

Canine Dysautonomia Fact Sheet

What is canine dysautonomia?

Canine dysautonomia (CD) is a sporadic, generally fatal disease of dogs. It is due to degeneration of nerve cells controlling subconscious bodily functions. These include control of normal swallowing and motility of the digestive tract, heart function, control of urination, and pupils of the eye. The cause of CD is unknown at this time.

Where does the disease occur?

At this time, CD is geographically isolated to distinct areas of the Midwest, and the eastern half of Wyoming. It is well documented in western MO, eastern KS, southern IL-western KY, and eastern NE (Lincoln area). It is also seen outside the United States, particularly in Europe.

Are specific breeds affected?

No – all breeds appear equally susceptible.

What clinical signs are associated with the disease?

While vomiting is common in dogs, severe intractable vomiting lasting days to weeks, with other consistent signs, point veterinarians toward a diagnosis of CD. In addition to vomiting, straining or difficulty urinating/defecating, protrusion of the 3rd eyelid and dilated pupils are consistent with CD. Later in the disease course, incoordination of the hind limbs can occur due to degeneration of motor nerve cells in the spine.

How is the disease confirmed?

Diagnosis in live dogs is done on the basis of the range of typical clinical signs and in-clinic testing of pupillary, bladder, heart, and immune function. Unfortunately, there is no definitive pre-mortem test for CD. The disease can be confirmed after a dog is put to sleep by a post-mortem examination (autopsy) with microscopic assessment of the nervous system.

What is the outcome for affected dogs?

Many affected dogs require euthanasia after a short clinical course (1 – 2 weeks), due to the grim prognosis. If an animal is able to avoid the most severe outcomes of the disease (heart complications and megaesophagus +/- associated aspiration pneumonia) then there is a reasonable chance that an animal can survive the acute phase and recover with variable neurological impairment, depending on the number of remaining nerve cells and their ability to compensate for those that were lost.

What home care actions can I take?

Due to swallowing difficulties it is important to raise food and water bowls in order to avoid aspiration pneumonia. Treatment plans should be developed in consultation with your veterinarian that will be targeted to improve GI motility, help with urinary continence, and provide nutritional and hydration support. There is no evidence that alternative therapies such as CBD or essential oils are effective at treating CD.

Is this a new disease?

The disease was first reported in the United Kingdom in the 1980s. The disease was first diagnosed in the United States in a dog from Wyoming in the 1990s.

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What factors are associated with affected animals?

CD mainly affects younger dogs with a median age of 14-18 months. Affected animals are more commonly outdoor dogs on agricultural property with access to livestock and/or wildlife. Exposure to and/or consumption of disturbed soil is commonly reported. Multiple cases from single properties have been reported.

Is the disease transmissible to people or other animal species?

No. There are rare, unrelated dysautonomia syndromes in people that cause some of the symptoms seen in CD; some of these are relatively mild and may regress. There are dysautonomias in a variety of animal species, including “grass sickness” in horses. There has never been a link between cases of dysautonomia in dogs and other animals or people in the same household.

Is the disease transmissible to other dogs?

At this time we think not. Disease clusters affecting two or more dogs have occurred on the same property. This is assumed to be due to some common risk factor, rather than direct dog-to-dog spread of an infectious agent. It is possible that an animal could carry the CD cause on their fur and that another animal could be exposed through this route but it is likely exceedingly rare.

What is UW doing to determine the cause of this disease?

Diagnosticians at the Wyoming State Veterinary Laboratory are actively looking for cases of CD to help determine the cause of the disease. Researchers will verify the disease by taking tissues from dog after they are put to sleep. Additionally, UW has developed a bank of frozen blood and tissue samples that will be used to test for an underlying cause. We are banking soil from premises affected by CD. Freezer space is at a premium and research funding is currently limited so samples are accepted only on a case-by-case basis.

Where can I go for more information?

Researchers at UW have developed a survey that they are requesting owners fill out:

<https://docs.google.com/spreadsheets/viewform?formkey=dFdweENUbDBWWFpFYXpEcUZ3MUxnNnc6MQ#gid=0>

You may contact Dr. Brant Schumaker, for more information:

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