BIRD FLU

What is bird flu?

Avian influenza or "bird flu" is a group of viral infections that occur naturally among birds. Some wild birds, like ducks, geese and swans as well as gulls and other shorebirds, can carry flu viruses in their intestines, but these species typically do not get sick. Infected birds shed virus in their saliva, nasal secretions, and droppings, and migratory birds can spread avian influenza among bird populations over long distances.

Poultry, such as chickens, turkeys, domestic ducks, quail, guinea fowl, and pheasants, can be easily infected when they come into direct contact with secretions from infected wild birds or when they are exposed to surfaces or materials contaminated with the virus, such as dirt, cages, water, or food.

What are the signs of disease in birds?

Bird flu infection in poultry causes two main forms of disease. Disease may go unnoticed in the mild form since the virus causes only subtle signs, such as ruffled feathers and a drop in egg laying. The severe form of disease spreads rapidly through flocks affecting multiple internal organs and causing death rates that reach 90-100% within 48 hours.

Avian influenza around the world

Until COVID-19, the 1918 H1N1 "Spanish Influenza" outbreak was the most severe pandemic or global outbreak of disease in modern history. The Spanish Flu was estimated to have infected one-third of the world's population (~500 million people), resulting in 50-100 million deaths. Research has indicated that the virus crossed directly from birds into humans.

Since that time, various strains of bird flu have circulated in wild bird populations. Some strains have the ability to transmit serious disease, particularly to birds in crowded settings. Influenza A (H5N1) virus or the "H5N1 virus" is highly contagious among birds. Between 1996 to 2009, H5N1 outbreaks spread from Asia, into Europe, the Mediterranean, and Africa. Hundreds of millions of poultry either died from disease or were culled in an effort to control outbreaks. This strain also caused several hundred human deaths. Most H5N1 human cases occurred in previously health children and young adults with direct or close contact with sick or dead, infected poultry or surfaces

contaminated by the virus. There was also evidence for a small amount of person-to-person spread.

Today, direct transmission of avian influenza virus from wild birds to humans appears to be very rare. Avian influenza viruses do not easily infect humans, and if a person is infected, it is very difficult for the virus to spread to another human being. Nevertheless, all flu viruses have the ability to mutate and scientists are concerned that another bird flu virus could one day be able to infect humans and spread easily from person to person. Since humans have little or no immunity against avian influenza, a bird flu infection could potentially spread worldwide. Therefore experts around the world carefully survey birds for avian influenza virus.

Outbreaks caused by avian influenza occur in the United States from time to time, including serious strains of bird flu, known as "highly pathogenic avian influenza" or HPAI. The USDA recently identified a highly pathogenic Eurasian H5 avian influenza in a wild duck in South Carolina, USA.

What are the signs of bird flu in people?

Symptoms of bird flu range from mild eye infections to flu-like illness. In severe cases, bird flu can cause pneumonia and death. Between 1996 to 2009, more than half of the human H5N1 cases died in Asia, parts of Europe, the Near East and Africa.

Bird flu cannot be diagnosed by symptoms alone, and a laboratory test is required. Doctors usually collect a swab from the nose or throat during the first few days of illness.

What can I do to prevent exposure to avian influenza?

1. Avoid direct contact with infected poultry when traveling abroad. The primary source of bird flu for travelers are live bird markets in Asia and Egypt. Travelers to nations with known bird flu should also…

    - Avoid visits to poultry farms or other places where live poultry are raised, kept, or sold.
    - Avoid foods that may have been made with raw eggs, such as ice cream.
    - Avoid surfaces that appear to be contaminated with feces from poultry or other animals.
    - Wash hands with soap and water or use alcohol-based hand sanitizers containing at least 60% alcohol.

2. Seek medical attention if you become ill during or after travel.

3. Biosecurity are the measures that can be taken to prevent the introduction and/or spread of infectious organisms. Good biosecurity should be practiced by anyone involved with poultry production, from small backyard flocks to large commercial producers (*see USDA resources* below). Pet birds owners should also practice good biosecurity (*see USDA resources* below). All bird owners should also prevent contact between their birds and wild birds.

4. Since wild birds can be infected with avian influenza without appearing sick, minimize direct contact with wild birds.

   - Wear gloves when handling wild birds.
   - If contact occurs, wash hands with soap and water, and change clothing before having any contact with healthy domestic poultry or pet birds.
   - Hunters should dress game birds in the field whenever possible and take measures to prevent any potential disease spread (*see USDA resources below*).

5. Report sick birds or unusual bird deaths to state or federal officials.

6. There is no evidence that any human case of bird flu have ever been acquired by eating properly cooked poultry products. Proper food safety practices include:

   - Wash hands with soap and warm water for at least 20 seconds before and after handling raw poultry and eggs.
   - Clean cutting boards and other utensils with soap and hot water to keep raw poultry from contaminating other foods.
   - Cook poultry and eggs to a minimum internal temperature of 74ºC (165ºF) to kill bacteria and viruses, including serious strains of avian influenza.
   - Cook eggs until both whites and yolks are firm.

7. Eligible people should be vaccinated each year against seasonal flu. Although the standard seasonal flu vaccine does not provide protection against bird flu, it is possible to be infected with both seasonal flu and bird flu, which can lead to much more severe illness.

USDA APHIS* Resources

Defend the Flock Program	http://healthybirds.aphis.usda.gov
Guidance for Hunters	https://www.aphis.usda.gov/publications/animal_health/2015/fsc_hpai_hunters.pdf

* United States Department of Agriculture (USDA) Animal & Plant Health Inspection Services

References and Further Reading

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