

# SOLUTIONS

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# Feathered Facts

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## Avian Influenza Information

There have been recent discoveries of Highly Pathogenic Avian Influenza (HPAI) in poultry flocks in the United States. Since late 2014 there have been reports of Avian Influenza in Arkansas, California, Idaho, Kansas, Minnesota, Oregon, and Washington. Avian Influenza is caused by a virus and the strain that is being detected now, H5N2, was first detected in wildlife and backyard flocks, but has since been detected in some commercial flocks as well. The following information should help to answer questions that you may have concerning Avian Influenza and your flock.

**WHAT IS AVIAN INFLUENZA?** There are two main types of Avian Influenza—Low Pathogenic Avian Influenza (LPAI) and Highly Pathogenic Avian Influenza (HPAI). They are both caused by viruses. The differences in designation between LPAI and HPAI is how sick it makes the exposed flock. The reservoir of AI tends to be wild birds, especially waterfowl. Frequently, the wild birds and waterfowl are carriers of the disease and they do not present clinical signs or symptoms of disease. It is also important to note that LPAI can mutate into HPAI, so these viruses should be avoided.

**HUMANS AND AVIAN INFLUENZA** While scientists cannot say with certainty that humans cannot contract the virus from birds, the odds of this happening are very low. In cases where there has been transmission of AI virus from bird to human there was a high level of physical contact and interaction with

sick and infected birds or their bodily fluids. It is important to note that the strain that is currently identified (H5N2) has not been shown to infect humans at all. Previous human infections occurred in other countries and were from the H5N1 form of the influenza virus.



**FOOD AND AVIAN INFLUENZA** Proper cooking of poultry and eggs will kill the Avian Influenza virus. Remember that poultry products should be cooked to an internal temperature of 165°F. You should also remember that commercial flocks are constantly being monitored for Avian Influenza and flocks that test positive are not allowed into the human food chain.

**WHAT CAN I DO TO PROTECT MY FLOCK?** As with all potential diseases flock management is key. While there is no cure for AI, the following steps can help to protect your flock:

- Restrict access to your property and flock by humans and other animals.
- Regularly wash clothes and equipment that are used on the farm.
- Do not visit other poultry flocks or share equipment.
- Restrict access of your flock to waterfowl and open water sources.

Additional information about the current strain can be found [here](#) and [here](#).



An example of the flaccid paralysis caused by Botulism (ingestion of the toxin from *Clostridium botulinum*). Photo provided by J.J. Giambrone, Auburn University.

Many poultry diseases have vaccinations available for them.



Swollen wattles associated with Fowl Cholera. Photos provided by J.J. Giambrone, Auburn University.

## Diseases that May Affect Backyard Poultry Flocks

**M**any diseases that can affect poultry flocks can be prevented with vaccination and/or good management. The list below contains information about diseases that have the potential to affect backyard poultry flocks. Please note that this is not an exhaustive list.

**BOTULISM**—Botulism is caused by the ingestion of a toxin produced by the bacterium *Clostridium botulinum*.

**Symptoms/Transmission:** Flaccid paralysis that begins at the extremities and progresses toward the trunk on the body. The transmission of this disease is caused by ingestion of the toxin which can be found in decaying plant or animal matter.

**Prevention/Control:** improperly stored feed is the typical culprit of botulism, although access to decaying material in wet areas can also be the cause. Control should begin by removal of the source of the toxin. Epsom salts in the water system (1 lb. per 1,000 birds) can help to alleviate the symptoms. There is a botulism antitoxin available, but it can be expensive. Expect some mortality from this disease.

**FOWL CHOLERA**—Fowl Cholera is caused by the bacterium *Pasteurella multocida*.

**Symptoms/Transmission:** Greenish-yellow diarrhea, fever, increased water consumption, decreased feed consumption, severe drop in egg production, and weight loss. Transmission is typically from feces but can also be from decaying carcasses and soil. Reservoirs for this bacterium include wild birds, raccoons, opossums, dogs, cats, and pigs.

**Prevention/Control:** Elimination of potential reservoirs and good sanitation are key. Vaccination is available. Treatment with antibiotics or other drugs is usually ineffective as mortality increases when the treatment stops.

**INFECTIOUS CORYZA**—This disease is caused by the bacterium *Hemophilus paragallinarum*. It is an acute respiratory infection.

**Symptoms/Transmission:** Depression, nasal discharge, and sneezing are common.

Birds also exhibit edema of the face and wattles. There may be decreased feed and water consumption. Transmission is typically from bird-to-bird. The bacterium may also be transmitted by contaminated feed or water or by inhalation of airborne droplets from sneezing. Birds that recover from this disease remain carriers for life.

**Prevention/Control:** Vaccination for this disease is available. Treatment of infected birds can be achieved by antibiotics and sulfa drugs, although sulfa drugs cannot be administered to layers. Infected birds remain carriers.

**AVIAN POX**—There are three (3) strains of virus that can cause this disease: fowl pox virus, pigeon pox virus, and canary pox virus. The disease is commonly referred to as fowl pox no matter the offending virus type. The different types of virus can infect species of birds other than the one that they are named for.

**Symptoms/Transmission:** There are two types of this disease: 1) **Dry pox** and **Wet pox**. Dry pox will show small, white foci to wart-like nodules on the skin (mainly the comb, wattles and ear lobes). These slough off and form scabs before healing. Wet pox lesions include ulcers in the oral cavity and respiratory tract. Overall, the disease will usually run its course in 3 to 5 weeks. Young birds will see decreased levels of development while layers will see a drop in production. The disease can be spread by both direct and indirect contact. The virus can survive in sloughed off scabs for several months. Mosquitoes are also a vector. Birds that recover do not continue to carry the virus.

**Prevention/Control:** There is no treatment available for avian pox. However, the disease is usually slow to spread so vaccination of an infected flock can stop an outbreak. Vaccination of young birds will prevent the disease. Control of mosquitoes and other potential vectors will aid in prevention of the disease and a part of a good management plan.

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## Diseases that May Affect Backyard Poultry Flocks

**NEWCASTLE DISEASE**—This disease is a contagious respiratory disease caused by a paramyxovirus.

**Symptoms/Transmission:** Respiratory stress, nasal discharge, depression, decreased appetite, decreased water consumption and a drop in production are all symptoms presented by Newcastle Disease. Mortality can range from 10 to 80 percent. Edema in the face along with airway congestion is also typically present. The incubation period for this virus is 5 to 7 days. During this time the birds will be contagious and shed the virus. The virus can be transmitted via fomites and via the air.

**Prevention/Control:** There is no specific treatment for this disease once it has been contracted. Antibiotics can be administered to prevent secondary infections. Vaccination of the flock, along with good sanitation and biosecurity will aid in prevention of the disease.

**INFECTIOUS BRONCHITIS**—This disease is caused by a coronavirus.

**Symptoms/Transmission:** Coughing, sneezing, rales, and labored breathing that is accompanied by a watery discharge from the eyes and mouth are typical symptoms of Infectious Bronchitis. This disease is considered one of the most contagious diseases that affect poultry. Typically, all unimmunized birds will become infected when the virus is introduced. The incubation time is 17 to 36 hours and the disease lasts 10 to 14 days. The disease can be spread via air over long distances and it can also be spread my mechanical means.

**Prevention/Control:** There is no specific treatment for this disease once it is acquired. Antibiotics can be administered for 3 to 5 days to prevent secondary bacterial infections. Vaccination of the flock annually can prevent the disease.

**ASPERGILLOPSIS**—Aspergillosis is caused primarily by the fungus *Aspergillus fumigatus*, but it can also be caused by other members of the *Aspergillus* genus.

These fungi are found almost everywhere in nature and they grow well at temperatures of 70°F and above. Since it is a fungus it can produce spores that are highly resistant to elimination methods.

**Symptoms/Transmission:** This disease can take two forms: 1) acute and 2) chronic. Symptoms for the acute form include loss of appetite, gasping, convulsions and sleepiness. Mortality for this form ranges from 5 to 20 percent. The acute form occurs primarily in young birds. Symptoms of the chronic form include emaciation, loss of appetite, cyanosis, gasping and death. The chronic form occurs typically in older birds. The disease is transmitted by inhalation of the fungal spores; therefore, most infections occur because of a contaminated environment.

**Prevention/Control:** There is no cure for infected birds. Birds that are infected should be eradicated. Housing and incubation equipment should be thoroughly cleaned and disinfected before repopulation. Prevention of this disease is attained via good husbandry and sanitation.

**MAREK'S DISEASE**—This disease is a type of avian cancer.

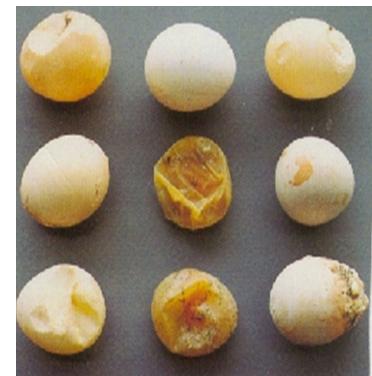
**Symptoms/Transmission:** Tumors can be located in many parts of the body including the nervous system, liver, spleen, kidneys, pancreas, lungs, muscles, and eyes. Symptoms include unthriftiness, emaciations blindness, lameness, and paralysis. Marek's Disease usually occurs in chickens between 12 to 25 weeks of age. It is viral and is transmitted via the air. Birds that become infected and survive the disease are considered carriers and can infect other birds after symptoms have subsided. Mareks's Diseases is very similar to Avian Leucosis but they are different diseases.

**Prevention/Control:** There is no treatment for birds infected with the virus. There is a vaccination available for Marek's disease.

Additional information on Poultry diseases can be found [here](#) and [here](#).



**Example of depression associated with Newcastle Disease. Photo provided by J.J. Giambrone, Auburn University.**



**Example of malformed eggs from a hen with Newcastle Disease. Photo provided by J.J. Giambrone, Auburn University.**



**Example of the dry pox type of Avian Pox (commonly referred to as Fowl Pox). Photo provided by J.J. Giambrone, Auburn University.**

A UF/IFAS  
Publication on  
poultry diseases  
can be found  
[here.](#)

USDA/APHIS  
information on  
biosecurity for  
your flock can be  
found [here.](#)

There are different types of diseases that can affect a poultry flock, including contagious diseases and hereditary issues. There are also nutritional deficiencies that can mimic the signs and symptoms of contagious disease. Many of the diseases that were once common in poultry flocks have vaccinations that are available and most commercial hatcheries will vaccinate chicks against these diseases before the birds are shipped or moved. Make sure to check with your chick or pullet provider to determine the level of vaccination that the birds have received before placing them. There are also issues that affect poultry that are considered hereditary in nature, meaning that they are passed down to the offspring of affected birds. Make sure to consult with your chick or pullet provider to determine the parent stock of the birds. Nutritional deficiencies that mimic the symptoms of diseases are not as common as they once were but can still present themselves. Birds that are fed a balanced ration that meets their nutritional needs should not see signs of deficiency unless there is a genetic component that prevents absorption or utilization of the nutrient.

There are drugs and antibiotics that are available to treat certain diseases. However, these drugs only work effectively when given at the recommended dose and for the recommended time period. Random or irregular use of these drugs can result in poor flock health. The use of a drug or antibiotic in your flock should be combined with good management and not as a substitution for it.

Following are some good management measure that you can do to help prevent disease in your flock. While there is no guarantee that disease will not come to your flock, using these measures will allow you to use the best management available for prevention.

- Develop a regular clean-out schedule for your coop. Many diseases are transmitted via infected litter.
- Clean static waterers daily with scrubbing and a chlorine bleach solution.
- Feeders can be cleaned less frequently than waterers, but should be cleaned when they appear soiled.
- Provide adequate ventilation during warm and hot weather.
- Use screening or other methods to keep your flock isolated from other animals and birds.
- Segregate different ages of birds if possible.
- Limit visitors to your flock area.
- Quarantine new or replacement birds for up to 30 days before introduction to the main flock.
- Eliminate trash or junk from the area as these can house vermin and pests that transmit disease.



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