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10 Things to Know About the H3N8 Dog Flu

By [Cynda Crawford, D.V.M., Ph.D.](#)

Micah Albert for The New York Times

Who's at risk from canine influenza?

Dr. Cynda Crawford, clinical assistant professor in the Maddie's Shelter Medicine Program at the University of Florida College of Veterinary Medicine in Gainesville, recently answered dozens of readers' questions on the [Consultis blog](#), "[The Dog Flu Virus: Are You or Your Pet At Risk?](#)" Many readers had questions about flu symptoms, how the virus is spread and whether their pets should receive the newly approved vaccine for the disease. Here are 10 things Dr. Crawford believes everyone should know about canine influenza and the risks to pets and people.

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What is canine influenza?

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Canine influenza is a highly contagious respiratory infection of dogs caused by a novel influenza virus that was first discovered in 2004. We do not use the general term "dog flu" because it could refer to any flu-like illness in dogs due to various causes. Rather, canine influenza is a specific disease caused by a particular subtype, H3N8, of the influenza A virus.

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Where does canine influenza occur?

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Canine influenza has been documented in 30 states and the District of Columbia. At this time, the canine influenza virus is very prevalent in many communities in Colorado, Florida, New York and Pennsylvania. There is no evidence that canine influenza H3N8 is currently infecting dogs in other countries.



What type of infection does canine influenza virus cause?



Like influenza viruses that infect other mammals, canine influenza virus causes an acute respiratory infection in dogs. It is one of several viruses and bacteria that are associated with canine infectious respiratory disease, or what's commonly referred to as "kennel cough." The canine influenza virus can cause respiratory disease by itself or along with other canine respiratory pathogens.

Unlike human influenza, canine influenza is not a "seasonal" infection. Infections can occur year round.



What are the symptoms and clinical signs of canine influenza?



Like influenza viruses in other species, canine influenza virus causes a flu-like illness consisting of cough, sneezing and nasal discharge ("runny nose"). Fever can also occur, but it is usually transient and rarely noticed by pet owners. There are no clinical signs that distinguish canine influenza from other respiratory infections. That is why diagnostic tests must be performed to determine the cause of respiratory infections in dogs (see below).

Virtually all dogs exposed to the canine influenza virus become infected; about 80 percent develop a flu-like illness, while another 20 percent do not become ill. Fortunately, most dogs recover within two weeks without any further health complications. However, some dogs progress to pneumonia, which is usually due to secondary bacterial infections.

While the death rate for canine influenza is very low, the secondary pneumonia can be life-threatening in some cases. There is no evidence that dogs of particular age or breed are more susceptible to developing pneumonia from canine influenza.



Who is susceptible to canine influenza?

A

Because canine influenza is due to a virus that is novel to the canine population, dogs lack preexisting immunity to the virus. Dogs of any breed, age or vaccination status are therefore susceptible to infection. It is likely that dogs that have recovered from infection retain immunity to re-infection for an undetermined time period, although studies have not verified for how long.

Canine influenza is most likely to spread in facilities where dogs are housed together and where there is a high turnover of dogs in and out of the facility. Dogs in shelters, boarding and training facilities, day care centers, veterinary clinics, pet stores and grooming parlors are at highest risk for exposure to the virus, especially if these facilities are located in communities where the virus is prevalent. Dogs that mostly stay at home and walk around the neighborhood are at low risk.

Canine influenza virus does not infect people, and there is no documentation that cats have become infected by exposure to dogs with canine influenza. Nor is there any evidence that the canine virus can infect birds.

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How is canine influenza transmitted?

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As with other respiratory pathogens, the most efficient transmission occurs by direct contact with infected dogs and by aerosols generated by coughing and sneezing. The virus can also contaminate kennel surfaces, food and water bowls, collars and leashes, and the hands and clothing of people who handle infected dogs. Fortunately, the virus is easily inactivated by washing hands, clothes and other items with soap and water.

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How is canine influenza treated?

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Since canine influenza is a viral infection, treatment consists mainly of supportive care while the virus runs its course, much like for human influenza. Dog owners should consult with their veterinarians if they think their dog has canine influenza. The veterinarian can determine what type of supportive care is needed, including whether antibiotics should be given for secondary bacterial infections. Dogs with pneumonia most

likely require more intensive care provided in a hospital setting under the supervision of a veterinarian.

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Is canine influenza contagious?

A

Like influenza infections in other species, canine influenza is highly contagious. Infected dogs shed virus in their respiratory secretions for 7 to 10 days, during which time the dog is contagious to other dogs. Infected dogs that do not show clinical signs are also contagious.

Once the virus has run its course, the dog is no longer contagious. Therefore, we recommend that dogs with canine influenza be isolated from other dogs for two weeks to err on the conservative side. The canine influenza virus does not cause a permanent infection.

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How is canine influenza diagnosed?

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Canine influenza cannot be diagnosed by clinical signs because all of the other respiratory pathogens cause similar signs of coughing, sneezing and nasal discharge. For dogs that have been ill for less than four days, veterinarians can collect swabs from the nose or throat and submit them to a diagnostic laboratory that offers a validated PCR test for canine influenza virus. The most accurate test recommended for confirmation of infection requires the collection of a small blood sample from the dog during the first week of illness, followed by collection of another sample 10 to 14 days later. The paired serum samples are submitted to a diagnostic laboratory for measurement of antibodies to CIV that were formed in response to infection.

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Is there a vaccine for canine influenza?

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In May 2009, the United States Department of Agriculture approved for licensure the first influenza vaccine for dogs. The vaccine was developed by Intervet/Schering Plough Animal Health Corporation.

The canine influenza vaccine contains inactivated whole virus, so there is no chance that the vaccine itself can cause respiratory infections. During tests to evaluate vaccine performance, there were no side effects or safety issues in a field trial that included more than 700 dogs ranging in age from six weeks to 10 years and representing 30 breeds.

The vaccine is intended as an aid in the control of disease associated with C.I.V. infection. Although the vaccine may not prevent infection, efficacy trials have shown that vaccination significantly reduces the severity and duration of clinical illness, including the incidence and severity of damage to the lungs. In addition, the vaccine reduces the amount of virus shed and shortens the shedding interval. This means that vaccinated dogs that become infected are less likely to have severe symptoms and are not as contagious to other dogs. These benefits are similar to those provided by influenza vaccines used in other species, including people.

The canine influenza vaccine is a “lifestyle” vaccine in that it is intended for dogs at risk for exposure to C.I.V., including those that participate in activities with many other dogs or those housed in communal facilities, particularly in communities where the virus is prevalent. Dogs that may benefit from canine influenza vaccination include those that are already receiving the kennel cough vaccine for *Bordetella* because the risk groups are the same.

Dog owners should consult with their veterinarian to determine whether their dog’s lifestyle includes risk for exposure to C.I.V., and the protection provided by the canine influenza vaccine. The vaccine is not yet available in veterinarians’ offices.