



Always consult with a veterinarian that you feel comfortable with before diagnosing or treating any disease on your own. This information is for reference only.

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## Canine Coronavirus

### Issue Description

*The virus invades and replicates in the villi of the small intestine. Intestinal disease may be related to virus-induced apoptosis (programmed cell death) of cells of the epithelial mucosa of the small intestine. Canine coronavirus was originally thought to cause serious gastrointestinal disease, but now most cases are considered to be very mild or without symptoms. A more serious complication of canine coronavirus occurs when the dog is also infected with canine parvovirus. Coronavirus infection of the intestinal villi makes the cells more susceptible to parvovirus infection. This causes a much more severe disease than either virus can separately. However, fatal intestinal disease associated with canine coronavirus without the presence of canine parvovirus is still occasionally reported. This may be related to the high mutation rate of RNA positive stranded viruses, of which canine coronavirus is one.*

### Symptoms, diagnosis, treatment, and control

The incubation period is only one to three days. The disease is highly contagious and is spread through the feces of infected dogs, who usually shed the virus for six to nine days, but sometimes for six months following infection. Symptoms include diarrhea, vomiting, and anorexia. Diagnosis is through detection of virus particles in the feces. Treatment usually only requires medication for diarrhea, but more severely affected dogs may require intravenous fluids for dehydration. Fatalities are rare. The virus is destroyed by most available disinfectants. There is a vaccine available, and it is usually given to puppies, who are more susceptible to canine coronavirus, and to dogs that have a high risk of exposure, such as show dogs.

### Canine respiratory coronavirus

Recently, a second type of canine coronavirus (Group II) has been shown to cause respiratory disease in dogs. Known as canine respiratory coronavirus (CRCoV) and found to be similar to strain OC43 of bovine and human coronaviruses, it was first isolated in the United Kingdom in 2003 from lung samples of dogs and has since been found on the European mainland and in Japan. A serological study in 2006 has also shown antibodies to CRCoV to be present in dogs in Canada and the United States. However, a retrospective study in Saskatchewan found that CRCoV may have been present there as far back as 1996.

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