cure, and no antiviral drugs have been approved to combat the infection. This is why vaccination is so important.

Treatment usually consists of supportive care such as fluids to correct dehydration and medications to prevent secondary infections and control vomiting, diarrhea, and neurologic signs. Dogs with canine distemper need to be separated from other dogs to prevent the disease from spreading.

HOW IS CANINE DISTEMPER PREVENTED?

The best way to prevent canine distemper is through vaccination. The canine distemper vaccine is included in a combination vaccine (sometimes abbreviated DAPP, DA2PP, or similarly) that also protects dogs against some other common canine viruses. This vaccine is considered "core" and is recommended for all dogs.

To help them build immunity, puppies need to undergo an initial series of vaccinations at certain weeks of age, followed by boosters at certain points afterward to maintain immunity as adults. If your adult dog hasn't been vaccinated yet, or is overdue or missing some vaccinations, it's not too late. Ask your veterinarian about a recommended vaccination program based on your dog's age and needs.

To further protect your dog and other animals:

- Until the initial vaccination series is complete, use caution when bringing puppies to places where dogs gather. This includes pet shops, parks, puppy and obedience classes, doggy day cares, kennels, and groomers.
- Choose establishments and training programs that require up-to-date vaccinations, health examinations, good hygiene, and isolation of sick puppies and dogs.
- Keep your dog away from other dogs when sick, including other dogs within your home.
- Avoid contact with known infected dogs and their premises.
- Keep your dog away from wildlife.

CANINE DISTEMPER

Brought to you by your veterinarian and the American Veterinary Medical Association







Canine distemper is a highly contagious and serious disease caused by the canine distemper virus. The virus attacks the respiratory, gastrointestinal, and nervous systems of dogs.

In addition to dogs, canine distemper virus can infect ferrets as well as a wide range of other mammals, especially carnivores. These include several wildlife species such as wild canines (e.g., foxes and wolves), raccoons, and skunks. Cats also may become infected but are unlikely to get sick.

The good news is that canine distemper can be prevented in dogs—and ferrets—through vaccination.

HOW IS CANINE DISTEMPER SPREAD?

Puppies and dogs most often become infected through airborne exposure to the virus from an infected dog or wild animal. This may occur through sneezing, coughing, or barking. The virus also can be transmitted through shared food and water bowls and other items. Once infected, dogs shed the virus in body fluids like respiratory droplets, saliva, or urine, and may be contagious for several months. Infected mother dogs can pass the virus to their unborn puppies.

Because canine distemper also affects wildlife, contact between wild animals and dogs can cause the disease to spread. Canine distemper outbreaks in local wildlife populations can increase the risk of infection for pet dogs in the area, and unvaccinated dogs may serve as sources of infection for wildlife.

WHAT DOGS ARE AT RISK?

All dogs are at risk of canine distemper. Those at particular risk include puppies younger than 4 months and dogs that have not been vaccinated against canine distemper virus.

Canine distemper can be prevented in dogs—and ferrets—through vaccination.

WHAT ARE THE SIGNS OF CANINE DISTEMPER?

Canine distemper virus initially attacks the cells of the immune system, weakening a dog's immune response and putting the dog at higher risk of other infections.

As the virus spreads to the respiratory and gastrointestinal systems, dogs typically develop the following clinical signs:

- Discharge from the eyes and nose
- Fever
- Coughing
- Lethargy
- Reduced appetite
- Vomiting
- Diarrhea

As the virus attacks the nervous system, dogs also may show neurologic signs:

- Walking in circles, unable to follow a straight path
- Head tilt
- Lack of coordination
- Muscle twitches
- Convulsions with jaw-chewing movements ("chewing gum fits") and drooling
- Seizures
- Partial or complete paralysis

The virus also may cause the surface of a dog's nose and footpads to thicken and harden, leading to the nickname "hard pad disease." If infected before their permanent teeth have emerged, dogs will develop permanent tooth damage.

If your dog has any of the above signs, immediately contact your veterinarian, who can guide you on next steps. As the signs suggest, canine distemper is a serious disease—about 1 in 2 dogs will die from their infection. Although dogs that survive will have lifelong immunity to canine distemper virus, they usually have permanent, irreparable nervous system damage.

HOW IS CANINE DISTEMPER DIAGNOSED AND TREATED?

Veterinarians typically diagnose canine distemper through a combination of clinical signs and laboratory testing. There is no



