurred have resulted from direct or close contact with infected birds, or surfaces and objects contaminated with their feces and secretions. So far, most human cases have occurred in rural or periurban areas where many households keep small poultry flocks, which often roam freely, sometimes entering homes or sharing outdoor areas where children play. Exposure is considered most likely during slaughter, defeathering, butchering, and preparation of poultry for cooking.

Is there a risk for becoming infected with avian influenza by eating poultry or poultry products (like eggs)?

There is no evidence that properly cooked poultry or eggs can be a source of infection for avian influenza viruses. Though certain precautions should be followed in countries currently experiencing outbreaks. Poultry and poultry products can be safely consumed provided these
items are properly cooked and properly handled during food preparation. The H5N1 virus is sensitive to heat. Normal temperatures used for cooking (70°C in all parts of the food) will kill the virus. Consumers need to be sure that all parts of the poultry are fully cooked (no “pink parts) and that eggs, too, are properly cooked (no “runny” yolks).

In areas free of the disease, poultry and poultry products can be prepared and consumed as usual (following good hygienic practices and proper cooking), with no fear of acquiring infection with the H5N1 virus.

**What are the symptoms of avian influenza in humans?**

Symptoms in humans have ranged from typical human influenza like symptoms (fever, cough, sore throat, and muscle aches) to eye infections, pneumonia, severe respiratory diseases, and other severe and life-threatening complications.

**How is the avian influenza treated?**

Two drugs (Tamiflu and Relenza), also known as neuraminidase inhibitors, can reduce the severity and duration of illness caused by seasonal influenza. The effectiveness of the neuraminidase inhibitors depends on their early administration (within 48 hours after symptom onset). For cases of human infection with H5N1, the drugs may improve prospects of survival, if administered early, but clinical data are limited. Additional studies are needed to determine the effectiveness of these medications.

**Does the current seasonal influenza vaccine protect me from avian influenza?**

No. The seasonal influenza vaccine for the 2005-2006 season does not provide protection against avian influenza.

**Is there a vaccine that will protect me from the avian flu?**

Currently, there is no vaccine that protects humans from the avian flu. Although a vaccine against the H5N1 virus is under development in several countries, no vaccine is ready for commercial production and no vaccines are expected to be widely available until several months after the start of a pandemic.

**What changes are needed for H5N1 virus to cause a pandemic?**

Three conditions must be met for a pandemic to start: 1) a new influenza subtype must emerge; 2) it must infect humans, causing serious illnesses; and 3) it must spread easily and sustainably (continue without interruption) among humans. The H5N1 meets the first two conditions: it’s a new virus for humans and it has infected more than 100 humans, killing over half of them. However, the third condition, an efficient and sustained human-to-human transmission of the virus, has not occurred. For this to occur, the H5N1 virus would need to improve its transmissibility among humans. This can happen via two principal mechanisms: 1) the first is an “reassortment” event, in which genetic material is exchanged between human and avian viruses during co-infection (infection of both viruses at the same time) of a human or pig; 2) the second
is adaptive mutation, a gradual process, where the capability of a virus to bind to human cells increases during infection to humans.

**How serious is the current pandemic risk?**

The risk of pandemic influenza is serious. With the H5N1 virus now firmly entrenched in large parts of Asia, the risk that more human cases will occur is going to increase. The recent spread of the virus to poultry and wild birds in new areas further broadens opportunities for human cases to occur. While neither the timing nor the severity of the next pandemic can be predicted, the probability that a pandemic will occur has increased.

**Can a pandemic be prevented?**

No one knows with certainty. The best way to prevent a pandemic would be to eliminate the virus from birds, but it has become increasingly doubtful if this can be achieved within the near future.

**Is it safe for me to travel to the affected areas?**

Currently, the CDC does not recommend any travel restrictions to affected countries. However, the CDC advises that travelers to countries with known outbreaks of H5N1 influenza avoid poultry farms, contact with animals in live food markets, and any surfaces that appear to be contaminated with feces from poultry or other animals.

**Are there any cases of humans or birds being infected with the H5N1 in the United States?**

Currently, there have been no cases of humans or birds being infected with the H5N1 influenza virus in the United States.

**What precautions are being taken to reduce the risk for H5N1 infection in the United States?**

The U.S. Government carefully controls domestic and imported food products, and in 2004 issued a ban on importation of birds and bird products from countries affected by avian influenza viruses, including the H5N1 virus. This ban is still in place.

**What can I do to reduce the risk for H5N1 infection in the United States?**

As a general rule, the public should observe wildlife, including wild birds, from a distance. This protects you from possible exposure to pathogens and minimizes disturbance to the animal. Avoid touching wildlife. If there is contact with wildlife do not rub eyes, eat, drink, or smoke before washing hands with soap and water. Do not pick up diseased or dead wildlife. Contact your state, tribal, or federal natural resource agency if a sick or dead animal is found.