

# High Pathogenicity Avian Influenza and Wildlife

## Advice for veterinarians and animal health professionals

Version 3.3, September 2024

### Summary

This advice has been prepared for veterinarians and other animal health professionals who may be required to investigate suspect high pathogenicity avian influenza (HPAI) in sick or dead wild birds or wild mammals. Avian influenza is a [notifiable disease](#).

Strains of avian influenza are categorised as either low pathogenicity (LPAI) or high pathogenicity (HPAI) depending on the potential severity of disease caused in poultry. LPAI viruses naturally occur in wild birds in Australia, notably waterfowl (ducks, geese and swans) and shorebirds, and typically do not cause severe disease.

Since 2021, a new strain of HPAI, H5N1 clade 2.3.4.4b, has caused ongoing outbreaks of disease in poultry, wild birds and wild mammals in all geographical regions apart from Oceania (which includes Australia and New Zealand). Mortalities have been observed in a wide range of wild species, seen as individual bird deaths and mass mortalities, and individual and mass mortalities in seals and sea lions. The current global situation means an increased level of risk to Australia via migratory birds from the northern hemisphere and local non-migratory movements of infected wildlife<sup>1</sup>.

**Any unusual disease or mass mortality events in wild birds should be reported via the [Emergency Animal Disease Hotline](#) on 1800 675 888<sup>2</sup>.**

For further details about avian influenza in wild birds see the [WHA Fact Sheet](#).

### Species affected

- **Birds:**
  - **Wild birds (native and feral species):** it should be assumed that all wild bird species are susceptible to infection with HPAI virus H5N1 2.3.4.4b. Overseas, wild birds commonly affected by H5N1 2.3.4.4b include waterfowl, shorebirds, seabirds and predatory or scavenging birds.
  - **Domestic poultry and captive birds:** poultry (e.g. chickens, turkeys) are particularly susceptible to infection with HPAI virus, but it should be assumed that all bird species can be infected by HPAI H5N1 2.3.4.4b virus.

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<sup>1</sup> Wildlife Health Australia (2023) Technical Issue Update - Global High Pathogenicity Avian Influenza Events Available from: [https://wildlifehealthaustralia.com.au/Portals/0/Incidents/HPAI\\_Technical\\_Issues\\_Update\\_V3Sept23.pdf](https://wildlifehealthaustralia.com.au/Portals/0/Incidents/HPAI_Technical_Issues_Update_V3Sept23.pdf)

<sup>2</sup> The **Emergency Animal Disease (EAD) Hotline** is a toll-free number that connects callers to the relevant state or territory officer. Anyone suspecting an EAD outbreak should use this number to get immediate advice and assistance.

- **Mammals:**
  - HPAI infections have been reported in nonhuman mammals.
  - **Wild mammals (native and feral species):** mammals, especially carnivores and marine mammals, are known to be susceptible to H5N1 2.3.4.4b. Infection of terrestrial carnivores is presumed to occur via consuming infected birds. Infection of marine mammals is thought to occur via close contact with, or ingestion of infected birds, or contact with marine environments contaminated with virus from infected birds.
  - **Domestic mammals:** a range of domestic mammals (including livestock and pets) are susceptible to H5N1 2.3.4.4b.

## Clinical signs

### Wild birds

HPAI should be considered as a differential diagnosis in the following scenarios for wild birds:

- Small groups or clusters (5 or more) of sick or dead wild birds of **any** species.
- Individual or less than 5 sick or dead wild birds:
  - seabirds, waterbirds, shorebirds or birds of prey
  - any other bird species with signs of avian influenza infection as outlined below.

Infected live birds may show a wide range of **clinical signs**, including:

- neurological signs (ataxia, paralysis, seizures, tremors, abnormal posture)
- respiratory signs (conjunctivitis, increased nasal secretions, oedema of the head, dyspnoea)
- gastrointestinal signs (diarrhoea)
- sudden death.

Some species may be asymptomatic or show only very mild clinical signs. In some cases, birds may die suddenly without displaying any clinical signs.

While there are other diseases of wild birds that can cause these clinical signs, HPAI should be excluded to ensure that HPAI can be detected as soon as possible, and any associated risks to animal and human health can be managed. With the new strain of HPAI presenting a greater risk to Australia than previous strains, early detection of HPAI is particularly important.

### Wild mammals

HPAI should be considered as a differential diagnosis in any event of sick or dead wild marine mammal, predator or scavenger species with signs of avian influenza infection as outlined below.

Infected wild mammals may show a wide range of clinical signs, including:

- neurological signs (ataxia, paralysis, seizures and tremors)
- respiratory signs (increased nasal and oral secretions, dyspnoea, tachypnoea)
- sudden death, including the potential for mass mortality events.

## Human infections

Avian influenza is potentially zoonotic. Contact with sick or dead birds should be avoided where possible.

**Precautions should be taken when handling or sampling potentially infected birds** (see [Biosecurity and PPE](#) below). Human infections with the currently circulating H5N1 2.3.4.4b clade are uncommon and have typically only occurred in people who have had close contact with infected birds. Human infection may be asymptomatic or result in severe illness (see [Australian Department of Health and Aged Care](#)). If you develop flu-like symptoms after handling wild birds, contact your health care provider.

## How to report suspect cases

**Avian influenza is a notifiable disease. Report suspected or confirmed cases of avian influenza to:**

- the 24-hour [Emergency Animal Disease Hotline](#) on free call 1800 675 888
- the Department of Primary Industries or Agriculture in the State/Territory in which the event has occurred.

Reporting will alert authorities to the event so they can evaluate the need for diagnostic testing or other investigation. Even if testing is not undertaken, all reports help inform our understanding of the disease and how to manage it.

## Sample collection & diagnosis

- **If sample collection is required, you will be advised on appropriate collection and laboratory submission protocols.**
- A primary diagnosis of avian influenza is usually via qPCR testing of oropharyngeal and cloacal swabs.
  - Using plain sterile swabs, collect samples individually from the cloaca and oropharynx and place in tubes containing viral transport media.
- You may also be advised to collect a range of post mortem tissues, or to submit the whole carcass to the laboratory.
- All samples and carcasses must be stored at 4°C prior to submission.

## Biosecurity & personal protective equipment (PPE)

- **Review and implementation of appropriate biosecurity measures are recommended in veterinary hospitals, rehabilitation settings and in the field**, following the [National Wildlife Biosecurity Guidelines](#) and AVA Guidelines for [Veterinary Biosecurity](#).
- Avian influenza viruses can be transmitted between birds and to other animals via direct contact with respiratory secretions and faecal material, as well as indirect exposure to contaminated environments or objects (e.g. clothing, boots, equipment, etc.).
- Handling of birds or mammals suspected of being infected with HPAI should be conducted with appropriate PPE, including gloves, a facemask and eye protection.
- PPE should be removed properly to avoid self-contamination.
- PPE and other potentially contaminated equipment should be thoroughly cleaned after use, followed by disinfection, or disposed of appropriately.
- Particular attention should be given to hand washing after handling animals, after contact with potentially contaminated materials and after removal of gloves. Hands and arms should be washed with abundant soap and warm water, then dried thoroughly. Hand sanitizer (gel with 60 to 90% ethanol concentration) can be applied to reinforce disinfection but should not replace proper handwashing.
- Further advice on PPE and disinfection, directed to people currently working in locations impacted by HPAI, can be found in the [WOAH avian influenza and wildlife risk management recommendations](#).

## More information and resources

More information and resources on HPAI and wildlife are available on the WHA website [HPAI incident page](#).

Topics include:

- general HPAI advice and information from WHA (e.g. a Fact Sheet on AIV and Australian wild birds, HPAI advice targeted for particular stakeholder groups, technical advice, videos and a communications guide)
- WHA HPAI and wild animals in Australia - risk mitigation toolboxes
- national and international HPAI guidelines from government agencies
- other relevant information (e.g. human health, communications materials).

In particular, see the WHA HPAI and wild animals in Australia - [risk mitigation toolbox for wildlife care providers](#).



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