



AVIAN INFLUENZA Q&A

Office of the State Veterinarian
Division of Environmental Health
Department of Environmental Conservation

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The U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) has confirmed Highly Pathogenic Avian Influenza (HPAI) H5N2 from waterfowl in Alaska during a routine surveillance project. This HPAI H5N2 is genetically similar to the virus identified in 2014 in Washington State and in the outbreak in 2015 in the Midwestern states that caused the death of 30 million domestic poultry.

Since wild waterfowl are known carriers (reservoir) for low pathogenic avian influenza virus, they are targets for surveillance by USDA Wildlife Services and the U.S. Fish and Wildlife Service. The State also performs surveillance testing of domestic poultry across the state, and the Office of the State Veterinarian has been collecting samples at each of the agricultural fairs across the state. So far, avian influenza has not been identified in domestic birds in Alaska.

General Information

What is avian influenza (AI) or bird flu?

- Avian influenza is a group of viruses found in domestic poultry (chickens, turkeys, waterfowl, and game birds, which are bred for the purpose of producing eggs or meat) and in wild birds, most often dabbling ducks, other waterfowl, and shorebirds.
- These viruses are found only in a small proportion of wild birds, which typically do not appear sick.
- Viruses can be passed from bird to bird (and in some cases to humans or other animals) in fecal droppings, saliva, and nasal discharges.
- Low pathogenic avian influenza (LPAI) virus strains occur naturally in wild migratory waterfowl and shorebirds without causing illness.
- Highly pathogenic avian influenza (HPAI) virus strains are extremely infectious, often fatal to domestic poultry, and can spread rapidly from flock to flock. Clinical signs in affected poultry may include edema or swelling of the head, nasal discharge, neurologic signs (circling, incoordination), depression, or sudden death. These strains are sometimes found in wild birds.

How are avian influenza viruses named?

- AI viruses are named by using a combination of two groups of proteins: hemagglutinin or “H” proteins, and neuraminidase or “N” proteins.
- There are 16 H proteins (H1–H16) and 9 “N” proteins (N1–N9). Many different combinations of “H” and “N” proteins are possible, such as H1N1 or H5N8.
- AI viruses are also classified by their “pathogenicity” or ability to produce illness or disease in domestic chickens. The pathogenicity can be either low (mild illness) or high (severe illness and death).

What are the new strains of Highly Pathogenic Avian Influenza that have been found in the U.S and now in Alaska? How are they different from other strains?

- Highly Pathogenic Avian Influenza (H5N2) that was recently identified in wild waterfowl in Alaska closely matches the H5N2 virus identified in 2015 in wild birds and domestic poultry in several states in the U.S. (Arkansas, California, Idaho, Kansas, Missouri, Minnesota, Montana, Nevada, Oregon, Utah, Washington, and Wyoming) and British Columbia, Canada.
- H5N2, H5N8, and H5N1 strains that have been found in the U.S. are the result of an Asian HPAI H5N8 being introduced into the U.S. and then mixing with North American avian influenza viruses.
- While the mixed-origin viruses contain the Asian-origin H5 part of the virus (which is highly pathogenic to poultry), the N parts of these viruses came from low pathogenic avian influenza viruses found in North American wild birds.

Can humans catch AI from wild birds?

- The H5N2, H5N8, and H5N1 strains have not caused any illness in people in North America, and animal health officials are working closely with partners in public health to continually monitor this situation.
- Normally, avian influenza viruses are passed among various species of shorebirds, waterfowl, and domestic birds, including poultry (chickens, turkeys, etc.). In some cases, the virus can also pass from domestic birds to humans, but this is likely only if people are in close and regular contact with poultry such as in poultry farming operations.
- More information about avian influenza and public health is available on the CDC website at <http://www.cdc.gov/flu/avianflu/h5/index.htm>.

What is being done to determine if HPAI avian influenza is in Alaska?

- A team of state, federal, and tribal agencies and organizations is coordinating the testing of live wild birds, hunter-harvested wild birds, and domestic poultry to look for HPAI viruses.
- These agencies are monitoring domestic poultry and migratory birds for die-offs (large groups, greater than 10 dead birds). These die-offs can be caused by several diseases, including this type of avian influenza.
- If you encounter 10 or more wild birds that appear sick, are acting abnormally, or are dead, you should contact the Alaska Department of Fish and Game at (907) 328-8354, U.S. Fish and Wildlife Service at (866) 527-3358, or the Office of the State Veterinarian at (907) 375-8215.
- Wild bird mortality events are known to happen in Alaska and in the past, have been caused by severe weather events, or other diseases, such as, avian cholera. When a mortality event occurs, tests will be conducted to determine the cause.

If we get the flu shot, are we protected?

- Regular flu shots do not protect against avian influenza, but it is very important to get them. Not only will you protect yourself from “normal” flu, but you can also prevent any chance that bird flu could combine with another type of flu in your body and become easier to pass from one person to another as a result.

Will the virus survive if it's frozen?

- Avian influenza viruses can withstand freezing and may still be able to cause disease in susceptible species when they are thawed.

Information for Bird Owners

Is it risky to own pet birds like canaries or parakeets?

- Having a pet bird that stays inside all the time is not likely to pose any threat.
- It is illegal to import pet birds into the U.S. from any regions that have experienced outbreaks of the Asian HPAI H5N1.
- If you do have pet birds, follow these good husbandry guidelines:
 - Maintain good nutrition and keep all food and treats covered, out of contact with wild birds.
 - Keep cages clean and disinfect after changing the cage bedding.
 - Contact your veterinarian if the bird shows signs of illness.
 - Wash your hands after handling the bird or the cage materials.

What can poultry or pet bird owners do to protect their birds?

- Make a plan to prevent disease from affecting your birds, e.g. a biosecurity plan.
- See the OSV web page <http://dec.alaska.gov/eh/vet/index.htm> or the USDA webpage “Biosecurity for the Birds” for details <http://healthybirds.aphis.usda.gov/>.

Could I catch avian influenza from poultry that my neighbor keeps?

- It is very unlikely for humans to become infected with any form of avian influenza from small scale or backyard poultry operations. To date, most of the human cases in Asia, Egypt, and other parts of the world involved people who have been in close contact with large numbers of poultry on a regular basis (people who work on chicken farms, for example).
- Avoid contact with sick or dead birds. Poultry that are infected with the highly pathogenic (which means deadly to poultry) form of avian influenza tend to die quickly. Infected poultry generally show easily recognized signs of illness which may include edema or swelling of the head, nasal discharge, neurologic signs (circling, incoordination), depression, or sudden death.
- You should always wash your hands after handling poultry, pet birds, or wild birds and thoroughly cook any poultry or wild birds that you intend to eat.
- More information about avian influenza and public health is available on the CDC website at <http://www.cdc.gov/flu/avianflu/h5/index.htm>.

Information for Hunters

Should hunters be concerned about avian influenza?

- Migrating birds play a role in the movement and distribution of these viruses, and surveillance of migratory waterfowl and domestic poultry will help state and federal officials track the spread of avian influenza.
- Both live and dead wild birds will be tested this spring to detect possible occurrence of HPAI viruses in Alaska.
- Precautions consistent with the normal recommended procedures for the safe handling and cleaning of game should always be followed.

- Resources for hunters include:
 - Alaska DEC: <http://dec.alaska.gov/eh/fss/Food/Docs/Temperature%20Facts.pdf>
 - USDA Hunter's Guide: http://www.aphis.usda.gov/publications/animal_health/2015/fsc_hpai_hunters.pdf
 - Health Canada and First Nations: <http://dhss.alaska.gov/dph/Epi/eph/Documents/FNIHBFoodManual.pdf>
- If you have pet birds or poultry at home, take precautions to clean your gear and keep wild birds away from your pet birds or poultry. See the details of biosecurity at: <http://healthybirds.aphis.usda.gov/>.

Are hunting dogs at risk from avian influenza?

- There is no evidence that dogs are able to catch these newly identified strains of avian viruses.
- Dogs can get a canine influenza (dog flu). It is caused by a specific type of influenza virus, H3N8, which originally came from an equine (horse) influenza. This virus is not related to either the avian or human influenza viruses. The canine influenza virus, H3N8, is only known to cause respiratory disease in dogs.

Scientists that are testing wild birds in the field are wearing gloves and other protective gear. Should hunters wear the same kind of gear?

- Biologists testing wild birds handle many more birds than a hunter would and are taking samples that contain bird droppings as part of their work. Healthy, live birds tend to struggle while they're being tested and can spread droppings, feathers, and dander all over the biologists collecting the samples.
- The extra protective gear shouldn't be necessary for hunters.
- Keeping your hands and tools cleaned with soap and water or other cleaners and making sure to cook all birds before eating are recommended to keep hunters safe from any bacteria or viruses that a bird might carry.

If scientists test a duck that I shot, will I be told the results of the test?

- Testing of healthy birds submitted by hunters will be batched, and results may not be available individually.
- It may take weeks or months before final results are available. Summary results will then be distributed to the public.
- If Highly Pathogenic Avian Influenza (the dangerous form of the virus) is detected in Alaska, the public will be notified immediately.

Could I catch avian influenza by eating domestic poultry or birds harvested during hunting season?

- No one has ever caught avian influenza from either a wild or domestic bird that has been properly cooked to an internal temperature of 165 °F and using a minimum oven temperature of 325°F.
- You can also eat the hearts, digestive tracts, gizzards, and livers of wild birds if they are cooked properly by ensuring that the internal temperature is 165 °F.
- Use a food thermometer to ensure food had reached the proper cooking temperature.

- If you are smoking a bird, heat the bird to the internal temperature and be sure the meat reaches the proper temperature of 165 °F.
- Proper handling and cooking provides protection against avian influenza and other viruses and bacteria such as Salmonella and Campylobacter.
- All poultry entering commercial markets are inspected by the USDA, and the birds in these flocks undergo surveillance testing for infectious diseases.

Can the virus be found in the eggs of wild birds? Is it safe to eat wild bird eggs?

- The avian influenza viruses can be found on the outer surfaces of egg shells.
- HPAI can also infect the inside of the egg which includes the yolk and albumen or the egg white. The influenza virus can be spread by movement of the eggs from place to place.
- The U.S. egg industry has had years of experience in dealing with and preventing AI in commercial poultry flocks and works closely with the USDA in these efforts.
- When collecting chicken or wild bird eggs, brush off any debris adhering to the egg shell and wash eggs with warm water that is at least 90°F. The eggs can be sanitized by rinsing them in a dilute bleach solution (one tablespoon of unscented household chlorine bleach per gallon of water) and stored in the refrigerator.
- It is always important to cook eggs until the yolk and white are firm and cook or bake any dishes containing eggs until they reach 160° F.

Could I catch avian influenza from the feathers of a bird used in crafts or clothing?

- Avian influenza viruses could be found on the feathers of birds. If you are going to use feathers for handicrafts, artwork, or utensils, collect feathers from healthy birds.
- The feathers may be cleaned with a dilute bleach solutions (one tablespoon of unscented household chlorine bleach per gallon of water) prior to use.

Reporting Avian Influenza

If I see a group of wild birds that are acting sick, or a number of dead birds, what should I do?

- If you see more than 10 dead birds, or birds that appear to be sick, please contact one of the following agencies:
 - Alaska Department of Fish and Game at (907) 328-8354
 - Office of the State Veterinarian at (907) 375-8215
 - U.S. Fish and Wildlife Service at (866) 527-3358

Thank you to all the agencies that participated in creating this informational document.

