

COVID-19 and Pets

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Coronaviruses are a family of related viruses, and just like any other family, they have some things in common and some differences.

Many types of coronaviruses have been around for years. SARS-CoV-2 is the specific virus causing the disease COVID-19 and the current worldwide pandemic. Coronaviruses are strands of RNA. Once a virus is inhaled or makes its way into the airways, it begins to replicate. As a virus multiplies, it may mutate, which means that the copy is different than the original. Small changes in the strand of RNA can result in big differences in what the virus does to those it infects. For example, cats that are infected with a common type of cat coronavirus usually show mild symptoms or no symptoms at all. The cat's immune system will be exposed to the virus, then it will develop immunity. Rarely, in kittens, the virus may mutate and cause a fatal infection of the abdominal cavity.

Most of these viruses cannot cross species barriers, which means that a coronavirus of cows will only infect cows, the coronavirus of dogs will only infect dogs, and so on. These viruses may cause different symptoms, depending on the virus and animal. The coronavirus of cattle may cause diarrhea and/or respiratory disease, which is often severe in calves. The coronavirus in dogs also causes diarrhea and is often included in the distemper-parvo vaccine for puppies. A common version of a coronavirus that is self-limiting has been in humans for a long time but did not cause the severe disease like this current strain we are seeing and had not been found to be transmitted into animals.



SARS-CoV 2 is also a coronavirus. However, it is a different strain than the common coronaviruses that have infected humans in the past. While most human infections are mild and people will recover, it may cause severe problems in some individuals. Medical doctors and scientists are still uncertain of where this virus came from. One theory is that an animal virus, like the coronavirus of bats, mutated and suddenly became able to cross that species barrier; however, the origin is still unknown. While that is a theory, it does open up the question of whether COVID-19 can cross species barriers to infect other types of animals or pets.

A study was done in Hong Kong in which dogs were experimentally exposed to COVID-19 and tested to see if they could become infected. Two dogs have tested positive for COVID-19. Both were likely infected from their owners, and there is no current research to show that the dogs may transmit to other dogs or humans. Another study in China, by Hualan Chen, compared multiple species and COVID-19. It found that dogs, pigs and ducks are inefficient at transmitting the virus; however, cats and ferrets may become infected and transmit the virus.

Our pets are much less likely to be a source of infection for us than other humans. Pets do not routinely leave the home or congregate in large groups. Although feral cats may travel over larger distances, those animals do not come into close contact with humans. As their owners, we leave the house and are more likely to be infected by other humans and may transmit the virus to them.



For prevention, the same social distancing guidelines apply to our pets as other family members. As you should not let children attend large gatherings or sleepovers, use caution when taking animals in areas where people and other animals congregate. After petting dogs or cats, make sure to wash your hands, especially before eating. And if someone in your household is infected with COVID-19 and your pet does develop an illness, contact your veterinarian for recommendations.

References

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