

# ONTARIO SPCA AND HUMANE SOCIETY

Ontario's animal charity since 1873.

<b>Disease Name:</b>	<b>Canine Distemper – Core Vaccine</b>			
<b>Agent:</b>	<i>Morbillivirus</i> (family Paramyxoviridae; enveloped RNA)			
<b>Clinical Signs:</b>	Various: upper respiratory disease including purulent nasal discharge, pneumonia, dyspnea, vomiting, diarrhea, ocular problems and neurological difficulties.			
<b>Susceptible domestic species</b>	Dogs, ferrets, raccoons			
<b>Zoonotic?</b>	No			
<b>Diagnostic tests:</b>	IFA for viral antigen or inclusion bodies in cells from conjunctival scrape, urine sediment, buffy coat	PCR of nasal or ocular discharge, respiratory mucosa or conjunctiva	Serum IgM or rising serum IgG	CSF antibody detection
<b>Test sensitivity</b>	Fair to poor in acute disease, lousy in subacute or chronic disease	Fair to good during acute respiratory phase of disease	Good	Good in acute encephalitic disease, otherwise poor
<b>Test specificity</b>	Very good	Good – false positive possible 1-3 weeks after vaccine; quantitative PCR can help distinguish	Good except false positive may occur within 3 weeks of vaccination	Good – antibody ratio can rule out blood contamination from traumatic collection
<b>Test comments</b>	Lymphopenia and thrombocytopenia are common acutely. There is no really satisfactory test for diagnosing distemper antemortem.			
<b>Vaccine available?</b>	Yes; <b>vaccination (on intake!!) is the cornerstone of distemper prevention in a shelter</b>			
<b>Vaccine efficacy</b>	Excellent. Within hours of administration, vaccination can provide meaningful protection against severe disease and death, and complete protection can occur within days, in the absence of maternal interference. Puppies exposed four hours after vaccination were protected in one study. Recombinant vaccine provides better protection in the face of maternal antibodies (puppies less than 16 weeks).			
<b>Excreted in :</b>	All body excretions (feces, urine, etc.), but most abundant in respiratory secretions.			
<b>Mode of transmission:</b>	Highly contagious. Aerosol, droplet, direct contact spread most common. Fomite transmission over short time/distance.			
<b>Disinfection</b>	Routine disinfection is adequate. Susceptible to heat, drying and most common disinfectants.			
<b>Incubation</b>	Fever spike 3-6 days postinfection (may go unnoticed), clinical signs 1-4 weeks postinfection (longer incubation more common), CNS signs may appear up to three months later with or without preceding signs.			
<b>Post-recovery shedding</b>	Up to 120 days, but usually < 60 days, decreased with complete resolution of clinical signs; quarantine minimum of one month for all exposed dogs (includes dogs with partial protection) but exposed before full protection as they may still be infected and shed even without clinical signs.			

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<b>Carrier state?</b>	No, but mild and inapparent infection common and important in propagation. Old dog encephalitis may represent recrudescence of latent disease, but dogs are not infectious in the interim.
<b>PPE Required</b>	Gloves, gown, impermeable shoe covers
<b>Control</b>	<p>The most important factor in shelter decontamination is quarantine/removal of incubating and mildly/subclinically affected animals.</p> <p>Animal Control agents: re wildlife handling, ensure no contact with clothing, and use separate equipment for wildlife vs dogs, DO NOT transport dogs and raccoons in same vehicle</p>