

COVID-19 Information Center

COVID-19 FAQ for Pet Owners



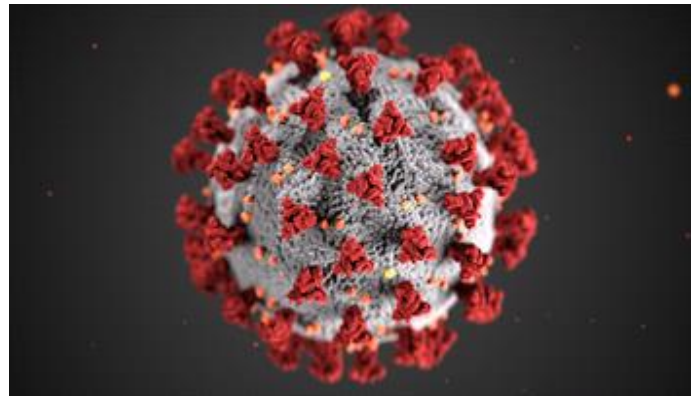
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This FAQ is mostly a resource from external sites that provide up-to-date information about COVID-19 and the SARS-CoV-2 virus as it pertains to veterinarians and pets.

A novel coronavirus, named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was identified as the cause of an outbreak of respiratory illness first detected in Wuhan, China in 2019. The illness caused by this virus has been named coronavirus disease 2019 (COVID-19).



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Illustration courtesy of CDC: Alissa Eckert, MS and Dan Higgins, MAM

Where can I find more information about COVID-19 that I can understand?

- [Worms-and-Germs Blog](#): Dr. Scott Weese, an infectious disease consultant for VIN, [maintains a blog](#) that has summarized the findings of infections in a dog in Hong Kong. If you want the most recent data about that dog, and the potential implications, read that blog.
- The [Centers for Disease Control and Protection](#) (CDC).
- [World Health Organization](#) (WHO)
- [Veterinary Information Network](#) (VIN)

We advise people who are concerned about exposure risk, precautions and latest news to consult the CDC information and the Worms and Germs blog, as they are expected to contain the most up-to-date information.

Can SARS-CoV-2 infect dogs, cats and other animals? (updated 4/1)

We don't really know. Preliminary evidence suggests that one dog in Hong Kong that lived with a person infected with the virus tested positive multiple times over multiple days. This suggests that the dog was in fact infected, rather than just contaminated with the virus. Subsequently, a second dog tested positive by RT-PCR. Neither dog showed clinical signs (the first dog died after quarantine from causes unrelated to the virus). In mid-March, 2020, the World Health Organization stated that there is no evidence at present that dogs and cats can be infected with SARS-CoV-2, develop the disease, or spread the disease. It is important to note that SARS-CoV-2 was not isolated from the first dog in Hong Kong - only RNA was identified via RT-PCR, although subsequent serological testing identified antibodies in the dog's blood confirming infection.

In late March 2020, a cat living with an infected person in Belgium tested positive for SARS-CoV-2 virus. The viral RNA was identified in the cat's feces. A second cat tested positive in Hong Kong via RTPCR on March 31 2020, with viral RNA identified from oral, nasal and rectal samples. The first cat showed vomiting, diarrhea and respiratory signs. The second cat showed no clinical signs.

Ferrets have been infected experimentally, and variably showed clinical signs of fever, decreased activity and some coughing.

SARS-CoV-2 uses two receptors in humans: It binds angiotensin-converting enzyme 2 (ACE2) and then fuses with the cell membrane with help from a type-II transmembrane serine protease (TMPRSS2) (similar to the original SARS virus in the early 2000s). Sequence homology for ACE2 at the critical binding sites suggests that SARS-CoV-2 might be able to bind to ACE2 receptors in cats and ferrets. Given the findings from the one dog in Hong Kong (see Worms-and-Germs Blog), we can reasonably suspect that dogs might also bind the virus. Rats and mice appear not to be able to bind the virus, because their ACE2 receptors are different enough from those of dogs or cats.

Infection, however, requires additional steps than just virus binding and membrane fusion. Viral replication, avoiding the host immune response etc. are also necessary components of infection and potential transmission.

Can infected dogs and cats transmit the disease to people? (updated 4/1)

This is changing. Although no transmission from animal to human has been documented, a [new study](#) found that ferrets and cats (but not dogs) could be infected, and infected cats could transmit virus to other cats (transmission between ferrets was not tested). Experimentally infected dogs developed antibodies and viral RNA (but not live virus) was detected in feces from the infected dogs. Uninfected dogs did not appear to become infected.

To date, all transmission has been human-to-human, after the initial jump from bats (most likely) to humans. It is worth noting that the original SARS virus could also bind to the dog and cat ACE2 receptor, but no reported cases of pet-to-human transmission of that virus were ever reported, although that outbreak was much smaller and investigation of domestic animals was limited.

Consequently, caution should be taken when handling pets of people who are known to be infected, especially cats or ferrets. Precautions should be also adopted when handling dogs of infected people, however, the risk with dogs transmitting infection to humans appears, for the moment, lower than it might be with cats or ferrets.

What about your pets when you have COVID-19? (new 4/3)

In a household with a person with COVID-19, the infected person poses the greatest risk to others in the household. However, some emerging data suggest that certain pets can get infected, and might be able to transmit the infection (this has not yet been confirmed). Even uninfected pets could track the virus out of the household on their coats, although this risk is considered to be much smaller than people disseminating the virus. Therefore, it makes sense to take simple steps to reduce exposure of pets and keep exposed pets away from others.

The goal is to keep exposed animals away from unexposed people. We now know that cats and ferrets can likely become infected, and can produce live virus that could infect other cats, ferrets or, potentially, people. We know that dogs can become infected, but they might not be able to infect

others (we don't have evidence of that yet). We suspect that pigs might not be capable of being infected, but additional studies are necessary to confirm this (so all you mini-pig owners – don't hug your minipigs just yet!).

As we've said all along, if you're sick, stay away from your animals just like you would other people. However, if you have COVID-19 and have been around your pets, keep the pets inside and away from other people (even others in your family who do not have the infection). If you're self-isolating, so is your dog/cat/ferret! If you are positive for COVID-19, and your dog/cat/ferret has been snuggling up with you, there is a reasonable chance that the pet is positive. Dogs and cats probably will not show signs although ferrets might show mild signs. The pet should not come into contact with uninfected household members (unless this is unavoidable – see below).

If possible, your dog should be walked by the infected person. They should be walked only in an enclosed space (e.g. your yard but away from neighboring dogs) and only for the purposes of elimination (peeing and pooping). Walks for exercise are out until the person recovers and is no longer shedding virus (tests negative). If the infected person is too sick to do this, other household members should take out the dog isolated with the infected person. If one or more of the household members have recovered from the infection, they should do it – they're likely immune to reinfection.

If no recovered people are available, and the infected person is too sick, then nominate a household member to do the pet care. The dog should remain isolated with the sick person, not roam free through the house. The person responsible for letting the dog out should wear gloves (and not let the dog lick their hands/face, etc). You do NOT need to wear disposable gloves. Dish-washing gloves are fine. Whoever takes the dog out should carefully wash the gloves (or use rubbing alcohol to clean them) and then wash their hands for at least 20 seconds after removing the gloves upon returning from outside and returning the dog to the isolation area where the infected person is. The risk of transmission from a dog leash is low because the dog is unlikely to have secreted virus onto it, unless it's a leash chewer – then you'll want to wash it or disinfect it. Dog bowls should be cleaned periodically with detergent and water, after which, hands should be washed or disinfected (remember, pet mouths go into the bowl, and pet mouths can carry infected saliva). Do not touch or handle the bowl while dispensing food; if you do, wash your hands right away.

Ferrets and cats are our main focus, both in terms of keeping infected people away from them (so the animals don't get infected) and, again, keeping exposed animals away from unexposed people. The fomite risk is pretty small, although with cats self-grooming, there has to be a greater risk of viral contamination of the fur than in dogs. Therefore, if uninfected, do not handle the cat if it can be avoided – let the infected person medicate, feed and water the cat if at all possible.

If an uninfected person must take care of a potentially infected (i.e. exposed) cat or ferret, the person should wear gloves while handling the cat, the food and water bowls, litter boxes and ferret condos. Avoid touching the cat or ferret. Again, kitchen gloves are fine; wash them thoroughly after you're done as described above, then wash or disinfect your hands.

While these precautions will not guarantee protection against infection, they should hopefully reduce the risk.

Again, the best solution is to avoid having the pet come into contact with an exposed or infected individual who is self-isolating.

Additional views on this can be found [here](#).

Can pets serve as fomites in the spread of COVID-19?

(A fomite is an object such as a dish or a doorknob that may be contaminated with infectious organisms and serve in their transmission. Answer from the American Veterinary Medical Association)

This question has been addressed by the AVMA. Here is the direct quotation:

"COVID-19 appears to be primarily transmitted by contact with an infected person's bodily secretions, such as saliva or mucus droplets in a cough or sneeze. COVID-19 might be able to be transmitted by touching a contaminated surface or object (i.e., a fomite) and then touching the mouth, nose, or possibly eyes, but this appears to be a secondary route. Smooth (non-porous) surfaces (e.g., countertops, door-knobs) transmit viruses better than porous materials (e.g., paper money, pet fur), because porous, and especially fibrous, materials absorb and trap the pathogen (virus), making it harder to contract through simple touch.

Because most pet hair is porous and also fibrous, it is very unlikely that a person would contract COVID-19 by petting or playing with a pet. However, because animals can spread other diseases to people and people can also spread diseases to animals, it's always a good idea to wash hands before and after interacting with animals; ensure the pet is kept well-groomed; and regularly clean the pet's food and water bowls, bedding material, and toys."

Could the SARS-CoV-2 virus cause clinical disease in dogs, cats or ferrets?

We don't know. The two dogs that might be infected in Hong Kong showed no clinical signs. The closely related SARS virus did not cause disease in cats (but cats were able to transmit the virus to other cats). In contrast, disease did occur in experimentally infected ferrets. There is currently no evidence that domestic animals can develop disease from this virus or, if infected, transmit it to other animals or people. However, study of animals to date has been limited.

COVID and The Bronx Tiger – what does this mean? (new 4/6)

As we have noted, cats appear to be susceptible to infection with SARS-CoV-2. They might also be able to transmit the disease from one cat to another. Because lions and tigers are cats, it's not surprising that they are also able to be infected.

What this case shows is that people who are asymptomatic or presymptomatic (as was the zoo keeper) can infect others. That includes cats.

So, can cats infect us? Currently, there are no reported cases of cats (or dogs or ferrets or tigers) transmitting the virus to humans. How would a cat, living indoors, get infected? From an infected house member. And that house member would pose a greater risk to uninfected house members than the cat would.

What about the cat that is indoor-outdoor? It's much harder to enforce a neighborhood wanderer to practice social distancing. Therefore, it might be reasonable to keep a cat like this indoors for the near future.

However, it would be reasonable to suspect that an infected cat might be able to infect a human. Therefore, if a cat lives with a person who is infected, the cat should be treated as potentially infective – uninfected people should not handle the cat, or if they have to, they should handle the cat while

wearing gloves and then wash their hands or disinfect their hands immediately. Given that cats groom themselves, consider that a potentially infected cat is likely to have virus on its coat.

If there is a cat who has not been near the infected person, keeping that cat separated from the infected person should be sufficient to prevent the cat from becoming infected.

Should I (can I) test a pet for SARS-CoV-2?

Many animal diagnostic laboratories are not currently set up to test for this specific coronavirus. Some are, and might be able to test animals with known exposure. For example, if the owner is infected (confirmed), it could be possible for them to ask for testing of their pet dog or cat (or ferret). However, given that the current data suggest that these pets are not infective to people, the rationale for doing this is questionable.

The dilemma about testing pets increases, given that any owner with a known infection (has tested positive) should be quarantined, and their pet should be considered, from a health-and-safety perspective to also be contaminated or infected. Consequently, you would be required to adopt precautions to prevent infection, by wearing PPE, a face mask, and face shield (to prevent contact from the pet's contaminated haircoat, or, if infected, saliva or droplets getting into your conjunctival mucosa) etc. Most clinicians are not set up to do this.

What disinfectants can I use to decontaminate surfaces?

The [CDC](#) has provided information for the public about [decontaminating and disinfecting surfaces](#).

A [group of German investigators](#) has identified several commonly available disinfectants that should inactivate SARS-CoV-2. These include:

- Isopropyl alcohol (70%), commonly called rubbing alcohol
- Bleach can be diluted by putting 4 teaspoons of bleach per 1 quart of water or 20 milliliters of bleach into 1 liter of water
- 0.5% hydrogen peroxide
- 0.1% sodium hypochlorite

Can ivermectin prevent infection or reduce viral load? (updated 4/7)

No.

A study, published 04/03/2020, suggested that ivermectin could reduce viral load in vitro. This immediately generated excitement and interest in the idea that ivermectin could be used to either prevent or treat the infection. That's patently untrue. The study does not provide the doses of ivermectin used to inhibit replication; however, examination of the figures suggests that a concentration of approximately 7 uM was required to effectively suppress viral replication. You would have to give over 100 times that dose - which would likely be fatal to most animal species - to even come close to the concentrations used in the study. That amount is approximately 6,000 monthly doses of the large-dog size ivermectin-based heartworm preventive.

Can a veterinary client-patient relationship be established via a telemedicine consultation to minimize exposure risk but still provide veterinary care?

A veterinary client-patient relationship (VCPR) is established primarily by **state law**. On the Federal front, the [FDA has issued guidance](#) noting that due to the current pandemic they “may” not prosecute for extralabel drug use in animals where VCPR doesn’t exist, but this limited potential exception does not change state law. As a general rule, you cannot establish VCPR using telemedicine. On the other hand, once you have VCPR using traditional standards, you can certainly use telemedicine for ongoing care. Regardless, remember you are responsible for meeting the medical standard of care – using telemedicine does not change the standards.

Can I still go to the veterinarian if I am sick?

It's best if you self-quarantine. The CDC says that if you have a medical appointment, call the healthcare provider and tell them that you have or may have COVID-19. This will help the healthcare provider’s office take steps to keep other people from getting infected or exposed. Perhaps someone else can take your pet in.

For everyone’s safety, if you believe you have been exposed to COVID-19, call your veterinarian before having your pet seen for any health conditions. Practice social distancing. You and your veterinarian can discuss the safest approach for all concerned whether he needs immediate medical intervention or not. Prescriptions can be mailed, but make sure you call early enough so that they will arrive in the mail by the time you need them.

Feedback on this article



URL: <https://www.vin.com/doc/?id=9548687&pid=25078>