

CANINE INFLUENZA

We have been getting some calls and questions recently about dog flu. As with flu infections in humans, there is more than one strain of virus, the virus can mutate rapidly and spread from one species to another, like bird flu and swine flu, and vaccination won't be effective unless it is specific for that particular strain of flu.

There are now two strains of canine influenza virus (CIV) in dogs; the H3N8 strain that has been around for years, and the newest strain of canine influenza virus, H3N2. Both are highly contagious and spread especially rapidly among dogs living in a confined space, such as a shelter, doggie day care or kennel. So far, CIV has not been able to spread to humans. However, people can carry it on their clothes or hands and infect other dogs.

Recently, it was discovered that cats can become infected with CIV H3N2. The Shelter Medicine Program at the University of Wisconsin School of Veterinary Medicine (UW Shelter Medicine) has confirmed that a group of cats at an animal shelter in Northwest Indiana that had an unusual form of respiratory infection were found to be positive for the H3N2 canine influenza virus, and also that they could spread the disease.

The H3N2 virus was first identified in 2004 and is suspected to have originated as an equine virus. Similar to other influenza viruses, H3N8 causes severe respiratory infection and cough. However, unlike other influenza viruses, the canine flu has no season so dogs can contract the disease any time of year. Dogs with lots of contact with other dogs are most at risk.

The virus has been detected in 30 states so far. The largest outbreak near us occurred in Chicago last spring. There have been very few cases in Wisconsin and only one in Milwaukee so far this year. The dog with CIV in Milwaukee had been to Chicago. According to the Wisconsin Department of Agriculture, Trade & Consumer Protection, there were three confirmed cases of H3N2 in Green Bay in January and one in Racine. In February there were 6 more cases in Racine and one more in Green Bay.

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.

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The signs are similar to kennel cough, caused most commonly by *Bordetella bronchiseptica* or parainfluenza virus, and canine flu is frequently misdiagnosed as such. Symptoms of all of these infections include coughing, sneezing and nasal discharge (“runny nose”). Fever can also occur, but it is usually transient and rarely noticed by pet owners.

There are no specific signs that distinguish canine influenza from other respiratory infections. Diagnostic tests must be performed to determine the cause of respiratory infections in dogs. Here in Wisconsin, testing is done at the Wisconsin Veterinary Diagnostic Laboratory.

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. Dogs with canine influenza should be isolated from other dogs for two weeks to err on the conservative side. CIV does not cause a permanent infection.

Vaccination for the older H3N8 strain of canine influenza does not protect against H3N2. The drug companies Merck and Zoetis have both developed vaccines for the new H3N2 strain, which were approved under conditional license by the FDA late in 2015. Two boosters are needed the first year, three weeks apart, and then the disease is boosted annually after that. We don’t yet have a combination vaccine to protect dogs against both types of flu and no vaccine is currently approved or recommended for cats.

Kennel cough caused by *Bordetella* or parainfluenza is much more common than CIV infection. So far, we have kept an eye on the spread of CIV. We have not yet started to vaccinate for it since there have been so few cases in our area. If the Green Bay or Racine outbreaks seem to be turning into a more widespread problem we will start immunizing our patients against it. We will keep you posted!