

Avian Influenza in Small Poultry Flocks

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Avian influenza is a disease caused by a virus; in fact, a large family of viruses. In birds the disease can be either mild, like a cold, or severe, resulting in death. The Asian H5N1 virus is a very bad member of this large family and because of this, it has been in the news. So much information has been presented, that people may be confused. Here are the facts:

- 1) The Asian H5N1 virus, or bad bird flu, is not a human disease agent right now. It is a poultry and bird virus that doesn't infect humans very often.
- 2) Wild birds may carry this bad virus, but the virus probably needs to be increased and in close touch for human infections to occur. That's where poultry may play a role.

People are very worried about their poultry flocks and their own safety but by understanding a little about the virus, they can protect their birds and themselves.

Sources of Virus and Transmission

1. Transmission between locations

Feces from infected birds is the most important source of avian influenza virus (AIV). Wetness and low temperatures increase the survival of the virus in manure. The spread of AIV between flocks almost always follows the movement of people and equipment because they tend to move the feces, which is where the virus is.

2. Transmission between birds

The virus can move between birds in a single flock through the air but it also happens by contact with infected fecal material.

Signs of highly pathogenic avian influenza in domestic poultry.

The bad bird flu is lethal for chickens and turkeys with a death rate of nearly 100% in the flocks it infects. In contrast, ducks and geese may survive, but are likely to show signs of respiratory disease, like coughing or snicking. The signs of disease reported for various domestic avian species are listed in Table 1.

Table 1. What does the bad bird flu look like?

Species	Mortality	Signs
Chickens, turkeys, gamebirds	50%-100%	Bruising under the skin, swollen heads, not moving, no egg production, death
Ducks	0%-100%	Coughing, not moving, off feed, death, weight loss, cloudy eyes, twisted necks
Geese	0%-25%	Twisted necks, uncoordinated moving, unusual behavior, death
Pigeons	0%	Normal appearance, diarrhea, decreased egg production, off feed

Frequently asked questions

The owners of small poultry flocks have many questions about how the bad bird flu will affect their flocks, their pets and most importantly, their families. Among the most common questions that we and others have received, are:

1. *Are my chickens putting my family at risk?*

Well, they certainly don't have to. There are several simple steps that every poultry owner can do to protect themselves and their poultry flocks. As was already mentioned, the bird flu virus that exists is mainly in birds so the first layer of protection for any family with poultry should be biosecurity to prevent infections in their flock (*see the answer to question 3*). As a second layer of protection, people should always use good personal hygiene, especially handwashing, after handling any animal or bird, their feces, or dirty surfaces like coops, waterers or feed trays. The final layer of protection available to small flock owners is health monitoring. Poultry flocks should be checked at least once everyday to make sure that they are eating, drinking, laying eggs, and, in general, look normal. If a poultry owner notices signs of disease, then they should seek veterinary care to find out what is wrong and develop a treatment plan.

So far, the people who have gotten the bad bird flu from poultry have had very close contact with sick or dying birds. Although no one can know for sure exactly how much contact is needed to become infected, it seems that this virus is not spread to people with just a little contact with poultry or their feces. Most people with backyard poultry have only a little contact with the birds and have even less contact with poultry kept by their neighbors. Making sure that manure from the flock is not in places where lots of people walk, and that small children are not alone with poultry or their feces, can reduce accidental contact with disease causing agents of all kinds, not just bird flu.

Handwashing

If you don't have access to water, alcohol-based hand gels (like Purell) can kill germs. Use a gel that has at least 60% alcohol and use enough to get your hands completely wet. When you get back to a place where there is water, you should wash your hands with warm, soapy water.

2. *What should I do if my chicken dies or looks sick?*

If you're going to move a dead or sick chicken, you should make sure that you take every precaution to protect yourself from possible exposure to germs. There are several ways to do this and you should choose the method that works best for you making sure that you follow some basic ideas. First, you should try to avoid contact with the live or dead bird. For a live bird, that probably means picking up the bird and putting it into a box with airholes after which you should wash your hands. For a dead bird, that might mean covering your hand with a plastic bag and inverting it over the carcass after which you should wash your hands. There are probably many other methods that can be used, just so long as the principles of limiting the amount of time you touch the bird and handwashing afterwards are used, they are probably fine.

It's important to know that a chicken that is found sick or dead is not good to eat. It should be taken to a laboratory to find out why it is sick or has died. Here in California, the California Animal Health and Food Safety Laboratory (CAHFS) takes poultry from small flocks and will conduct a thorough necropsy and find what was wrong with your bird. This information is critical for you to determine how to treat the rest of the birds in the flock. However, if you take a live bird to CAHFS, they will put it to sleep and you will not be able to take it home with you.

Sick poultry can also be taken to a veterinary clinic, just like you would your pet dog or cat. This will have some expense involved but unlike CAHFS, your chicken will not be put to sleep, unless it is needed.

3. *How can I protect my chickens from bird flu?*

All poultry flocks can be protected from infections, including bird flu, by following a few simple rules. These rules of how people interact with poultry are called biosecurity.

I. *Cover food and water.* The food and water intended for poultry flocks should be covered so that your birds are not sharing with wild birds. This can reduce the chances that

bird flu will infect your flock. To reduce the risk even more, provide a covered poultry pen with a solid top and fenced space for your birds rather than letting them wander freely.

II. *Wear dedicated clothing.* You and any visitors to your flock should only wear clothing and footwear that is clean or has only been around your poultry when caring for your flock. Clothing and shoes can be contaminated with germs that could be dangerous for your poultry flock.

III. *Wash hands.* Frequent hand washing is not only a matter of personal hygiene and a way to prevent the transmission of germs from your poultry flock to your family, it is also an important part of a biosecurity program. People touch many things and can carry germs on their hands even without knowing it. Those germs may not be in large enough amounts to make you sick, but if they are bird disease agents like the bird flu virus, they could infect your poultry flock. Your poultry flock can grow these germs and can transfer them back to you if you don't follow the rules of personal hygiene.

4. Is there a vaccine to protect my poultry flock?

Vaccines can protect poultry flocks from bird flu. However, their use is allowed only with the permission of the USDA. At this time, the USDA is not permitting the use of bird flu vaccines in poultry.

Sources of information

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