Kingsbrook Animal Hospital

5322 New Design Road, Frederick, MD, 21703

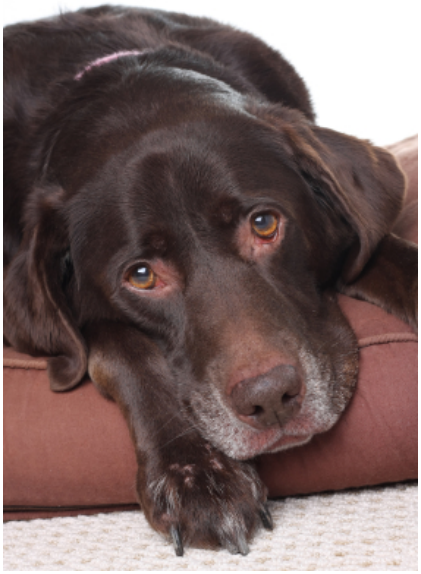
Phone: (301) 631-6900

Website: KingsbrookVet.com

Canine Influenza: The Dog Flu

What is canine influenza?

The H3N8 equine influenza virus has been recognized in horses for more than 40 years. In 2004, the H3N8 influenza virus or "flu" appears to have "jumped" from horses to dogs. The virus had mutated into a form known as canine influenza virus (CI virus) that is highly infective for dogs. At first, veterinarians thought the H3N8 canine flu would be quite lethal. Fortunately, like the human flu virus, it kills very few healthy individuals. By the end of 2011, it had been verified in 38 states; Washington, DC; and suspected in some provinces in Canada. The discoverer of the disease, Dr. Cynda Crawford from the University of Florida, estimates that it kills between 1% and 5% of dogs that contract it, with most of the deaths being in dogs that have serious concurrent illnesses. That's nothing to sneeze at. The 1918 Spanish flu had a mortality rate of only 2%.



Currently, there are approved CI virus vaccines in the United States and Canada. Vaccination against canine flu should be considered for any at-risk breed, dogs with heart or respiratory conditions, dogs that travel or show, and those that have extensive contact with other dogs (e.g., those that are boarded).

What are the signs of canine influenza? When should I suspect canine influenza rather than kennel cough, and when should I take my dog to the veterinarian?

The symptoms of canine influenza are similar to the human flu: cough, runny nose, and fever.

The symptoms of canine influenza are similar to the human flu: cough, runny nose, and fever. The CI virus is virtually identical to other respiratory infections such as kennel cough. In fact, many cases of CI virus may be mistaken as kennel cough or other infections in the canine infectious respiratory disease (CIRD) complex because of these similarities. Because of the difficulty in distinguishing canine influenza from CIRD, any dog with these clinical signs should be seen by a veterinarian.

Older dogs and dogs with heart and respiratory conditions are at particular risk for the CI virus. Dogs with short, flat faces (brachycephalic breeds), such as Boston terriers, boxers, Pekingese, pugs, and Shih Tzus, are also at higher risk.

How is canine flu spread?

The canine influenza virus is easy to transmit. The CI virus is spread through respiratory secretions (e.g., sneezing, coughing, nasal discharge) and contaminated objects such as kennel walls and floors, food and water bowls, collars, and leashes and on the clothing and skin of people who come in contact with infected dogs. The canine influenza virus can survive on skin and hands for 12 hours, on clothing for 24 hours, and on surfaces for up to 48 hours.

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It takes about 2 to 4 days (incubation period) for clinical signs to develop after contact with the virus. Infected dogs are most contagious during this incubation period before symptoms occur, making rapid transmission likely. Infected dogs continue to spread the virus for 7 to 10 days.

Because canine influenza is a new disease for dogs, all dogs are susceptible to infection. There is no naturally acquired or other immunity. This means that if your dog is exposed to the virus, there is a high probability that it will become infected and develop clinical signs. Current research suggests that about 20% to 25% of infected dogs will remain asymptomatic but still spread the virus. Although most infected dogs will only develop a mild form of canine influenza and recover without complications, some dogs may develop severe, life-threatening pneumonia.

What tests will my veterinarian run to determine whether my dog has influenza? What factors would influence the vet's decision to test?

If a veterinarian sees a dog within the first few days of the onset of clinical signs, a nasal swab for a polymerase chain reaction (PCR) test can be submitted to a veterinary diagnostic lab. If the PCR test is positive, the dog most likely has the CI virus. After 4 days of illness, PCR results are less likely to be accurate (there may be false-negative results). At this stage, blood testing for CI virus antibodies should be performed. This type of testing involves comparing antibody levels 2 to 3 weeks apart. If antibody levels rise significantly over this period, it indicates active CI virus infection.

Any dog that is suspected of having the CI virus should be tested to determine if the disease is spreading in your area. If there are confirmed canine influenza virus cases in your area, consider vaccinating your dog.

What are the benefits and risks of the canine influenza vaccine? Which dogs should get it?

The decision to use any vaccine is based on each individual's risk. Indoor dogs with little exposure to other dogs are at less risk than show dogs that travel or dogs that are kenneled or encounter other dogs frequently. Owners that live in areas where outbreaks are occurring should also consider vaccinating their dogs against canine influenza. Cases have been identified in 38 states and the District of Columbia and suspected in some provinces in Canada. Owners of older dogs with respiratory or heart disease and breeds with short, flat faces should also consider vaccination. There have been no reported issues with the CI virus vaccination to date.

Vaccination against canine flu should be considered for any at-risk breed, dogs with heart or respiratory conditions, dogs that travel or show, and those that have extensive contact with other dogs.

It is important to note that the CI virus vaccine can't completely prevent the disease. The benefit of the vaccine is that it reduces the clinical signs to a very mild form and decreases the risk of shedding the virus. This is especially important in at-risk dogs and to help reduce the spread of outbreaks.

Talk to your veterinarian to determine if vaccinating against canine influenza is right for your dog.

What is the treatment for canine influenza?

As with nearly all viral infections, treatment is largely supportive. It is important that your pet be kept in a warm, dry area away from other dogs; fed a high-quality diet; and kept well-hydrated during illness. Dogs affected with a mild form of canine influenza will often develop a secondary bacterial upper respiratory infection. These dogs typically have a thick green mucous discharge from their nose and benefit from broad-spectrum antibiotics. Dogs that develop pneumonia may require hospitalization, intravenous fluids and medications, and potent broad-spectrum antibiotics. Most dogs fully recover from canine influenza within 2 to 3 weeks.

What can I do to care for my dog with canine influenza, and how severe is the infection in most cases?

Virtually 100% of dogs exposed to the CI virus will become infected. For this reason, it is important that owners of dogs diagnosed with the virus keep them away from any unvaccinated dogs. This includes trips to the groomer's or dog parks and contact with other dogs during walks and in kennels. Clothing, equipment, floors, and hands should be thoroughly cleaned with soap and water after contact with any dog with signs of respiratory illness.

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About 80% of infected dogs will develop respiratory signs, while the other 20% will remain healthy but continue to spread the infection. Most infected dogs will develop clinical signs within 2 days of exposure to the virus. Current research indicates that an infected dog stops shedding the virus approximately 7 to 10 days after the start of clinical signs. Just like the human flu virus, the CI virus is most infectious before a dog shows signs of illness. Because many dog owners won't know when their dog contracted the CI virus, we advise quarantining infected dogs at home (and away from other dogs in the household) for 2 weeks after diagnosis.

A small percentage of dogs, especially those that are older or have pre-existing conditions or short, flat faces, will develop potentially life-threatening pneumonia. These dogs are at risk for serious complications, including death, and must be treated promptly and aggressively.

How is canine influenza different from human seasonal flu and the H1N1 virus? Are dogs at risk for an epidemic of canine flu?

In many ways, H1N1 in people and H3N8 in dogs are similar. Both are viruses that mutated from one species to another and are new infections that neither humans nor dogs have been exposed to before. Both viruses cause fever, runny nose, and coughing that last for a week or two and make you feel crummy. Because the immune systems have no defense against these new viruses, quarantine and vaccination are our best strategies for preventing widespread infection.

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Can people get the flu from a dog with canine influenza?

The CI virus poses no threat to humans and is being closely monitored by the Centers for Disease Control and Prevention (CDC), Health Canada, and their partners. If your dog does contract the CI virus, you can feel comfortable giving it plenty of TLC and your veterinarian's recommended treatments without worry of contracting the infection yourself.

This client information sheet is based on material written by: Ernest Ward, DVM