



Information Sheet: Highly Pathogenic Avian Influenza H5N1



Highly pathogenic avian influenza (HPAI) H5N1 was first detected along the Atlantic Coast of Canada and the United States in December 2021 and January 2022, respectively. Following the initial detection, the virus has spread across the continental U.S. and Canada causing illness and death in wild and domestic birds. Prior to detection in North America, the virus was circulating more broadly across Europe and Asia. This strain of H5N1 consists of Eurasian H5 clade 2.3.4.4b, which is causing illness and death in a higher diversity of wild birds than during any previous outbreak with occasional spillover into wild mammals.

You can help the California Department of Fish and Wildlife monitor for potential virus activity by reporting sightings of sick and dead wildlife, and by taking precautions to limit disease spread between domestic birds and wild birds.

WHAT IS AVIAN INFLUENZA?

Avian influenza is an infectious disease of birds caused by type A influenza viruses. These viruses naturally circulate among wild waterfowl and other waterbirds. Viruses are classified based on two surface proteins, Hemagglutinin (H) and Neuraminidase (N), which combine to form different subtypes (e.g., H5N1, H5N2, H7N3). Different subtypes, and strains within a subtype, vary in their ability to cause disease in birds. Avian influenza viruses are categorized as highly pathogenic (HP) or low pathogenic (LP) based on their ability to cause disease in domestic poultry. Highly pathogenic viruses are very contagious among birds and cause high mortality. Historically, viruses of H5 and H7 subtypes have been more likely to become highly pathogenic.

HOW DOES AVIAN INFLUENZA SPREAD?

The virus is shed in bodily fluids such as respiratory droplets, saliva, and feces. Transmission may occur directly from bird to bird, or indirectly through people, animals, or objects contaminated with virus particles (e.g., dogs, rodents, insects, feathers, feed, water, clothing, footwear, vehicles). Avian and mammalian predators and scavengers may become infected after eating or having close contact with an infected bird.

ARE HUMANS AT RISK OF INFECTION WITH AVIAN INFLUENZA?

The Center for Disease Control states that the disease risk to the general public's health from the current H5N1 virus is low, however, some people may have job-related or recreational exposures to birds that put them at higher risk of infection ([CDC 3/7/2022 update](#)). For protective actions for human health, see the [CDC website](#).

DOES AVIAN INFLUENZA CAUSE DISEASE IN WILD BIRDS?

Wild birds typically do not show signs of infection with viruses categorized as low pathogenic for poultry. However, HPAI viruses may cause signs in some wild birds ranging from mild to severe. Wild bird species at highest risk of infection with HPAI viruses include waterfowl (ducks, geese, swans), waterbirds (pelicans, gulls, terns, herons), and birds that prey or scavenge on these species such as eagles, hawks, falcons, vultures, and corvids. Signs of infection in wild birds varies and may include sudden death, or neurological signs such as swimming in circles, head tilt, tremors, weakness, lack of coordination, and diarrhea. It is important to note, these signs are nonspecific and may also be caused by other illnesses, malnutrition, or trauma.

DOES AVIAN INFLUENZA INFECT MAMMALS?

The current HPAI virus has been detected in wild mammals that have consumed infected birds or had close contact with infected birds or their environment. Although rare, wild carnivores seem most at risk of infection (e.g., raccoons, skunks, bobcats, foxes). The risk to domestic dogs and cats is relatively low. However, as a precaution during the outbreak, avoid recreating in areas with large concentrations of waterfowl, and dogs and cats should not be allowed to consume raw meat, organs, or other tissues from

wild birds or poultry (e.g., chickens, ducks).

WHAT IS CDFW DOING IN RESPONSE TO THE HPAI OUTBREAK?

The CDFW's [Wildlife Health Lab](#) in coordination with regional staff and other partners are monitoring wild bird populations for signs of illness. CDFW will continue to investigate wildlife mortalities, and conduct surveillance testing for avian influenza. Additionally, CDFW supports the [national HPAI surveillance plan](#) for avian influenza testing in hunter-harvested waterfowl and live-birds led by the United States Department of Agriculture (USDA).

WHAT CAN YOU DO TO PREVENT DISEASE SPREAD?

Feeding and providing water to wildlife is discouraged especially if backyard poultry or other captive birds are present (e.g., chickens, turkeys, peafowl, ducks, geese, pigeons, doves). Providing food and water to wild birds and other wildlife increases contact between individuals making disease transmission more likely and contributes to fecal contamination of the local environment. Wild birds should be excluded from entering enclosures for poultry and other domestic birds, and food and water should not be shared between wild birds and domestic birds.

If recreating outdoors in areas with large concentrations of waterfowl and other waterbirds, please take care to wash clothing and disinfect footwear and equipment before traveling to other areas or interacting with poultry and other domestic birds. Footwear and equipment may be washed with soap and water, then disinfected in household bleach diluted 1:10 with water for at least 10 minutes.

WHERE CAN YOU REPORT DEAD WILDLIFE?

Sightings of sick and dead wild birds and mammals may be reported to CDFW through our [online form](#). If there is a need to dispose of dead wildlife, wear impermeable gloves or a plastic bag turned inside out, to collect the remains into a plastic garbage bag, which may then be placed in the regular trash collection. Afterwards, wash hands with soap and water, and change clothing before having contact with domestic birds. If assistance or guidance is needed with the disposal of dead wildlife on private property, contact your county environmental health department or animal services for options available in your area. For orphaned or injured live wild birds or mammals, please contact your nearest [wildlife rehabilitation center](#) for advice before collecting the animal. For non-urgent questions concerning wildlife, please contact your [regional CDFW office](#) or local animal control service.

For stray or feral domestic birds (e.g., peafowl, chickens, racing pigeons), please contact your local animal control service for assistance. Sick and dead poultry, domestic ducks, and pet birds may be reported to the California Department of Food and Agriculture's hotline at 1 (866) 922-2473. Visit [CDFA's website](#) for more information for keeping poultry healthy.

RECOMMENDATIONS FOR INDIVIDUALS THAT MAY HANDLE WILD BIRDS

HUNTERS: Do not handle or consume sick game. Field dress and prepare game outdoors or in a well-ventilated area. Wear impermeable gloves while handling and cleaning game. After handling game, wash hands with soap and water, and clean knives, equipment, and surfaces that contacted the game. Do not eat, drink, or smoke while handling game. All game should be cooked to an internal temperature of 165°F before consuming. See [USDA's guidance for hunters](#) for more information.

FALCONERS: Raptors can become infected with avian influenza viruses from close contact and feeding on an infected bird. As a precaution, falconers should avoid hunting wild waterfowl and other waterbirds during the HPAI outbreak. To protect the health of your bird, avoid contact with other captive birds, poultry, free-ranging wild birds, and practice good biosecurity. Consult with a veterinarian if your bird shows signs of illness.

GAME BIRDS FACILITIES: Game birds such as turkeys, pheasants, chukar, and quails, may be susceptible to infection with HPAI. To protect the health of captive birds, practicing good biosecurity is essential. Game birds should not be allowed to mix with domestic poultry or waterfowl. Wild birds should be excluded from enclosures and should not be allowed to share food or water with captive game birds.