

Occupational Health - Zoonotic Disease Fact Sheet

INFLUENZA

KEY FACTS:

- Influenza is caused by a viral agent.
- There are four types of influenza viruses: A, B, C and D.
- Human influenza A and B viruses cause seasonal epidemics of disease almost every winter in the United States.
- Influenza type C infections generally cause a mild respiratory illness and influenza D viruses primarily affect cattle and are not known to infect or cause illness in people.
- The best prevention of this disease is by a readily available vaccination.

SPECIES: Ferrets, birds, swine, marine mammals, dogs, cats, horses, and humans.

CAUSATIVE AGENT: The causative agent is influenza type A, B, C, D, from the Orthomyxoviridae family.

TRANSMISSION: Transmission is by inhalation of droplets produced by coughing, sneezing, and talking, especially in crowded, enclosed spaces. These droplets can land in the mouths or noses of people who are nearby. Individuals can also get the flu by touching a surface or object, such as gas pump handles and door handles, that has the virus on it and then touching their mouth, nose, or eyes. In mammals, the influenza virus is transmitted through the air by coughing and sneezing, by direct contact with nasal discharges, or by objects contaminated with the virus. In birds, the virus is shed in the feces as well as saliva and nasal secretions.

DISEASE IN ANIMALS: In mammals, the most common clinical signs include fever, followed by the sudden onset followed by anorexia, coughing, respiratory distress, and mucoid nasal discharge. In birds, such as poultry, symptoms can include malaise, diarrhea, nasal discharge, swelling of the head, eyelids, comb, wattles, and hocks, and can result in sudden death, sometimes with little to no symptoms.

DISEASE IN HUMANS: Typical symptoms include fever, chills, headache, myalgia, malaise, sore throat, cough, vomiting, and diarrhea. Some cases can result in viral or secondary bacterial pneumonia and can result in death.

DIAGNOSIS: The most common diagnostic tests are called “rapid influenza diagnostic tests (RIDTs).” Other tests include rapid molecular assays and specialized laboratory tests. *Please review current literature before prescribing diagnostic testing as recommendations may have changed.*

TREATMENT: Bed rest, analgesics, cough medications, and plenty of fluids can treat most cases of the flu. In some cases, your physician may recommend antiviral medication, such as

oseltamivir (Tamiflu) or zanamivir (Relenza). *Please review current literature before prescribing diagnostic testing as recommendations may have changed.*

PREVENTION/CONTROL: The annual human influenza vaccine provides partial immunity for a few months to one year. The vaccine's antigenic configuration changes yearly and is based on prevalent strains of the preceding year. To prevent and control unintended infections, use uninfected animals for research, and isolate any animals used in clinical trials. Additionally, only conduct projects in laboratories with proper engineering controls and train staff members in the proper use of required personal protective equipment when they are in spaces containing live agent.

More information on Influenza can be found on the Centers for Disease Control and Prevention website at: <https://www.cdc.gov/flu/>