



Effect of highly pathogenic avian influenza virus in domestic poultry

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DESCRIPTION

Avian influenza is a virus that has been isolated from over 100 different wild bird species worldwide. These viruses are found in wild waterfowl worldwide and can infect poultry and other bird and animal species. Wild aquatic birds include waterfowl (water birds) such as ducks, geese, swans, gulls, and terns, and seabirds such as storks, plovers, and sandpipers. Wild aquatic birds, especially pond ducks, are considered reservoirs (hosts) for avian influenza viruses. Wild aquatic birds can become infected with avian influenza viruses in the intestines and respiratory tract of some species such as ducks but they will not become ill. Avian influenza is a viral disease, highly contagious and even fatal in poultry (chickens, turkeys, ducks, etc.). The current avian influenza bird flu outbreak began in China in the 1990s and has spread to many parts of the world. Chickens and turkeys are most susceptible to avian influenza and commonly die when infected. Wild aquatic birds can survive the disease, but they can spread the virus. Avian influenza outbreaks have occurred in Asia, Africa, North America, and parts of Europe. Avian influenza infections are often asymptomatic in wild birds but can cause highly fatal diseases in poultry. Marine mammals can also be infected with avian influenza strains.

Signs of avian bird flu in birds include sudden death, lack of energy, appetite, and coordination, purple discoloration and/or swelling in various parts of the body, diarrhea, and nasal discharge, coughing, sneezing, and decreased egg production and/or Contains anomalous eggs. Although the virus can be present in village and backyard flocks and other birds sold in live poultry markets, most poultry raised commercially in developed countries contain the AI virus. Low-pathogenic avian influenza viruses typically cause respiratory symptoms such as sneezing, coughing, runny eyes and nose, and swollen sinuses in poultry.

Sinusitis is common in domestic ducks, quail, and turkeys. Airway involvement usually involves congestion and inflammation of the trachea and lungs. Laying hens and breeders may experience reduced egg production or infertility, egg rupture (seen as yolk in the abdominal cavity) or retraction, or mucosal edema and inflammatory exudate in the lumen of the fallopian tubes.

Highly Pathogenic Avian Influenza (HPAI) is rapidly fatal to poultry. Sudden onset and high mortality of HPAI are common in all poultry species (except ducks and geese). In chickens, symptoms of HPAI often include respiratory (wheezing) and gastrointestinal (extreme diarrhea) symptoms followed by rapid mortality. Hens may have to swell around the head, neck, and eyes. The head and feet may also be discolored purple. Other poultry species, including turkeys, may exhibit neurological symptoms such as tremors, twisted neck, paralyzed wings, and kicking while lying down. Highly pathogenic avian influenza is a reportable infectious disease. This means that the disease is highly infectious or highly contagious, with extreme consequences for animal welfare and product supply. Early detection of HPAI is key to curbing its spread. Unfortunately, one of the first signs of HPAI is sudden, unexplained death. Egg layers may show signs of depression, ruffled plumage, or be quieter than normal. Other signs may be dry combs. Turkeys may be quiet and depressed, lie down more than usual, and have puffiness around their eyes. Waterfowl don't always die or show signs of illness from HPAI, but they can carry the virus and spread it to other birds.

The first AI screening test will be performed by one of more than 45 USDA-approved labs in the National Animal Health Laboratory Network. Rapid screening tests, virus isolation tests, H/N subtyping tests, gene sequencing tests, and chicken virulence tests are the most commonly performed tests worldwide.