Are pets at risk of COVID-19? Advice for pet owners and members of the public

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Can pet animals carry SARS-CoV-2?

There are two ways animals may be affected by SARS-CoV-2, the viral cause of COVID-19 - either contamination or infection.

Contamination. Animals in contact with people infected with COVID-19 may get the virus on them, in the same way a ‘phone or a door handle would. Contamination is more likely with close contact and this may explain why some animals have tested positive when living with COVID-19 patients. The virus could be passed onto other people who handle the animals inappropriately. We call this indirect transmission.

Infection. Recent research from China has shown that SARS-CoV-2 can infect certain non-human animals. The receptor that the virus binds to (like a docking station, to infect cells in humans, has similar counterparts in other animals, and research has shown that the receptors in non-human primates, cats, ferrets and other species may be similar enough to human receptors to allow the virus to “dock” efficiently and infect cells. The receptor involved is called the ACE2 receptor.

Secondly, under experimental conditions, SARS-CoV-2 has been shown to infect and replicate (multiply) within cats and ferrets, and to a lesser extent, dogs. Pigs, chickens and ducks did not seem susceptible. Some affected cats showed abnormalities in the respiratory tract, though they did not have clinical signs. The virus could also be transmitted to other cats housed in nearby cages. The animals in this experiment were given a virus suspension of SARS-CoV-2 by direct squirting of virus right into the nose. This clearly is unlikely to occur naturally, and probably overestimates the risk of SARS-CoV-2 infection in those ferrets and cats, and to a lesser extent dogs, living with infected humans. The study did not explore the potential of SARS-CoV-2 transmission between different species. However, it possible that pet animals could become infected through close and ongoing contact with owners in a COVID-19 positive household, and such animals might be able to pass this virus on to other animals or humans. The recent report of a tiger in a zoo in the USA testing positive and showing mild clinical signs also suggests other species may be susceptible.

In geographical areas where COVID-19 is present in humans, some cats have antibodies for SARS-CoV-2, and antibody levels are highest where cats were living with COVID-19 patients1. Antibodies are the bodies response to the virus, and the presence of antibodies suggests the cats were infected, most likely from their owners, but possibly from wider environmental contamination. The cats with antibodies cats tested negative for virus, so were not acting as a source of infection.

It is important to note that no case reports nor research studies have demonstrated cat to human transmission of SARS-CoV-2 to date. Despite this newly understood risk of infection and contamination of pets with SARS-CoV-2, it is likely that the risk posed to humans is low, and much lower than from other in-contact infected people. The overwhelming majority of people that become infected with SARS-CoV-2 will do so from other people. Over 1 million people have now
been infected, and there are no known cases of pet animal to human infection. Pet owners do not therefore need to feel at any greater risk or significantly change their animal care routines.

**Advice for handling pets**

Owners should aim to keep the risk of pet infection as low as possible and to minimise the risk of pets, either contaminated or infected, transmitting virus. The precautions recommended follow from NHS and Government advice about how we behave as people, how we socially distance ourselves and how we socially isolate in our household groups. For most people with pets, having their companionship will help make isolation more tolerable, with positive physical and mental health benefits.

**All members of the public**

All members of the public should avoid contact with pets of other households. This is in line with existing government advice to limit our personal interactions to only those within our household group. Pets should similarly be considered as part of household groups.

**Healthy owners without signs of COVID-19**

This group are being told by government to stay at home to help stop the spread of coronavirus, and only travel outside for essential shopping, health care, one form of exercise and essential work. People should be minimising time spent outside of the home and ensuring we are at least 2 metres apart from anyone outside of our household (https://www.nhs.uk/conditions/coronavirus-covid-19/).

If we translate this to pet owners, we can see that dog walking can carry on in a controlled manner – dogs walks are good for pet and owner alike. However, congregations of dog walkers are not allowed. Just as we are being told not to shake hands and to keep 2m apart, so we must not stroke or touch pets belonging to other households. Interaction with pets within our own household can carry on as normal.

There are important changes in how veterinary practices are working, including delaying non-essential visits, increased hand washing, phone or email consultations, and being asked to wait in the car park. Veterinary practices may also be short staffed so, as with all walks of life at the moment, owners should be prepared to be a little more patient. Vets will be there to care for pets, but that care may just be a little slower than usual and provided in a different way.

**Owners who are self-isolating with known or suspected COVID-19**

For most people with pets, having their companionship will help make isolation more tolerable. However, there are sensible precautions to be taken to reduce both the risk that they may infect their pets, and the greater risk that they will contaminate their pets with virus and therefore potentially indirectly infect other people, especially those from their household group self-isolating with them.

NHS advice for humans with suspect disease is to stay in if at all possible (https://www.nhs.uk/conditions/coronavirus-covid-19/self-isolation-advice/), and get others to deliver our essentials like food. They can however use a private garden but must only leave the house to exercise if absolutely necessary: it is recommended that if you are sick, you get someone else to exercise the pet if necessary.

Hand contact with pets should sensibly be reduced, and people isolating with COVID-19 signs should wash their hands before and after such contact.
Avoid face contact and follow government rules around personal hand hygiene when coughing and sneezing around pets, just as you would around other people. Wearing a face mask may also help.

Cats should be kept indoors if possible, or outdoors where suitable shelter is available.

For dogs, exercising in a private garden is fine. If you take your dog for a walk, it is essential to follow government rules on social distancing, and if you are unwell but there is someone else in the household who is well but will also be self-isolating, it is preferable to get them to walk the dog. If necessary, you can ask someone outside the household to walk the dog for you: walkers not be high risk individuals (over 70, pregnant or with underlying medical concerns) or living with or caring for such people. They should not come into your house. To minimise risk of onward transmission from the dog, dog walks would sensibly be short, away from other people, on a lead (it is a good idea for the walker to provide a lead and store it outside your home) and at a quiet time, and in strict accordance with government rules on social distancing. Do not let other people stroke these potentially contaminated or infected dogs. If a dog walker is used, they should wash their hands immediately after they have returned the dog.

If veterinary care is needed for your pet for any reason, you must phone your practice and tell them you have signs of COVID-19. Your vet will advise on treatments, whether a vet needs to see the pet, and if so, how to manage getting the pet to the veterinary surgery.

Owners in high risk groups who are self-isolating but well.
These people who are over 70, pregnant or with underlying medical conditions placing them at increased risk are also being told to self-isolate. Current NHS advice suggests that exercise is still allowed, and for example, shopping for essentials at quiet times. Such people should also avoid gatherings with friends and family (https://www.nhs.uk/conditions/coronavirus-covid-19/).

Interaction with pets belonging to the household can continue as usual. It makes sense to continue walking your dog if you want to, but do this away from groups of other people, on a lead and at a quiet time, according to government advice. Do not let other people stroke your dog. Cats again are best kept indoors. However, cats generally avoid close contact with other people’s cats so transmission, although possible, seems likely to be rare in day-to-day settings. Cats are probably most likely to be infected by their owner. You could also politely ask neighbours to avoid touching your cat.