



# Avian Influenza

## *Some Questions and Answers about Avian Influenza (“Bird Flu”)*

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### *First, the Basics:*

The Asian strain of avian influenza, called H5N1 or just bird flu, has been in the news lately. You might be surprised to know that it has never been found in North America, and there is no evidence that anyone, anywhere, has caught it from a wild bird. It is also not the same as the colds and other illnesses people usually call “flu,” or the common forms of flu that shots can prevent. Still, it’s best to be safe. Here’s what you can do:

- Cook any wild or store-bought birds or eggs until they are done all the way through before eating.
- Wash your hands and knife with soap and water after cleaning or handling any birds.
- The questions and answers below cover many of the concerns people might have about the Asian H5N1 virus.

### *General information*

#### **1) What is Avian Influenza?**

Bird flu, or avian influenza, is a term that refers to a number of viruses found in domestic poultry and in wild birds, especially waterfowl and shorebirds. These viruses are found only in a small proportion of wild birds, and most cause few, if any, symptoms. The viruses can be passed from bird to bird (and in rare cases to humans or other animals) in fecal droppings, saliva and nasal discharges.

#### **2) Is there a new strain of avian influenza?**

Yes. A particularly deadly strain of avian influenza has emerged in poultry and wild birds in Asia – this is the Asian H5N1 virus. This virus is deadly to chickens and some other domestic birds. This strain is of concern to people because it has caused illness and death in some humans who had been in close contact with infected domestic poultry in Asia. The most dangerous situation would occur if this avian flu strain changed form and acquired the ability to spread easily from person to person.

#### **3) Where is the Asian H5N1 virus now occurring?**

There are increasing numbers of reports that the Asian H5N1 virus is infecting and causing death in domestic poultry and some wild birds in Asia, Europe, and Africa. In Asia some people have also been infected, and almost half of these have died. (As of the end of February, 2006, a total of approximately 170 human

cases have resulted in more than 90 deaths worldwide.) The virus has primarily been a problem for domestic poultry and has been spread by these birds, though wild birds have been affected. Some of the wild bird species affected are migratory, and there is concern that H5N1 might spread into North America as infected birds migrate.

#### **4) How could the Asian H5N1 virus arrive in North America?**

Migratory birds in the northern hemisphere will be migrating north this spring to breeding grounds in eastern Russia, Alaska, and Canada, and some of these might be coming from areas in Asia where the virus has been found. Bird migration is only one of the possible routes of introduction of the Asian H5N1 virus into North America. Travel by people who are infected or traveling with virus-contaminated articles, and illegal smuggling of birds or poultry products are more direct, and possibly more likely, means of introducing the virus into the United States. The USDA has prohibited the import of any birds, poultry equipment, or poultry products from any country that has had the Asian H5N1 virus diagnosed.

#### **5) Can humans catch the Asian H5N1 virus from wild birds?**

There is no known case where the Asian H5N1 virus has been passed from wild birds to humans, but it is not certain that transmission from wild birds to humans isn’t possible. Normally, avian flu viruses are passed among various species of shore birds, waterfowl and domestic birds,

including poultry (chickens, turkeys, etc.). The Asian H5N1 virus has also, on rare occasions, passed directly from domestic birds, especially chickens, to humans. This is most likely if the people are in close and regular contact with diseased poultry, as they would be in a chicken farming operation. That is what has happened in Southeast Asia.

### **6) What is being done to make sure we know if the Asian H5N1 virus does arrive in North America?**

Here in Alaska, a team of state and federal agencies, tribal organizations and universities is coordinating testing of live wild birds, hunter-harvested wild birds, and domestic poultry in hopes of spotting the Asian H5N1 virus if it does arrive here. Many of the same organizations are watching for die-offs, or large groups of dead wild birds. These die-offs can be the result of several causes, one of which might be the Asian H5N1 virus.

### **7) How likely is it that this virus will reach wild birds in Alaska?**

The Asian H5N1 virus has not been detected in either wild or domestic birds or in humans in North America. Between 1998 and 2005, more than 12,000 wild bird samples from Alaska were examined for evidence of H5N1. No evidence of H5N1 virus has yet been discovered. However, the virus is more widespread in other parts of the world today than it has ever been, so now is a time to be vigilant.

### **8) Can mosquitoes spread the Asian H5N1 virus?**

Mosquitoes have never been shown to spread any type of influenza virus. It is not likely that the Asian H5N1 virus could be carried by a mosquito ingesting blood from an infected animal like other diseases, such as West Nile virus, can be.

### **9) If this virus did arrive in North America, how long after being exposed to it would an infected person show symptoms?**

According to the World Health Organization, the incubation period for the Asian H5N1 virus may be

longer than that for normal seasonal influenza, which is around two to three days. Current data for H5N1 infection indicate an incubation period ranging from two to eight days, but possibly as long as 17 days.

### **10) How can I tell a "normal" flu from the Asian H5N1 virus?**

The symptoms of the Asian H5N1 virus in humans can range from "normal" flu symptoms (fever, cough, sore throat, and muscle aches) to eye infections, pneumonia, and more severe symptoms. In short, there is no way to confidently identify a human case of the Asian H5N1 virus from the symptoms.

### *What can I do to protect myself from H5N1?*

#### **11) If we get the flu shot are we safe?**

Regular flu shots are not thought to protect against the Asian H5N1 virus, 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.

#### **12) Is there a vaccine for people to prevent the Asian H5N1 virus?**

No, there isn't a vaccine yet available for this specific type of flu, though work is going on to develop one. There are medicines called antiviral drugs available that may help limit symptoms and reduce the chance that the disease will spread. There have been reports that the flu in some human patients has developed a resistance to some of these antivirals, however.

#### **13) How can people best protect themselves from the Asian H5N1 virus when handling or eating wild birds or domestic poultry?**

Remember that the Asian H5N1 virus has never yet been detected anywhere in North America. However, if you were to handle a raw, infected bird there is a chance

you could accidentally infect yourself by touching your mouth, eyes, etc. with contaminated fingers. You could also put yourself at risk by eating uncooked meat or organs from wild or domestic birds. Washing with soap and water or most commercial hand cleaners will kill the virus. It's important to avoid smoking, eating, drinking, etc. after handling raw wild or domestic birds until after washing your hands. Always cook any wild or domestic birds before eating. If possible, use a food thermometer to ensure food has reached the proper cooking temperature. Cook all whole birds and parts to at least 165-degrees (F). Use a minimum oven temperature of 325-degrees (F). If cooking in the field, make sure that the birds (or any bird parts cooked separately) are cooked through.

#### **14) What should I do if I feel sick after handling wild or domestic birds?**

Although the Asian H5N1 virus has not been found in the United States, its symptoms could resemble those of a variety of ailments. It is always best to contact your usual health care provider when you feel ill, and to tell him or her about any contact that you might have had with birds or sick animals.

### *Information for Hunters*

#### **15) Should hunters be concerned about the Asian H5N1 virus?**

The Asian H5N1 virus has not yet been detected anywhere in North America, and there have been no confirmed reports of anyone, anywhere in the world, catching the Asian H5N1 virus from a wild bird. However, no one yet knows for sure if migrating birds might play a role in the movement and distribution of this virus. Only surveillance will tell us that. Federal, state, university, and tribal groups will be testing both live and hunter-harvested wild birds this spring in order to try to detect the virus early should it arrive in Alaska. While the risk to hunters is currently low, no one can guarantee that there is no risk. Precautions consistent

with the normal recommended procedures for the safe handling and cleaning of game should always be followed. A fact sheet from the State of Alaska is available at: [http://alaska.fws.gov/media/avian\\_influenza/index.htm](http://alaska.fws.gov/media/avian_influenza/index.htm)

**16) Is there any way for me to tell if a wild bird has the Asian H5N1 virus?**

Infected birds may have respiratory symptoms such as sneezing and coughing, swelling of the eyes, ruffled feathers, and diarrhea. However, any and all of these symptoms might also indicate other illnesses. Remember, too, that the Asian H5N1 virus has never yet been detected anywhere in North America, and that there have been no confirmed reports of anyone, anywhere, catching the Asian H5N1 virus from a wild bird.

**17) Are hunting dogs at risk from the Asian H5N1 virus?**

There is no evidence yet that dogs are able to catch this virus.

**18) Could I catch the Asian H5N1 virus by drinking river water that ducks or other birds have been in?**

Drinking water has never been known to transmit any type of influenza virus. If infected birds were present in large numbers in a confined (not flowing) body of water, levels of contamination in that water could infect someone who drank the water without treating it. However, unfiltered or untreated water can carry a number of other pathogens that are far more likely to cause problems at this time.

**19) What kinds of water filters will protect me against the Asian H5N1 virus?**

Many water filters, particularly those designed for camping, are *biological* filters, and can be used to remove bacteria and protozoa from water of suspect quality. These must be used in conjunction with a disinfectant (such as those found in commercially available water purification tablets), or boiling, to remove viral contaminations such as the Asian H5N1 virus. Remember that the Asian H5N1 virus has never

yet been detected anywhere in North America, and that there have been no confirmed reports of anyone, anywhere, catching the Asian H5N1 virus from a wild bird.

**20) Will boiling the water provide protection?**

Boiling for at least one minute will kill the Asian H5N1 virus.

**21) Will rinsing my hands in salt water kill the virus?**

Salt water alone can not be relied upon to kill the Asian H5N1 virus (see Question #13).

**22) Will the virus survive if it's frozen?**

Yes. The Asian H5N1 virus can withstand freezing and still be dangerous when it is thawed. See Question #13 for information on things you *can* do to protect yourself.

*Information about Wild Bird Surveillance in Alaska*

**23) Scientists who are testing wild birds in the field are wearing gloves, face masks 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. Furthermore, healthy, live birds tend to struggle while they're being tested, and can fling droppings, feathers, and dander on the scientists doing the tests. 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 (see Question #13) are the common-sense steps recommended to keep hunters safe in the unlikely event that they handle a bird carrying the H5N1 virus. Remember that the Asian H5N1 virus has never yet been detected anywhere in North America, and that there have been no confirmed reports of anyone, anywhere, catching the Asian H5N1

virus from a wild bird.

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

There are no plans to get individual results back to the hunter. For one thing it might be weeks or months before a single sample can be completely tested. For another, if the duck is properly cooked and handled (see Question #13), there is no risk to those who eat it. Also, if the Asian form of H5N1 is ever detected in Alaska (or anywhere in North America) the public will be notified immediately.

**25) Is it safe to eat a duck that has been tested?**

If the duck is properly handled and cooked (see Question #13) there is no risk to those who eat it.

*Domestic Birds and Animals*

**26) 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 the Asian form of H5N1, so the chances of anyone buying an infected pet from a reputable pet store in the United States are extremely low.

**27) Could I catch the Asian H5N1 virus from poultry that my neighbor keeps?**

Poultry that are infected with the highly pathogenic (which means deadly to poultry) form of Asian H5N1 tend to die quickly, and so far most of the human cases in other parts of the world have involved people who have had exposure to sick backyard flocks or fighting fowl. There should be very little risk from a healthy backyard flock, and almost no risk at all as long as you wash your hands after handling the chickens and cook any birds you intend to eat (see Question #13).

## **28) What about other domestic animals?**

There have been no reports of Asian H5N1 causing illness to humans exposed to infected animals other than birds. There are reports that cats and pigs are able to catch the Asian H5N1 virus.

### *Could I Catch the Asian H5N1 virus if.....?*

## **29) ...I eat the hearts, digestive tracts, gizzards, livers, etc. of wild birds after cooking them?**

Heat is a good way to kill the virus, so properly cooked internal organs should be safe (see Question #13). There is some evidence that eating raw, contaminated poultry blood might have resulted in people becoming infected in Vietnam, so any bird products should be cooked before eating.

## **30) ...I swim or wade in water that ducks or other birds have been in?**

Remember that the dangerous Asian H5N1 virus has never yet been detected anywhere in North America, and that there have been no confirmed reports of anyone, anywhere, catching the Asian H5N1 virus from a wild bird. If infected birds were present in large numbers in a confined (not flowing) body of water, levels of contamination in that water could theoretically infect someone who, while wading, accidentally got that water into his or her eyes or mouth. However, unfiltered or untreated water can carry a number of other illnesses that are far more likely to cause problems at this time.

## **31) ...I eat plants or fish that are in water used by wild birds?**

To be safe, it is best to cook any wild plants or fish that have been in water frequented by wild or domestic birds before eating the plants or fish.

## **32) ...I clean wild birds or handle raw domestic poultry?**

Remember that the Asian H5N1 virus has never yet been detected anywhere in North America, and

that there have been no confirmed reports of anyone, anywhere, catching the Asian H5N1 virus from a wild bird. If you were to handle a raw, infected bird there is a chance you could accidentally infect yourself by touching your mouth, eyes, etc. with contaminated fingers. Washing with soap and water or commercially available hand cleaners will kill the virus. It's important to avoid smoking, eating, drinking, etc. after handling raw wild or domestic birds until after washing your hands (see Question #13).

## **33) ...I buy a chicken from a store and cook it?**

Asian H5N1 has not been found in the United States. Even if H5N1 were detected in the U.S. the chance of infected poultry entering a store would be extremely low. All poultry entering the food chain is inspected by the USDA and the farms raising these birds are under surveillance testing for infectious diseases. Proper handling and cooking of poultry provides protection against this virus as it does against many viruses and bacteria, including *Salmonella* and *E. coli* (see Question #13).

## **34) ...I eat a cooked chicken in a restaurant?**

No one has ever caught the Asian H5N1 virus from a properly cooked bird, either wild or domestic. All poultry entering commercial markets are inspected by the USDA and the farms raising these birds are under surveillance testing for infectious diseases.

## **35) ...I eat cooked birds, either poultry or wild birds?**

No one has ever caught the Asian H5N1 virus from a properly cooked bird, either wild or domestic (see Question #13).

## **36) ...I eat a smoked bird?**

By cooking the bird to the proper temperature, either before or after smoking, you can ensure that it is safe to eat (see Question #13).

## **37) ...I eat wild bird eggs?**

There is no evidence that anyone has caught the Asian H5N1 virus

from cooked eggs. Raw eggs should not be eaten. Wild bird eggs should be washed after collecting, and hands should be washed after handling eggs. Remember that the Asian H5N1 virus has never yet been detected anywhere in North America, and that there have been no confirmed reports of anyone, anywhere, catching the Asian H5N1 virus from a wild bird.

## **38) ...I use feathers of a bird in crafts or clothing?**

Influenza viruses can sometimes be found on the feathers of birds. However, since Asian H5N1 has not been found in North America the risk would be extremely low. If you are going to use feathers for craft work, collect them from healthy, harvested birds. The feathers may be cleaned with a dilute bleach solution (one tablespoon of bleach to a quart of water) prior to use.

### *And, Finally*

## **39) What should I do if I see a group of sick or dead birds?**

Birds die for many reasons, but Asian H5N1 has been the cause of deaths of wild birds in Europe and Asia. Do not handle any sick or dead birds you find. If you encounter dead or sick wild birds, and no obvious cause is apparent, such as hitting a power line or building, call 1-866-5BRDFLU (1-866 527-3358). Please note the location (GPS coordinates are best), species of bird, and the date and time that you found them.

## **40) Where can I find out more?**

For more information, see: [http://alaska.fws.gov/media/avian\\_influenza/](http://alaska.fws.gov/media/avian_influenza/)

**Note: This material was produced on March 20, 2006. The avian influenza issue is constantly changing. See the website above to determine if the information in this copy has been updated due to new developments.**

*The Alaska Avian Influenza Information Group includes representatives from the Alaska Departments of Health and Social Services, Fish and Game, and Environmental Conservation; the Alaska Native Tribal Health Consortium, and the U.S. Fish and Wildlife Service.*