

Avian Influenza

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Avian influenza (AI)—also called flu, bird flu, influenza, and fowl plague—is caused by a virus. This illness can occur in most species of birds. Wild birds, most commonly waterfowl, can introduce the virus to domesticated flocks. The virus is released in secretions from the nostrils and in the manure of infected birds. Insects and rodents may carry the virus from infected to susceptible flocks. AI can also be spread as a result of improper disposal of dead birds and manure, and by contaminated shoes, clothing, crates, and other equipment. The AI virus can remain viable for long periods of time at moderate temperatures and can live indefinitely in frozen material.

Clinical Signs

The signs of AI vary depending on the type of virus involved. The AI viruses are typically categorized according to pathogenicity as mildly or highly pathogenic.

- The **mildly (low) pathogenic** form of AI typically produces respiratory signs, listlessness, loss of appetite, difficulty breathing, ruffled feathers, and decreased egg production. It is also common for a flock infected with the mild form to show no symptoms at all.
- The **highly pathogenic** form causes facial swelling, blue combs and wattles, dehydration, and respiratory distress. Infected birds may have blood-tinged discharge from the nostrils. Dark red or white spots can develop on the legs and combs of infected chickens. Egg production and hatchability decrease. There might also be an increase in production of soft-shelled and shell-less eggs. It should be noted, however, that when poultry are infected with highly pathogenic AI, birds might die before any symptoms begin to appear.
 - Mortality from the highly pathogenic form ranges from low to nearly 100 percent. Sudden exertion adds to the total mortality.

Treatment

There is no effective treatment for AI.

- When birds contract the mildly pathogenic form, good husbandry, proper nutrition, and broad spectrum antibiotics may reduce losses from secondary infections. Recovered flocks will continue to shed the virus. Vaccines may be used only with a special permit. Depopulation is required for some types of mildly pathogenic AI because the virus has the ability to mutate to a more pathogenic form.
- When the highly pathogenic form is detected, national and international regulations require strict quarantine and rapid destruction of all infected flocks.

Control and Prevention

Prevention requires establishment and enforcement of a rigorous biosecurity program.

NOTE If you suspect an outbreak of AI, even the mild form, you must report it to the state veterinarian's office.

For More Information

[Avian influenza homepage](#). eXtension.

[Avian influenza in poultry](#). J.P.Jacob, G.D. Butcher, F.B. Mather, and R.D. Miles, University of Florida.

[Avian influenza in free-range and organic poultry production](#). Terrell Spencer, National Sustainable Agriculture Information Service.

[Understanding the differences between various types of flu](#). University of Kentucky.

[Taking biosecurity measures to limit your legal liability for the spread of avian influenza](#) (University of Maryland)

[Bird flu - Information for taxidermists and hunters](#), University of Kentucky

[Bird flu - Identification and reporting](#), University of Kentucky

[Bird flu - Considerations for pets and non-farm animals](#), University of Kentucky

[Bird flu - Cleaning and disinfection](#), University of Kentucky

[Bird flu - Biosecurity and Prevention](#), University of Kentucky

[Avian influenza: An internal report for the College of Food, Agricultural, and Environmental Sciences](#). Mo Saif and Mauricio Espinoza, Ohio State University.

[What small flock owners in Maine need to know about avian influenza \("bird flu"\)](#). Scott Haskell, Beth Calder, and Gary Anderson, University of Maine.