



NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE
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Commissioner

2022 Veterinary Advisory # 7

Canine Distemper Virus Identified in Raccoons from Brooklyn

- Raccoons collected from Prospect Park, Marine Park, and Greenwood Cemetery in Brooklyn tested positive for canine distemper virus (CDV).
- Several other raccoons with illness clinically compatible for CDV have been reported from Prospect Park since August, as well as Marine Park, and Greenwood Cemetery.
- Veterinarians should ensure their patients are properly vaccinated to prevent potential infection with CDV.
- Raccoons are highly susceptible to CDV as well as mustelids, such as ferrets, minks, and skunks.
 - Dogs and raccoons infected with canine distemper virus may have a clinical presentation similar to that of rabies.

Please share with your colleagues in Veterinary Medicine and your staff

September 9, 2022

Dear Veterinary Colleagues,

This year several raccoons collected in Brooklyn have tested positive for canine distemper virus (CDV) at the New York State Wadsworth Laboratory; two raccoons collected from Prospect Park in August, one from Greenwood Cemetery in June and one from Marine Park in April. In addition, multiple sick raccoons were identified in Prospect Park throughout August, and from Marine Park and Greenwood Cemetery from March through June of this year.

CDV is not uncommon among raccoons in the US. The virus is likely being transmitted regularly among raccoons in areas of NYC without causing large outbreaks. When the virus is newly introduced to a large, dense population of raccoons, it can spread rapidly and cause widespread illness. Several large outbreaks of CDV occurred among raccoons in multiple parks in 2018 (see Veterinary Alerts [#3](#), [#6](#) and [#7](#) from 2018). Monitoring will be ongoing to assess the situation in both parks and updates will be shared with the veterinary community.

The prevalence of CDV among dogs decreased dramatically with the availability of highly effective vaccines. However, the disease continues to spread among unvaccinated dogs such as strays or dogs imported from areas where vaccination rates are low. Canine distemper virus is a paramyxovirus and is related to human measles virus. While CDV is most commonly identified in dogs and other canines, it can also affect mustelids such as ferrets, minks, and skunks, and procyonids such as raccoons. It is a highly contagious, systemic disease with potential gastrointestinal, respiratory, and neurological complications. Clinical illness in dogs can vary depending on their age and immune status. Mild illness can include fever, anorexia, fatigue, upper respiratory illness, and oculo-nasal discharge that may mimic “kennel cough”. Severe systemic manifestations are most common in younger dogs with inadequate immunity. In addition to the signs described, dogs may go on to develop lower respiratory illness, vomiting, and a watery and/or bloody diarrhea. Dogs that develop vesicular or pustular skin lesions rarely go on to develop central nervous system disease (CNS), whereas dogs that develop hyperkeratosis of the nasal planum and digital pads usually do have CNS involvement. CNS illness may develop concurrently or 1 to 3 weeks after recovery from systemic illness and is typically progressive. Signs may include myoclonus, ataxia, paresis, hyperesthesia, and seizures with “chewing-gum”-like behavior. Infected dogs with minimal clinical illness that develop CNS signs months to years later are described as having old dog encephalitis (ODE).

The virus is spread primarily via respiratory secretions from infected animals, which can shed virus for several months. The virus is sensitive to lipid solvents and it is readily killed by most disinfectants. It is inactivated by ultraviolet light,

heat, and desiccation and is relatively unstable outside the host, although it has been known to survive in affected tissues or secretions for up to 3 hours at room temperature.

Infection can be prevented in dogs through routine vaccination of puppies starting at 6 to 8 weeks of age, using a canine distemper vaccine, and at 2 to 4 weeks intervals until 16 weeks of age. The vaccine is usually given as part of a combination canine vaccine. Booster protocols for older dogs may vary from annually to every three years. For additional information on diagnostic options please refer to previous veterinary alerts on our website at www1.nyc.gov/site/doh/providers/resources/zoonotic-vectorborne-publications.page or go to www.nyc.gov and search "Veterinary Alerts."

Dogs and raccoons infected with CDV may have a clinical presentation similar to that of rabies. Remember to consider rabies for any animal presenting with an acute, rapidly progressive neurologic illness. Rabid animals have been reported regularly in New York City. For the most recent rabies activity in NYC, visit our website at www.nyc.gov/health/rabies.

CDV is not thought to be transmissible to humans, although general precautions should always be taken when handling any suspicious animals, as infection with rabies may mimic that of canine distemper.

As always, we appreciate your continued collaboration with our efforts to monitor public health issues in New York City.

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References

1. The Merck Veterinary Manual. 8th Edition. Merck and Company Inc. , Whitehouse Station, NJ, USA. 2005.
2. Infectious Diseases of the Dog and Cat. 3rd Edition. Greene CE. Elsevier, St. Louis, Missouri, USA. 2006.
3. <https://ahdc.vet.cornell.edu/>

-Visit our webpage for more information and resources for veterinarians: [Zoonotic and Vector-borne Diseases: Information for Providers](#)

-If you do not receive these alerts via email and would like to added to the distribution list, please email zivdu@health.nyc.gov