



Chirping About Avian Influenza

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Reports of an impending influenza pandemic have created fear and panic among the public that has been further reinforced with the documentation of avian influenza in Asia. Due to its recent reappearance, avian influenza is the **Bug of the Month** for April.

Avian influenza, or the “bird flu,” is a highly contagious, zoonotic disease caused by viruses that normally infect birds and, to a lesser extent, domesticated animals.

Most human cases of bird flu infection have resulted from contact with infected poultry or contaminated surfaces. Concern has been raised that avian influenza could be transmitted from uncooked birds or bird products. Avian influenza A (H5N1) virus has been detected in imported frozen duck meat and infected poultry eggs.

What is the risk to humans?

Avian influenza viruses do not normally infect species other than birds and pigs. The current outbreak of avian influenza (H5N1) among fowl in Asia is an example of a bird flu outbreak that has caused human infections and deaths.

In such situations, public health authorities suggest avoiding contact with infected birds or contaminated surfaces.

Of the fifteen avian influenza virus strains, H5N1 is of particular concern due to its propensity to mutate rapidly and it has acquired genes from viruses infecting other animal species. There is currently no evidence of efficient human-to-human transmission of the virus, thus while there is a risk to humans of acquiring the infection from sick birds, the risk of human to human transmission is very low.

Is bird flu deadly?

The current strain (H5N1) of bird flu circulating in Asia can be lethal in birds and humans. The first documented human infections were in Hong Kong in 1997, resulting in the hospitalization of 18 people and six deaths.

Symptoms of avian influenza

The reported symptoms of avian influenza in humans have ranged from typical influenza-like symptoms (*i.e.*, fever, cough, pharyngitis and myalgias) to eye infections (*i.e.*, conjunctivitis) to serious respiratory illnesses (*i.e.*, pneumonia and acute respiratory distress).

Children infected with avian H9N2 and H10N7 influenza viruses present with mild, self-limiting upper respiratory illnesses. The most severe infections occurred in people older than 12 years.

In a description of 12 older patients, the presenting features included:

- fever (100%),
- upper respiratory tract symptoms (67%),
- pneumonia (58%),
- gastrointestinal symptoms (50%),
- elevated serum aminotransferases (50%),
- pancytopenia and
- bone marrow hemophagocytosis (16%).



How can we protect ourselves?

The current Centre for Disease Control guidelines suggest travellers to countries experiencing outbreaks of avian flu should:

- avoid areas with live poultry, such as live-animal markets and poultry farms;
- practice appropriate hand hygiene, either using soap and water or the waterless alcohol-based hand sanitizers;
- cook *all* poultry products, as heat effectively kills viruses;
- monitor health status for a 10-day period after returning from their trip and
- tell health-care providers about flu-like symptoms and recent travel so avian influenza can be considered.

How is avian influenza diagnosed?

The differential diagnosis of avian influenza includes:

- atypical pneumonia,
- respiratory virus infections (*i.e.*, influenza, respiratory syncytial virus, adenovirus) and
- severe acute respiratory syndrome and other serious upper respiratory infections.

Most patients with H5N1 infection will admit to a history of recent exposure to sick or

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Flu Fact...

Is avian influenza related to SARS?

No. The severe acute respiratory syndrome (SARS) is caused by a coronavirus (a viral family related to other causes associated with the common cold) and avian influenza is caused by the influenza virus; however, both viruses originally occur in animals and spread to humans.

dead poultry. A comprehensive travel and epidemiologic history could be important in the identification of suspected cases. Current tests used for the diagnosis of influenza A may have limited value for the diagnosis of avian influenza. The diagnosis of avian influenza is currently made by specific gene-based tests or by viral culture of respiratory specimens.

How is avian influenza treated?

Studies suggest that the prescription medications approved for human viruses may work in preventing avian influenza infection in humans. However, these viruses are becoming resistant to current medications, which are therefore expected to have limited value.

Although no outcome trials have been performed in humans infected with avian influenza, it may be beneficial to administer oseltamivir, one capsule daily for six to eight weeks, as prophylaxis or treatment. This dosage is based on the knowledge that it has proven efficacy against human influenza infection.

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Flu Fact...

Does the influenza vaccine protect against avian influenza?

No. Presently, no licensed vaccines exist against avian influenza.