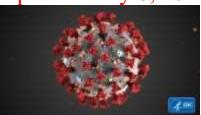
Coronavirus - Information for Dog Owners

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This illustration, created at the Centers for Disease Control and Prevention (CDC), reveals ultrastructural morphology exhibited by coronaviruses. Photo credit: Alissa Eckert, MS; Dan Higgins, MAM

WHAT IS A CORONAVIRUS?

Coronaviruses are a large family of viruses found in both humans and animals. The name is derived from the Latin word *corona*, or crown, since coronavirus particles have a ring of projections resembling a royal crown or solar corona. Coronaviruses can be subdivided into groups (1-4) based on microbial organization and evolution of the virus.

WHAT ARE SOME COMMON CORONAVIRUSES?

<u>Canine enteric coronavirus</u> (a group 1 coronavirus) is a highly contagious intestinal infection seen mostly in young puppies. It is spread by oral contact with infected feces and causes diarrhea that is self-limiting in adult dogs but can be more severe in young puppies. A vaccine is available. This virus is not contagious to other species.

Canine respiratory coronavirus (a group 2 coronavirus) is genetically related to the common cold in humans. It is spread by direct dog to dog contact and causes acute respiratory symptoms and contributes to canine infectious respiratory disease complex (sometimes called CIRDC or kennel cough). No vaccine is available for this respiratory virus, although there are vaccines for some of the other causes of CIRDC, such as canine influenza virus, distemper virus, and *Bordetella*. (Learn more at akcchf.org/tophealthconcerns.) Canine respiratory coronavirus is not contagious to other species.

<u>Feline Infectious Peritonitis</u> (FIP) is caused by a mutation in the otherwise innocuous feline enteric coronavirus. Due to this mutation and/or an alteration in the cat's immune system, white blood cells

become infected with the virus and create an intense inflammatory reaction throughout the body. This disease is almost always fatal. A minimally effective vaccine is available. Feline enteric coronavirus is not the same as canine enteric coronavirus and neither disease is contagious to the other species.

<u>SARS-CoV</u> (severe acute respiratory syndrome coronavirus) was first recognized in China in 2002. This virus is believed to have originated in bats before it was transmitted to civet cats and then humans. No cases have been reported worldwide since 2004.

MERS-CoV (Middle East Respiratory Syndrome Coronavirus) was first reported in Saudi Arabia in 2012. Since then all cases have been linked to countries in or near the Arabian Peninsula. This virus is believed to have originated in bats before it was transmitted to dromedary camels and then humans.

WHAT IS THE 2019 NOVEL CORONAVIRUS?

SARS-CoV-2 is a viral infection identified as the cause of a respiratory illness outbreak in humans first detected in Wuhan, China in 2019. The disease it causes has been named "coronavirus disease 2019" or "COVID-19." Early on, many patients had some link to a large seafood and live animal market in the area, suggesting animal-to-person spread. Later, a growing number of patients reportedly did not have exposure to animal markets, indicating person-to-person spread. This virus causes symptoms of fever, cough, and shortness of breath in varying intensity.

The first infection with SARS-CoV-2 in the United States was reported on January 21, 2020 and it was declared a pandemic by the World Health Organization (WHO) on March 11, 2020. The Centers for Disease Control and Prevention (CDC) is closely monitoring the situation and working to prevent sustained spread in the United States.

CAN DOGS (OR OTHER PETS) CONTRACT SARS-COV-2?

To date, globally, very few pets have tested positive for exposure to SARS-CoV-2: 2 dogs and 1 cat in Hong Kong, 1 cat in Belgium, 1 dog and 2 cats in the US. Only a few of these pets had mild symptoms of illness and circumstances make it impossible to determine if SARC-CoV-2 infection was the sole cause of their symptoms. Almost all of these pets had close contact with a person who had been confirmed to have COVID-19.

In addition, two major US veterinary diagnostic laboratories independently tested thousands of dog and cat samples for SARS-CoV-2 and found no positive results.

At this point in time, human to dog transmission does appear possible, but remains very unlikely. Widespread testing of pets for SARS-CoV-2 is not recommended. The CDC has updated recommendations for managing pets in homes where people are sick with COVID-19 (see resources).

CAN I CONTRACT SARS-COV-2 FROM MY PET?

Both the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO) report that the risk of animals spreading SARS-CoV-2 to people is considered to be low. Pet owners should continue to exercise good hygiene practices when interacting with pets.

CAN I TRAVEL WITH MY PETS OR IMPORT PETS FROM REGIONS WHERE CASES OF SARS-COV-2 ARE REPORTED?

The CDC recommends people "stay home as much as possible, especially if your trip is not essential." The status of COVID-19 varies by location, so you should consult your local and state authorities for restrictions and precautions related to the safety of any essential travel.

The United States Department of Agriculture Animal and Plant Health Inspection Service oversees international pet travel. While no specific warnings or recommendations have been issued regarding pet travel, you should consult with your local and state veterinarians about any potential risk associated with pet travel.

WHAT CAN I DO TO KEEP MYSELF AND MY PETS SAFE FROM INFECTIOUS DISEASE?

- Wash hands often with soap and water for at least 20 seconds or use an alcohol-based hand sanitizer.
- Avoid close contact with people who are sick and stay home when you are sick.
- Isolate (keep separate) dogs that have been exposed to an animal with respiratory or intestinal illness, and those currently showing signs such as coughing, sneezing, vomiting, or diarrhea. Notify your veterinarian of these signs for direction on when and how to bring your dog to the clinic for evaluation and treatment.
- Follow your veterinarian's recommendations for preventive care, such as heartworm and flea and tick control, vaccinations, and nutrition to keep your pet as healthy as possible.

 Practice good hygiene and sanitation in your home and at all facilities where you and your pet visit.

SUMMARY:

- Coronaviruses comprise a large family of viruses that affect humans and animals.
- The coronaviruses that cause diarrhea and respiratory symptoms in dogs are not the same, nor are they the same as SARS-CoV-2, the virus that causes COVID-19.
- Both the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO) report that at this time there is no evidence that companion animals such as pet dogs or cats can spread SARS-CoV-2.

REFERENCES AND RESOURCES:

Centers for Disease Control and Prevention (CDC) Coronavirus (COVID-19) Home

World Health Organization – Coronavirus disease (COVID-19) Pandemic

American Veterinary Medical Association (AVMA) – COVID-19

World Small Animal Veterinary Association - COVID-19 - Advice and Resources

Disease Prevention at Canine Group Settings

COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at by Johns

Hopkins University

Idexx Laboratories, Inc. press release

Antech Diagnostics press release