

Parvovirus Infection

Parvo infection in dogs is caused by the canine parvovirus type 2 (CPV-2) virus. CPV-2 causes a highly contagious and serious disease affecting the gastrointestinal tract of puppies and dogs. It can also damage the heart muscle when developing puppy fetuses and very, very young puppies are infected.

CPV-2 is a hardy virus which is passed in the feces or vomit of infected dogs. Dogs become infected when they ingest the virus particles. The virus can contaminate floors, food and water bowls, collars, leashes, and the hands and clothing of people who handle infected dogs. CPV-2 is readily transmitted from place to place on the fur and feet of dogs, people's shoes, or other contaminated objects. The virus can only be adequately killed through the use of bleach (1 part bleach in 10-30 parts water). To properly disinfect contaminated objects and surfaces, any visible feces or vomit should be removed, a detergent should be used to clean any remaining visible organic matter, and then the bleach can be applied to the visibly clean surface. The bleach should be in contact with the surface at a minimum of 10 minutes before being wiped off. Objects that can't be bleached should be disposed of. For surfaces that can't be adequately disinfected with bleached such as yards or parking lots, removal of any feces or vomit should be immediately and routinely performed. Cleaning these surfaces with copious amounts of water will dilute the virus concentrations, often to levels less than required to infect dogs, then allowing the sun to dry all surfaces will help to decrease the risk of infection.

Signs of infection include lethargy or decreased activity; loss of appetite; vomiting and/or severe, often bloody diarrhea. These signs usually manifest 3-7 days after exposure. Vomiting and diarrhea with the concurrent loss of appetite can rapidly result in dehydration and death can occur within 48-72 hours if no treatment is provided. Puppies that develop these signs should be seen immediately by a veterinarian so that a proper diagnosis can be made and treatment initiated.

There is no specific treatment that will kill the CPV-2 virus in infected dogs. Treatment is aimed at providing support to prevent dehydration, controlling the vomiting and diarrhea, and preventing secondary bacterial infection in the intestinal tract. Treatment is often very expensive because dogs require intravenous fluid and medication therapy since they have loss of appetite and tend to vomit up any fluids administered orally. Due to the highly contagious nature of CPV-2, dogs undergoing treatment must be housed in isolation to prevent transmission of the virus to other dogs present. People providing the treatment to infected dogs must follow strict sanitation procedures also to prevent transmitting the virus.

Infected dogs can continue to shed virus in their feces for up to 2 weeks after any signs of disease have resolved so responsible dog owners should not allow their dogs to go to areas where susceptible dogs may gather or frequent for at least 2 weeks after their dogs appear normal and diarrhea and vomiting have resolved. Bathing infected dogs to remove any fecal contamination prior to allowing them to go to public places will also help to prevent transmitting the virus.

The best way to ensure that your puppies or dogs do not become infected with parvo is through proper vaccination. Puppies should start to receive their vaccine series at 6-8 weeks of age, followed by booster vaccination every 3-4 weeks with the last vaccine given after they are at least 4 months of age. Adult dogs who have unknown vaccination history should receive a series of 2 vaccinations at 3-4 week interval. Adult dogs who have a complete vaccine history should seek their veterinarians advice about the best vaccination regimen to

follow based on their health and risks. Despite proper vaccination with approved vaccines that have been stored and handled according to manufacturer requirements, a small percentage of dogs can't develop protective immunity and can remain susceptible to infection.

Because CPV-2 virus, and a number of other viruses, bacteria, and parasites that can infect dogs and people, are transmitted through the feces, dogs should not be allowed to come into contact with fecal waste of other dogs while walking or playing outdoors. Responsible dog owners should always promptly pick up after their dogs.

This information sheet was designed to give general information about parvovirus infection. Your veterinarian is the best source of information for how to keep your dog healthy. Please consult your veterinarian for information regarding how best to protect your dog from parvovirus as well as other diseases.

References: American Veterinary Medical Association's Canine Parvovirus brochure 2009
Parvovirus Information Center from The Pet Health Library on VeterinaryPartner.com 2008

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