Bird Flu, Avian Influenza Viruses

Avian influenza or "Bird Flu"is also known as H5N1 virus. It occurs naturally in wild and domesticated birds. Bird flu is easily spread (*contagious*) among birds and is deadly to them. Though rare, bird flu can cause disease in humans.

CAUSES

Infected birds can shed the H5N1 virus through:

- Feces.
- Nasal secretions.
- Saliva.

Birds become infected when they come into contact with infected birds or contaminated surfaces. The bird flu virus is spread from country to country through international poultry trade or by migrating birds.

MODES OF TRANSMISSION TO HUMANS

The bird flu virus does not normally infect humans. However, the virus can infect humans who have contact with infected birds, breath in dust or touch surfaces contaminated with the virus. Human to human transmission of the H5N1 virus has been rare. The virus lacks the ability to grow (*replicate*) itself in humans, thus spreading of the disease is limited. However, because all influenza viruses can mutate, scientists are concerned the H5N1 virus will someday replicate itself and make human to human transmission easier. If this happens, an influenza "pandemic" could occur.

SYMPTOMS

- Symptoms of H5N1 virus are similar to other influenza viruses:
  - Fever.
  - Cough.
  - Sore throat.
  - Nausea, vomiting.
  - Diarrhea.
  - Muscle aches.
  - Tiredness (*malaise*).
  - Some people may get inflammation or redness of the eyes (*conjunctivitis*).
- Life threatening complications may result in the death of the patient. These include:
  - Viral pneumonia.
  - Breathing (*respiratory*) distress syndrome.
  - Multi-organ failure.

DIAGNOSIS

- A person with a respiratory illness may be suffering from bird flu if direct or indirect contact has been made with infected birds. This includes handling or taking care of sick birds. The H5N1 virus may also be suspected if a person has breathed in particles or touched surfaces contaminated with the virus.
- In addition to the above symptoms, a chest X-ray is useful to detect pneumonia.
- Fluid specimens such as a sputum sample may be sent to a laboratory for further investigation.
- Blood tests may be be done to help detect the H5N1 virus.

TREATMENT

- The H5N1 virus has shown resistance to amantadine and rimantadine, which are two antiviral drugs commonly used for other influenza viruses. However, two other antivirals, oseltamavir and zanamavir, seem to be effective against the H5N1 strain.
- If bird flu is suspected in a person, treatment should start immediately without waiting for laboratory confirmation.
- Treatment for the H5N1 strain is essentially the same as treating other influenza viruses.

PREVENTION

- Stay home from work, school and errands when you are sick. Not being in contact with other people will help stop the spread of illness.
- Cover your mouth and nose with your arm when coughing or sneezing. This may help those around you from getting sick.
- Wash your hands often with warm water and soap. Illnesses are often spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose, or mouth.
- Antiviral medications can help prevent the flu.
- For optimal health, get plenty of rest, eat a healthy diet and exercise.

Information courtesy of the CDC.

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