

AVIAN INFLUENZA (BIRD FLU)

Denver Division of Animal Care & Control – Vector Control Program

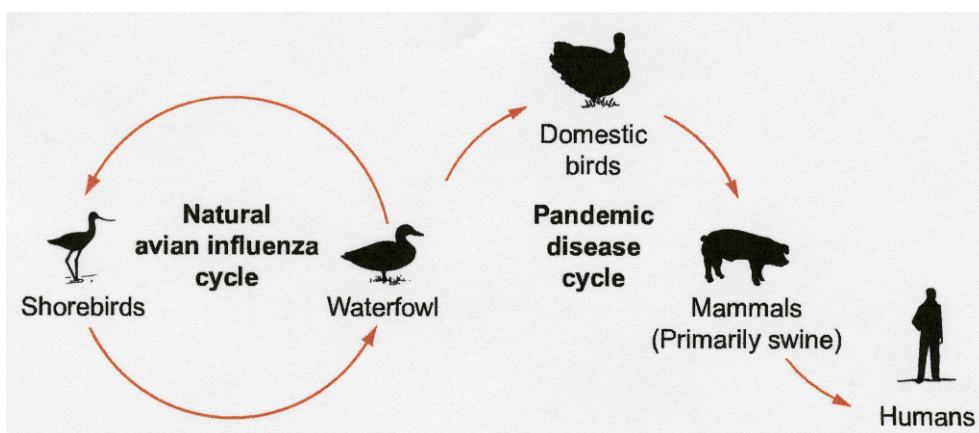
What is bird flu? Avian (bird) flu is caused by influenza A avian viruses that occur naturally among birds. There are many different subtypes of type A influenza viruses. These subtypes differ because of changes in certain proteins on the surface of the influenza A virus. Many different combinations of the proteins are possible and each combination represents a different subtype. All known subtypes of influenza A viruses can be found in birds. The avian flu currently of concern is the H5N1 subtype.

Avian influenza in birds: Wild birds worldwide carry influenza viruses in their intestines, but usually do not get sick from them. However, avian influenza is very contagious among birds and can make some domesticated birds, including chickens, ducks, and turkeys, very sick and kill them. Infected birds shed influenza virus in their saliva, nasal secretions, and feces.

Human infection with avian influenza viruses: The risk from avian influenza is generally low to most people, because the viruses do not usually infect humans. However, confirmed cases of human infection from several subtypes of avian influenza infection, including H5N1, have been reported since 1997 in other parts of the world. Most cases of avian influenza infection in humans have resulted from contact with infected poultry or surfaces contaminated with secretion/excretions from infected birds. The spread of avian influenza viruses from one ill person to another has been reported very rarely, and transmission has not been observed to continue beyond one person.

“Human influenza virus” usually refers to those subtypes that spread widely among humans. There are only three known A subtypes of influenza viruses (H1N1, H1N2, & H3N2) currently circulating among humans. It is likely that some genetic parts of current human influenza A viruses originally came from birds. Influenza A viruses are constantly changing, and they might adapt over time to infect and spread among humans.

So far, the spread of H5N1 virus from person to person has been limited and has not continued beyond one person. Nonetheless, because all influenza viruses have the ability to change, scientists are concerned that H5N1 virus one day could be able to infect humans and spread easily from one person to another. Because these viruses do not commonly infect humans, there is little or no immune protection against them in the human population. If H5N1 virus were to gain the capacity to spread easily from person to person, a pandemic (worldwide outbreak of disease) could begin. No one can predict when a pandemic might occur. However, experts from around the world are watching the H5N1 situation very closely and are preparing for the possibility that the virus may begin to spread more easily and widely from person to person.



Global cycle of avian influenza viruses in animals. The strains of avian influenza that infect wild birds do not normally infect humans. It is believed that waterfowl and shorebirds maintain separate reservoirs of viral gene pools from which new virus subtypes emerge. These gene pools may mutate and spill over into other animals (mammals). Because swine can get both avian influenza and human influenza they may become a vessel in which the two viruses mix and mutate into a virus that could cause a human pandemic.

Avian H5N1 Flu in Humans is Currently Very Limited and Not a Pandemic

- Human H5N1 influenza infection was first recognized in 1997 when this virus infected 18 people in Hong Kong, causing 6 deaths.
- Since 2003, about 200 human H5N1 cases have been diagnosed in Thailand, Vietnam, Cambodia, Indonesia, China, Turkey, Azerbaijan, Egypt, and Iraq. Of those cases, more than half have died as a result of the virus.
- Currently, close contact with infected poultry has been the primary source for human infection. Though rare, there have been isolated reports of human-to-human transmission of the virus.
- Genetic studies confirm that the influenza A virus H5N1 mutates rapidly. Should it adapt to allow easy human-to-human transmission, a pandemic could ensue – it has not done so to date.
- At this time, it is uncertain whether the currently circulating H5N1 virus will lead to a global disease outbreak in humans.
- The reported symptoms of avian influenza in humans have ranged from typical influenza-like symptoms (e.g. fever, cough, sore throat, and muscle aches) to eye infections (conjunctivitis), acute respiratory distress, viral pneumonia and other severe, life-threatening complications.
- Vaccines to protect humans against H5N1 viruses currently are under development. In addition, research is underway on methods to make large quantities of vaccine more quickly.

For more information on the avian H5N1 virus and pandemic influenza visit: www.pandemicflu.gov .

RECOMMENDATIONS FROM USGS NATIONAL WILDLIFE HEALTH CENTER

There is no known case where H5N1 has been transmitted from wild birds to humans. However, even apparently healthy wild birds can be infected with microorganisms other than highly pathogenic avian influenza (HPAI), some of which are currently of more concern to human health in North American than HPAI H5N1.

- Thoroughly washing hands with soap and water (or with alcohol-based hand products if the hands are not visibly soiled) is a very effective method for inactivating influenza viruses, including HPAI. These viruses are also inactivated with many common disinfectants such as detergents, 10% household bleach, alcohol or other commercial disinfectants. The virus is more difficult to inactivate in organic material such as feces or soil.
- The **General Public** should, as a general rule, 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 as described above.

If you have to handle dead birds use a shovel and/or use waterproof gloves. Place the carcass in a plastic bag and tie the bag. Place that bag inside another plastic bag and tie the second bag and then place the bag in an outside trash container for disposal. Thoroughly wash hands when finished.

In Colorado, the Colorado Health Emergency Line for the Public (“CoHELP”) will be the primary information collection and dissemination source for the general public on avian diseases. CoHELP staff respond to hotline calls 7:00 AM to 11:00 PM Monday through Friday, and 9:30AM to 8:00 PM Saturday and Sunday. The CoHELP hotline phone number is 1-877-462-2911.

If you are concerned about possible exposure of domestic birds to sick or dead wild birds, contact your local veterinarian.

Additional sources of information:

Colorado Department of Agriculture: (303) 239-4161 www.ag.state.co.us

Colorado Division of Wildlife: (303) 297-1192 www.wildlife.state.co.us

Colorado Avian Disease Surveillance Program: (970) 297-1281 www.coloradobirdhealth.org

Colorado Dept. of Public Health and Environment: (303) 692-2000 www.cdphe.state.co.us/dc/Influenza/