Zoonoses and Australian wild birds

Fact Sheet

August 2024

Key points

- Zoonosis is defined as any infectious disease that can naturally be transmitted from animals to humans.
- Some pathogens of wild birds are zoonotic.
- The route of exposure is an important consideration for zoonotic risk and can influence which pathogens are transmitted from wild birds to humans.
- People at the highest risk of acquiring zoonotic infections from wild birds include those who have prolonged or close contact with these animals.

This Fact Sheet summarises information on the more important zoonotic diseases found in Australian wild birds (see Table 1).

Table 1. Important zoonoses in Australian wild birds

PPE= personal protective equipment; *=WHA Fact Sheet available

Pathogen	Main routes of infection to humans	Clinical signs in humans	Treatment in humans	Prevention in humans
Bacterial				
*Chlamydia psittaci**	Inhalation, direct contact	Flu-like	Antibiotics	Hand hygiene; wear PPE when handling sick or dead birds; ventilation controls
Mycobacterium avium and *genavense**	Inhalation, ingestion	Pneumonia	Antibiotics	Ventilation controls and respirator; hand hygiene
Salmonella spp.*, *Campylobacter* spp.	Contact, ingestion	Diarrhoea	Supportive, antibiotics	Hand, food and environmental hygiene
*Escherichia albertii**	Ingestion	Diarrhoea	Supportive, antibiotics	Hand and environmental hygiene
Protozoal				
Giardia spp.*	Contact, ingestion	Diarrhoea	Supportive, antiprotozoals	Hand and food hygiene; treatment of drinking water
Cryptosporidium spp.*	Ingestion	Diarrhoea	None	Hand and food hygiene; treatment of drinking water
Viral				
Avian influenza virus*	Contact, inhalation	Rare. Ranges from mild illness to severe respiratory disease and death	Supportive, antivirals	Avoid secretions from infected birds; hand hygiene; PPE

Prevention and management of human infection

People most at risk of acquiring zoonotic infections from wild birds include those that have close or prolonged contact with infected birds. This includes staff working in facilities holding captive birds, particularly those that accept wild individuals for treatment and rehabilitation. Others at risk are research scientists and wildlife officers.

Suitably qualified veterinary staff should discuss ways to minimise infection risk with the local public health authorities and at-risk groups. Appropriate use of personal protective measures is recommended. At a minimum, hands should be washed in warm water (with soap or chlorhexidine gluconate or an equivalent disinfectant) and thoroughly dried after handling any wild bird or their products. Appropriate PPE (personal protective equipment), including disposable gloves, should be used when handling faeces, urine, blood or body discharges. Disposable gloves and a face mask (or preferably a class P2 respirator/face mask), along with (preferably) impermeable protective clothing should be used when conducting post-mortem examinations on wild birds or working with diseased animals. A biological extraction cabinet is the preferred space for a post-mortem examination. Any mass mortality event must be approached with caution and immediately reported. All equipment should be washed and chemically sterilised following use. For more information on appropriate biosecurity practices see the "National Wildlife Biosecurity Guidelines" www.wildlifehealthaustralia.com.au/Portals/0/Documents/ProgramProjects/National_Wildlife_Biosecurity_Guidelines.PDF [1].

Members of at-risk groups should seek advice on the risks of zoonotic disease from their general practitioner, state veterinary authority or state medical authority. In the event of illness, they should seek the attention of their medical practitioner.

Surveillance data for many of these potential zoonotic pathogens within Australia should be expanded. Ideally, increased effort should be placed into risk evaluation through pre-emptive surveillance projects and an increased understanding of the disease ecology of relevant pathogens.

Surveillance

Wildlife Health Australia administers Australia's general wildlife health surveillance system, in partnership with government and non-government agencies. Wildlife health data is collected into a national database, the electronic Wildlife Health Information System (eWHIS). Information is reported by a variety of sources including government agencies, zoo based wildlife hospitals, sentinel veterinary clinics, universities, wildlife rehabilitators, and a range of other organisations and individuals. Targeted surveillance data is also collected by WHA. See the WHA website for more information https://wildlifehealthaustralia.com.au/Our-Work/Surveillance and https://wildlifehealthaustralia.com.au/Our-Work/Surveillance/eWHIS-Wildlife-Health-Information-System.

Acknowledgements

We are grateful to Peter Holz who compiled the initial draft of this Fact Sheet and to those individuals, agencies and organisations that provided comment and external review.

Wildlife Health Australia recognises the Traditional Custodians of Country throughout Australia. We respectfully acknowledge Aboriginal and Torres Strait Islander peoples' continuing connection to land, sea, wildlife and community. We pay our respects to them and their cultures, and to their Elders past and present.

Please cite this Fact Sheet as: Wildlife Health Australia (2024) "Zoonoses and Australian wild birds – Fact Sheet", published by Wildlife Health Australia, Canberra, available at https://wildlifehealthaustralia.com.au/Resource-Centre/Fact-Sheets

Updated: August 2024

References

1. Wildlife Health Australia (2018) 'National Wildlife Biosecurity Guidelines.' ed. A. Reiss. (DAWR/ WHA: Sydney, NSW) https://wildlifehealthaustralia.com.au/Portals/0/ResourceCentre/BiosecurityMgmt/National_Wildlife_Biosecurity_Guidelines.pdf

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