

# Avian Influenza Basics for Urban and Backyard Poultry Owners

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REVISED FOR CONNECTICUT POULTRY OWNERS BY MICHAEL J. DARRE

## What is Avian Influenza?

Avian influenza (AI) is a disease in domestic poultry, such as chickens, turkeys, pheasants, quail, ducks and geese. Waterfowl and shorebirds are natural hosts for the virus that causes avian influenza and will shed the virus into their environment while often showing no signs of illness. Some types of avian influenza are called highly pathogenic (HPAI) because in contrast to waterfowl, these viruses are rapidly fatal for poultry. In chickens, the clinical signs of highly pathogenic (HPAI) are often a combination of respiratory (gasping) and digestive (extreme diarrhea) signs followed by rapid death. There may be swelling around the head, neck, and eyes as well as purple discoloration around the head and legs. In contrast, other poultry species, including turkeys, may have nervous symptoms such as tremors, twisted necks, paralyzed wings and recumbent pedaling. What is common among all poultry (except ducks and geese) is the sudden onset and high rate of mortality.

As of March 6, 2017 USDA's National Veterinary Services Laboratories (NVSL) has confirmed the full subtype for the highly pathogenic H7 avian influenza reported in Lincoln County, TN. The virus has been identified as North American wild bird lineage H7N9 HPAI based upon full genome sequence analysis of the samples at the NVSL. All eight gene segments of the virus are North American wild bird lineage. **This is NOT the same as the China H7N9 virus that has impacted poultry and infected humans in Asia.**

While the subtype is the same as the China H7N9 lineage that emerged in 2013, this is a different virus and is genetically distinct from the China H7N9 lineage.

As additional background, avian influenza viruses are classified by a combination of two groups of proteins: hemagglutinin or "H" proteins, of which there are 16 (H1–H16), and neuraminidase or "N" proteins, of which there are 9 (N1–N9). Many different combinations of "H" and "N" proteins are possible. Each combination is considered a different subtype, and subtypes are further broken down into different strains. Genetically related strains within a subtype are referred to as lineage.

The risk to the public is very low and there is no food safety concern because infected birds do not reach the market. The risk of infection is generally limited to people in direct contact with affected birds. As a reminder, poultry and eggs should always be handled properly and cooked to an internal temperature of 165 °F. Do not eat birds that appear to be sick or have died for reasons unknown (<http://z.umn.edu/mdafoodsafetyhpa1>).

## What to do if you suspect your poultry may have Highly Pathogenic Avian Influenza?

Each state has a designated agency to respond to avian influenza cases. In Connecticut, the CT Department of Agriculture is that agency. (<http://www.ct.gov/doag>) **If your flock experiences a sudden, high mortality or has a high percentage of birds with signs of highly pathogenic avian influenza, please report this immediately to your veterinarian or call the State Veterinarian, Dr. Mary Lis, at (860) 713-2505.**

## Biosecurity Steps to Protect Your Flock

In order to help flock owners to keep their birds healthy by preventing disease, biosecurity is a must! Introductions of HPAI come from waterfowl (ducks and geese) and gulls. Once poultry are infected, they

can spread the disease to new flocks. Now is a great time to review your biosecurity. The USDA provides the following tips on preventing AI in your poultry:

- Keep your distance (separating your poultry from disease introduction). Some examples are:
  - Restrict access from wildlife and wild birds to your birds by use of enclosed shelter and fencing of the outdoor areas. Use of smaller mesh hardware cloth which allows exclusion of wild birds while still allowing outdoor exposure.
  - Caretakers should not have contact with other poultry or birds prior to contact with their own birds. Restrict access to your poultry if your visitors have birds of their own.
  - Keep different species of poultry and age groups separated due to differences in susceptibility.
  - *Look at your own setting, what can you do to prevent your birds from contact with other birds that could introduce HPAI?*
  
- Keep it clean (cleaning and disinfecting). Some examples are:
  - Keep feeders and waterers clean and out of reach of wild birds. Clean up feed spills. Change feeding practices if wild birds continue to be present.
  - Use dedicated or clean clothing and foot wear when working with poultry
  - Clean and then disinfect equipment that comes in contact with your birds such as shovels and rakes.
  - Conduct frequent cleaning and disinfecting of housing areas and equipment to limit contact of birds with their waste.
  - *Evaluate your practices. Is it clean or is there room for improvement?*
  
- Don't haul disease home. Some examples are:
  - Introduction of new birds or returning birds to the flock after exhibition. Keep them separated for at least 30 days
  - Returning dirty crates or other equipment back to the property without cleaning and disinfecting. This includes the tires on the vehicles and trailers.
  - *Take a look and be critical. Is that site where you have set up a quarantine really separated well enough to keep your flock safe? Where do you clean crates? Can the runoff get to your birds?*
  
- Don't borrow disease from your neighbors
  - Don't share equipment or reuse materials like egg cartons from neighbors and bird owners, you could be borrowing disease.
  - *Do you have what you need to separate yourself from your friends and neighbors? Now is the time to get the equipment and supplies you need to make that possible.*

**For more detailed information and resources, please visit the following websites:**

Extension.org Avian Influenza at <http://z.umn.edu/extorgavianinfluenza>

USDA Animal and Plant Health Inspection Service at <http://z.umn.edu/usdabiosecuritytips>

CT Department of Ag Animal Health <http://www.ct.gov/doag/cwp/view.asp?a=1367&q=259102>