



CANINE DISTEMPER

Other names: *Canine morbillivirus*, Distemper, Hardpad Disease

CAUSE

Canine distemper is caused by infection with the *Canine morbillivirus*. In North America this virus causes disease in domestic and wild dog species, coyotes, foxes, wolves, ferrets, skunks, raccoons, species of large wild cats, and pinnipeds. Domestic cats can also contract the virus, however, infection appears to be mostly asymptomatic.

SIGNIFICANCE

There is no cure for canine distemper and the disease has a 50% mortality rate in infected individuals. Despite this relatively high mortality rate, the disease tends to infect young of the year wildlife that lack immunity. Distemper also tends to occur in outbreaks or epidemics causing short term population declines but do not appear to effect populations in the long term. Wild carnivores are particularly susceptible to canine distemper and it can have a devastating impact on species at risk. The CWHC has examined 83 animals for canine distemper between 2016 and 2017, with 20 of those animals testing positive for the disease. Although the virus potentially exists in natural populations across Canada, the majority of wildlife cases that have tested positive by the CWHC are from Ontario and Quebec. Current research suggests that co-infections with rabies and distemper commonly occur in wildlife. The reason for this and any links between infections is, however, not yet understood.

RISK TO HUMAN AND DOMESTIC ANIMAL HEALTH

Humans appear capable of being infected by *Canine morbillivirus*, but it causes no illness or symptoms. However, humans can act as carriers for the virus, which can be easily transmitted to pets susceptible to the disease (i.e. dogs and ferrets).

TRANSMISSION

Distemper is a highly contagious pathogen that can be readily transmitted in contaminated aerosols through sneezing and coughing. The virus can also be transmitted through contaminated food, water, dishes or other equipment. Transmission from infected females to developing offspring during pregnancy is also possible.

CLINICAL SIGNS

Symptoms in wildlife often resemble those of rabies. Animals infected with distemper initially exhibit discharge from their eyes, followed by the development of fever, coughing, lethargy, loss of appetite, and vomiting. When the virus begins to attack the central nervous system of the animal they typically exhibit circling behaviour, head tilts, muscle twitches convulsions



with chewing motions in the jaw and excessive salivation, seizures, and partial to complete paralysis. The disease may also cause a hardening of the foot pads and the end of the nose. This symptom lends the disease the alternate common name of hardpad disease.

MANAGEMENT AND PREVENTION

Canine distemper occurs naturally in wild populations of animals. Experimental programs delivering vaccines for wildlife species have been used in some specific cases such as for the black-footed ferrets. The biggest concern regarding distemper is the interface between wild and domestic animals. However, prevention is generally the best course of action to reduce the risk of transmitting the virus between domestic and wild animals.

- Ensure your pets are vaccinated for canine distemper and that vaccinations are kept up to date.
- Maintain direct supervision of pets while outdoors and prevent interactions between them and wildlife.
- Call animal control to remove wild or stray animals in the event they may be unvaccinated or ill.
- Maintain a safe distance from wild animals and unfamiliar domestic animals.
- Do not feed or harass wildlife.
- Do not attempt to house, relocate, or rehabilitate wildlife. Call your local authorities to properly capture and treat any sick, injured, abandoned, or nuisance animals.
- If a pet is suspected of having been exposed contact your veterinarian.
- Report any sick or dead animals to the Canadian Wildlife Health Cooperative. Find your closest regional centre at: <http://www.cwhc-rcsf.ca/>

SUGGESTED READING

- [Government of BC Canine Distemper Fact Sheet](#)
- [Government of Alberta Canine Distemper Fact Sheet](#)



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