

Canine Parvovirus

Alternate Names: Parvovirus, Parvo, CPV.

Species Affected: Canines (dogs, coyotes, wolves, foxes). There are also some subtypes that can infect cats, skunks, and raccoons.

What causes canine parvovirus? Canine Parvovirus type 2 (CPV), a highly contagious virus which is resistant to many disinfectants and can survive in contaminated environments for months.

How is canine parvovirus transmitted? CPV infects and destroys cells that line the small-intestine and it's shed in the scat of infected dogs. Transmission is via direct oral (licking/eating) or nasal (sniffing) contact with contaminated scat or contaminated environments.

What are the clinical signs of canine parvovirus? CPV mostly affects young unvaccinated or partially vaccinated puppies and dogs. Clinical signs typically develop 5-7 days after contracting the virus (i.e. "incubation period") and begin with fever, depression, and decreased appetite. Disease progresses to vomiting, stomach pain, severe, bloody diarrhea, and dehydration. The virus also attacks the bone marrow and lymphoid tissue, destroying red and white blood cells causing anemia and compromising the immune system (immunosuppression).

Fully vaccinated dogs will not develop clinical disease.

What are the consequences of canine parvovirus? Young unvaccinated puppies suffer severe vomiting, diarrhea, and dehydration, and may die of CPV without veterinary care.

How is canine parvovirus detected? CPV is suspected based on age, clinical signs, and vaccination history of the dog. Laboratory testing is necessary to confirm CPV. ELISA (an immune test to detect antibodies) or PCR (a molecular test to detect viral DNA) can be used on scat samples to confirm CPV.

How is canine parvovirus prevented? CPV is highly contagious, resistant to many disinfectants, and will remain infectious in contaminated environments for a long time. Avoid close contact between puppies and other dogs and avoid dog environments (such as dog parks) until puppies have completed their CPV vaccination scheme. Vaccination of puppies 6 weeks of age with a booster after 4 weeks protect them against CPV. Boosters every 1 or 3 years (depending on the vaccine used) protect adult dogs.

How is canine parvovirus treated? Dogs with CPV should be isolated from other dogs to prevent disease transmission. They require intravenous (IV) fluids and IV nutrition to treat dehydration and protein loss caused by vomiting and diarrhea. Antibiotics are given to prevent secondary bacterial infections due to intestinal damage. To help heal the dog's intestines, a bland diet or a medicated veterinary diet should be fed when their appetite returns. All surfaces and bedding that were in contact with the infected dog must be thoroughly washed and then disinfected with a bleach solution (1 part of bleach diluted in 30 parts of water). Hospitalization is often necessary.

Is canine parvovirus zoonotic (transmitted from animal to humans)? No

References:

- *Canine parvovirus*. (n.d.). American Veterinary Medical Association. Retrieved January 14, 2022, from <https://www.avma.org/resources-tools/pet-owners/petcare/canine-parvovirus>
- *Canine Parvovirus*. (2021, December 21). Cornell University College of Veterinary Medicine. <https://www.vet.cornell.edu/departments-centers-and-institutes/baker-institute/our-research/canine-parvovirus>
- Gallagher, A. (2022, October). *Canine Parvovirus*. Merck Veterinary Manual. <https://www.merckvetmanual.com/digestive-system/diseases-of-the-stomach-and-intestines-in-small-animals/canine-parvovirus>