



COUNTY OF LOS ANGELES-DEPARTMENT OF HEALTH SERVICES
VETERINARY PUBLIC HEALTH-RABIES CONTROL PROGRAM
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AVIAN INFLUENZA

Three Types of Influenza viruses: A, B, C.

Influenza A

- Wild birds (mainly ducks) are the reservoir of all influenza A viruses.
- H and N are “spikes” on surface of virus and are used to name virus strains.
- There are 16 types of H, 9 types of N.
- Avian Influenzas are influenzas that make birds sick.
- HPAI (high-pathogenicity AI has high death rate) vs. LPAI (low-path, lower death rate)
- “**Drift**” (frequent small mutations of virus) vs. “**Shift**” (a.k.a. reassortment – two different types of influenza viruses swap genes while in same cell. A new virus is created to which no one is immune.)
- Avian Influenzas that infect people
 - H7N7 – birds, horses, sea lions, 89 humans (mostly conjunctivitis)
 - H9N2 – birds, people. Very few human cases.
 - H5N1** – Few people infected but high fatality rate. About 125 humans infected and 62 deaths. No sustained human-to-human transmission yet.

H5N1

- HPAI
- First jumped from birds to people in Hong Kong 1997
- Has made approximately 122 people sick and killed 62 in Southeast Asia (nearly all poultry farmers).

Qinghai Lake, China

- 6000 wild birds die of H5N1 spring 2005, especially bar-headed goose, great black-headed gulls, brown-headed gulls, ruddy shelducks and great cormorants.
- Qinghai Lake is a major migratory bird rendezvous site, and the biggest lake in China.
- Since then, migratory birds have spread H5N1 all across Asia and into Europe.

Potential ways H5N1 to enter US

- Migratory birds
- Imported birds –less likely due to regulations.
- Smuggled birds
- LAX Airport (**ONLY IF** human-to-human transmission develops).

Transmission of virus

- **Mostly through feces** and contaminated water and surfaces.
- Cough, sneeze, aerosolized dander, contaminated feathers and surfaces.

Symptoms in birds

- Sudden death, lethargy, depression, incoordination, head tilt, paralysis, cough, sneeze, diarrhea.

Testing

- Cloacal swabs, blood testing, serology, necropsy all done through Public Health.

What to do if you see a wild bird die-off

- Keep the public away from the birds.
- Ideally do not touch birds with bare hands. If necessary, handle bird bodies with caution. Wear a mask, goggles, gloves, and removable coveralls/gown. Place bodies in bags and seal securely. Do not touch your face. Wash your hands.
- Write down the species of birds, number of sick birds and dead birds.
- Call **LA Veterinary Public Health 562-401-7088** to report situation and for assistance in diagnosis. We will need to collect some carcasses for testing. You can also report online at www.lapublichealth.org/vet/disintro.htm
- Contact the organization in charge of the beach or lake where birds are found. They should take charge in keeping the public away and participate in disposal of birds after the investigation.

What to do if you see a farm bird/poultry or pet bird die-off

- **Call Avian Health Group 800-491-1899**
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Recommendations for birds owners.

- **Do not allow your birds direct contact with wild birds.**
- **Do not allow wild birds to use and contaminate your birds' feeder and water.**
- **If you feed wild birds** – Feed separately and clean and disinfect feeder weekly.
- **Whenever adopting a new bird:** Keep separate from your birds (even if it looks healthy) for a month. Wash hands when moving between birds.
- **If you had a sick bird in a cage** – throw out wooden perches and plastic feeders, and thoroughly clean and disinfect cage before allowing another bird into it.
- **Always wear gloves and mask when cleaning cages** and work in a well-ventilated open area.
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Preventing human infection with the flu.

- Influenza cannot infect you unless you touch your face after touching contaminated surface, or someone coughs or sneezes in your face.
- We touch our faces constantly.
- Hand washing – 15 full seconds – include under nails and wrists. Sing Happy Birthday.
- Alcohol-based hand-sanitizers DO work at killing flu.
- Flu is NOT resistant to disinfectants.

KEEP UP WITH THE NEWS ONLINE!

Monitoring Human Disease:

World Health Organization (WHO)

<http://www.who.int/en/>

Monitoring Animal Outbreaks:

World Organization for Animal Health (OIE)

http://www.oie.int/eng/en_index.htm

US Wild bird avian flu surveillance:

National Wildlife Health Center – USGS

<http://www.nwhc.usgs.gov/>

UC Davis Wildlife Health Center

<http://www.vetmed.ucdavis.edu/whc/>

Contact us if any bird die-offs:

Drs. Patrick Ryan, Karen Ehnert, and Emily Beeler

Veterinary Public Health and Rabies Control

562-401-7088

Online reporting: www.lapublichealth.org/vet/disintro.htm