

Avian Influenza in Birds and Humans

Our topics for this week are:

- **What is avian influenza**
- **Potential for transmission to other birds**
- **Risks to human health**

Influenza viruses can cause disease, proliferate, and mutate in one species and be transmitted to another species and also cause disease in it. Mutation is more common if the virus is highly concentrated by close confinement of animals and occurs in stressed animals. This occurs most often in commercial poultry and swine production.

Current Outbreak

In 2015, an avian influenza outbreak resulted in approximately 50 million birds dying of disease or being slaughtered in control efforts in the United States. That outbreak caused \$3 billion in economic losses. Another outbreak began this year, 2022, in February. Currently at least 27 million birds in 23 states have died or been slaughtered for control of the outbreak. First case in Missouri was reported March 3rd involving 300,000 birds.

There is no prevention or effective treatment. Control requires eradication of all exposed birds

Birds Affected

Avian Influenza does not cause disease in all types of birds. Songbirds and caged pet birds are not affected. It is lethal in chickens and turkeys. Avian influenza also infects pheasants, quail, ducks, and geese but causes less disease. Waterfowl, such as ducks, geese, and swans, and shorebirds, such as storks and sandpipers, are natural hosts for avian Influenza. These birds will shed the virus off and without showing signs of illness. Wild ducks, in particular, can shed the virus with no signs of disease in the ducks.

Signs in Birds

Signs of disease in domestic poultry can range from finding them dead overnight to eating and drinking less, coughing, sneezing, nasal discharge, reduced egg production, and lack of energy. Turkeys may show swelling around the face, neck, and eyes; purple discoloration around the face; a lack of coordination; diarrhea; muscle tremors; drooping wings; twisting of the head and neck, laying on their side and pedaling, and an inability to move. Signs alone are not sufficient for a diagnosis. Laboratory testing is required to confirm the presence of avian influenza.

Transmission

Wild ducks such as mallards are considered the primary reservoir of avian Influenza. Infected birds shed the virus in their saliva, nasal secretions, and feces. People can become infected if they work with sick poultry, but not from processed poultry products. People, pets, and equipment can also transmit the virus from one farm to another.

Risks to Humans

At least two avian influenza types have been able to be transmitted to humans. Those are H7N9 and H5N1. The signs in humans range from no symptoms or mild illness such as eye redness, coughing, sneezing, fever, sore throat, or body aches to severe disease causing death. The virus enters the human body by being inhaled or is carried to the person's eyes, nose, or mouth.

Transmission from one person to another is very rare, but a little further mutation could increase the ability of avian influenza mutants to be more easily transmitted from human to human.

Control

If you raise chickens or turkeys, control measures include:

- Keeping your birds away from wild birds and wildlife
- Maintaining a clean poultry area and clean equipment
- Separating new birds from your flock for at least 30 days
- Avoid attracting wild birds, especially waterfowl
- Covering or enclosing any outdoor feeding areas for poultry
- Promptly clean up any feed spills
- Avoid visiting any ponds or streams especially with pets
- Clean your hands, clothes, and footwear before handling your birds
- Do not allow others to handle your birds

If you have any birds that show signs of avian influenza, contact your veterinarian or state veterinarian immediately. It is a required reportable disease.

Now let's recap the key points to remember from today's episode:

1. **Avian influenza is extremely dangerous to chickens and turkeys but the risk of causing disease in humans with backyard flocks is very low.**
2. **Chickens and turkeys should be protected from possible exposure to migrating waterfowl, i.e. ducks and geese.**
3. **There is no vaccine nor treatment for avian influenza. Control requires eradication of sick and exposed birds.**

More information on animal handling is available in my book, Animal Handling and Physical Restraint, published by CRC Press. It is also available on Amazon and from many other fine book supply sources.

Additional information is available at: www.betteranimalhandling.com

Don't forget, serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.