



NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE
Ashwin Vasan, MD, PhD
Commissioner

2023 Veterinary Alert # 10

Canine Distemper Virus Detected in Raccoons from Inwood Hill Park

- **Two raccoons collected October 25-26, 2023 from Inwood Hill Park in Manhattan tested positive for canine distemper virus (CDV).**
- **Several other raccoons with illness clinically compatible for CDV were identified in the park in October.**
- **Veterinarians should ensure their patients are properly vaccinated to prevent potential infection with CDV.**
- **Raccoons are highly susceptible to CDV, as are 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.

November 30, 2023

Dear Veterinary Colleagues,

Two sick raccoons collected October 25 and 26, 2023 from Inwood Hill Park in Manhattan tested positive for canine distemper virus (CDV) at the New York State Wadsworth Laboratory. Several other sick raccoons with clinically compatible illness were identified in October. The situation will continue to be monitored.

Canine distemper virus is common among raccoons in the US. The virus is likely being transmitted regularly among raccoons in NYC without causing large outbreaks. When the virus is introduced into 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); there was also an outbreak in [2022 in Brooklyn](#) and in May of this year in Fort Totten, Queens.

Canine distemper virus is a paramyxovirus and is related to human measles virus. It is most often identified in dogs and other canines, but can also affect mustelids such as ferrets, minks, and skunks, and procyonids such as raccoons. It is a highly contagious, systemic viral disease of dogs with potential gastrointestinal, respiratory, and neurological complications. Infection is spread primarily via respiratory secretions from infected animals, and the virus can be shed for several months.

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. Dogs may go on to develop lower respiratory illness, vomiting, and watery or bloody diarrhea.

Dogs that develop vesicular or pustular skin lesions rarely go on to develop central nervous system (CNS) disease, whereas dogs that develop hyperkeratosis of the nasal planum and digital pads usually have CNS involvement. CNS illness may develop concurrently or one to three 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).

Dogs and raccoons infected with canine distemper virus 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 NYC. For the most recent rabies activity in NYC, visit our website at www.nyc.gov/health/rabies.

For additional information on diagnostic options, see [2018 Veterinary Alert #6](#).

Infection can be prevented in dogs through routine administration of canine distemper vaccine to puppies starting at 6 to 8 weeks of age, at 2 to 4-week 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.

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. The virus is sensitive to lipid solvents and most disinfectants and can be killed using routine disinfection. 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.

As always, we greatly appreciate your partnership and cooperation.

-Asha Abdool, MPH, Renee King MPH, Christina Ng MPH, Kevin Lovingood MPH, Ryan MacDonald MPH, Marc Paladini MPH, Stephanea Roeser MPH, Sally Slavinski, DVM, MPH, DACVPM
Zoonotic and Vector-borne Disease Unit, Bureau of Communicable Disease, ZIVDU@health.nyc.gov

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/>