



# Canine Distemper Virus (CDV): Treatment Recommendations

The decision to treat an individual patient in the shelter environment is shelter-specific and depends on various parameters such as the ability to properly isolate the infected dog, the capacity to ensure proper mental well-being and overall welfare during isolation, the severity of clinical signs and prognosis and the shelter's capacity (based on staffing, resources, etc.).

## Treatment

Treatment of Canine Distemper Virus (CDV) for the individual patient remains focused on supportive care. There is no specific anti-viral drug indicated for treatment of CDV. Most dogs with mild respiratory or gastrointestinal signs will recover on their own, with or without supportive care. Please see below for specific types of supportive care.

### *Respiratory disease:*

- For dogs experiencing significant respiratory disease, evaluate for any secondary bacterial infections and treat judiciously with appropriate antibiotics.
- Bacterial culture and sensitivity are ideal for judicious antimicrobial use; however, may not be feasible when considered alongside all financial allocations in diagnostic and treatment decision-making.
- Typical pathogens seen with secondary infections include *Bordetella bronchiseptica* or *Mycoplasma cynos*. Doxycycline is a recommended first-line antibiotic.
- More severe respiratory cases that progress to bronchopneumonia may require treatment with a broad-spectrum antimicrobial combination, including fluoroquinolone. Oxygen supplementation, nebulization and coupage may also be indicated.

### *Gastrointestinal disease:*

- Broad spectrum parenteral antibiotic therapy is indicated in severe gastrointestinal disease.
- Appetite support or assisted feedings may be needed if the patient does not eat for a prolonged period. This may include appetite stimulant medication, syringe feeding or feeding through a nasogastric tube.
- Fluid replacement therapy may be necessary to prevent or treat dehydration and is critical to recovery.
- Probiotics may be useful for cases presenting with diarrhea.
- Anti-emetics are recommended for nausea or vomiting.

### *Neurologic disease:*

- Treatment for neurologic clinical signs is often less successful as neurologic disease rarely resolves and may be progressive.
- If a dog progresses to seizures, an anti-seizure medication is indicated.

### *Ocular disease:*

- Dogs suffering from a lack of tear production may require artificial tears.

## Recovery

Currently, most cases of CDV are considered infectious within the shelter environment until there is a negative PCR test result. Unfortunately, dogs can have low quantitative PCR levels for extended periods of time after recovery. A [new study](#) suggests that dogs infected with CDV may shed viable infectious virus for a much shorter time than they excrete viral RNA as detected by PCR and that peak viral load can be used as a functional marker to gauge the end of infectious risk. This may be helpful to reduce the isolation period rather than isolate dogs until testing negative on PCR, which can result in very prolonged isolation periods.

When considering dogs for adoption after a CDV quarantine or isolation, adopter education and communication are critical. Adopters of low-risk dogs should be aware of the exposure and possibility that the animal is still at risk for disease. Adopters of recovered dogs should be alerted that shedding of the virus can be prolonged and further testing may be indicated.

## Prognosis

Prognosis for dogs with mild disease is good with prompt diagnosis and treatment. Neurologic disease can develop weeks to months after apparent recovery and these signs rarely resolve and can be progressive. CDV remains a potentially fatal disease and carries significant morbidity and mortality during outbreaks in shelter environments.