

## CPD article

# COVID-19: implications of self-isolation and social distancing for the emotional and behavioural health of cats

As the progress of the COVID-19 pandemic proves slow to respond to control measures, the ongoing advice for humans to maintain social isolation and social distancing continues. The media has paid considerable attention to the potential cost of such restrictions in terms of human mental and behavioural health but less attention has been paid to the potential welfare cost of 'lock-down' and 'self-isolation' to the pet population. This article considers the immediate consequences of reduced access to environmental and social stimulation outside the home and increased social exposure within the home to cats, as well as considering some of the potential long-term effects of such measures.

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At the time of writing, there is considerable confusion within the human population regarding whether, because of concerns regarding the spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (the virus which causes COVID-19), they should be restricting their cat's access to the outdoor environment. Many British companion cats are already labelled 'indoor cats', but although many companion cats live in homes where the outdoor environment may pose specific dangers to their safety (e.g. heavy traffic), ideally, if cats are to express their natural behaviours, they would have access to the outdoors (Cats Protection, 2017). Consequently, this author believes that it is inevitable that any attempt during the current public health crisis to alter a cat's normal access to the outdoor environment will have considerable implications for their current emotional and behavioural health; implications that are likely to extend into their future welfare.

## Should our cats be subject to exercise and handling restrictions intended for humans?

To answer this question, we need to consider whether cats are capable of acting as a vector for SARS-CoV-2 to be passed on to a greater number of humans. In an interview (Weese, 2020), Dr J Scott Weese, a veterinary infectious disease expert from Ontario Veterinary College, explained that COVID-19 was likely to be a predominantly human disease, but that it is not yet known how

domestic species can be affected. Studies are finding that SARS-CoV-2 replicates poorly in dogs, pigs, chickens and ducks, but ferrets and cats are susceptible to infection, with cats proving to be liable to airborne infection (Shi et al, 2020). Dr Weese (2020) stated 'Currently there is limited evidence that companion animals can be infected with SARS-Cov-2 and no evidence that pet dogs or cats can be a source of infection to other animals or to humans resulting in COVID-19.'

Hence, it was very disappointing, and potentially highly deleterious to animal welfare, that in the urgency to provide COVID-19 related information to the public, journalists are not always adequately checking their sources. Hence, on Wednesday 8 April 2020, BBC Radio 4's *Today* programme inaccurately announced that the British Veterinary Association recommended that all pet cats must be kept indoors; other news sources quickly picked the story up and it was widely spread. The British Veterinary Association later corrected the BBC's statement (British Veterinary Association, 2020), explaining that there is no evidence that animals can pass the disease to humans and that the advice to keep cats indoors was only relevant to cats in infected households or where people are self-isolating and, even then, only if the cat's welfare was not compromised by being kept indoors. The British Veterinary Association confirmed that cats can contract SARS-Cov-2 from owners and that they may become unwell. They also confirmed that cats could act as fomites, as the

virus could be on their fur in the same way as it may be found on other surfaces, such as tables and doorknobs. Hence the British Veterinary Association's advice is that pet owners continue to practise good hand hygiene and, as a precaution, those cat owners who have COVID-19, or who are self-isolating following exposure to someone who has tested positive for COVID-19, should keep their cat indoors, if possible, during that time. It will also be important that both owners and veterinary staff maintain strict hand hygiene routines when handling cats.

### Are the social distancing and self-isolation regulations likely to pose immediate or future problems to the emotional and behavioural welfare of cats?

It is the opinion of this author that there is a likely negative emotional and behavioural welfare outcome to cats of the human-centric social isolation regulations. The short- and longer-term emotional and behavioural effects on domestic cats are likely to be highly dependent on:

- The cat's ethology (particularly the fact that it belongs to a predominantly asocial species — Cats Protection, 2017)
- An individual's genetic capacity for sociability and general social and environmental resilience
- The cat's early and subsequent learning opportunities (Ley, 2016a)
- The animal's current state of health
- The individual animal's expectation of access to the outdoor environment.

All of these parameters will influence whether an individual cat will benefit from increased access to human companions and whether their wellbeing will be impaired by restricted opportunities to engage with the outdoor environment. In addition, the emotional advantages of increased social contact with owners will be determined by whether an individual cat has options for choice regarding avoidance of, or access to, the social environment, and the availability of alternative mental stimulation within the confines of the cat's home and outdoor environment.

### The effects on cats of restricting access to outdoor exercise

Exercise and environmental enrichment (through access to a diverse and stimulating environment) is a basic health requirement for all animals, but the amount of exercise and the level of stimulation required will vary markedly between individuals. However, as a natural predator that retains a strong requirement for opportunities to engage in predatory activity, suddenly denying outdoor access to any domestic cat is likely to have a detrimental effect on its welfare (Cats Protection, 2017).

Cats are predominantly asocial with conspecifics, anxious of many outdoor environmental stimuli and their outdoor activities are usually independent of their owners. However, particularly in urban areas, a cat's movement around the outdoor environment is likely to be limited by the density of the surrounding cat population and the complexity and stress-inducing nature of the outdoor environment (Cats Protection, 2017). With some owners

becoming more careful about regulating their cat's access to the outdoors and with the current lighter pedestrian and motorised traffic, there is the potential that cats which are still allowed to wander will do so further from their homes. This investigation of a wider territory may well enhance the level of environmental enrichment available for the cat, but it is accompanied by potential dangers of new social and environmental challenges, leaving many cats potentially vulnerable to cat bite/scratch and traffic-related injuries.

It is this author's experience that cat owners are increasingly relying on electronic, sonic devices to monitor the movement of their cats. When turned on to 'track,' these devices make a high pitched sound through the collar-held monitor and many owners find that the monitor is also, inadvertently, acting as an effective 're-call' device — their cat rapidly runs for home on hearing the highly aversive sound (which is then turned 'off' on their return). Unaware that this behavioural response is likely to be associated with the highly aversive nature of the sound and its cessation on the cat's return home, owners are increasingly using such devices to control their cat's outdoor activity. This creates the considerable welfare infringement associated with a cat finding itself trapped in a novel environment, or trying to navigate its way home from a novel environment, while also being constantly bombarded by aversive high-pitched sounds that will result in confusion and distress.

In response to altered or adverse social or environmental conditions, many cats will experience a motivation to engage in natural coping strategies which owners may misinterpret as wilful and inconvenient behaviours (Ley, 2016b); a selection are mentioned in *Table 1*.

Owner frustration associated with their cat's seemingly inconvenient coping strategies may result in owners initiating punitive behaviours that will produce an increase in the cat's distress, an enhanced motivation for the problem behaviour and a learned requirement for avoidance of family members which will extend past the resolution of the current COVID-19 crisis.

### The effects on cats of increased social pressure within homes

The immediate impact on cats of enhanced exposure to family members, and the range of activities that they engage in, will be highly dependent on the individual sociability of the cat and the individual's previous experience of social exposure to the family.

Although cats are termed 'domesticated', many writers would question the cat's capacity to conform to the generally accepted definition of domesticity ('the process of enfolding an animal into human society' — Mills 2010) and Clutton-Brock (1987) described 'domesticated' cats as 'exploited captives'. As a consequence, although cat owners often make considerable demands on the cat's capacity to tolerate physical contact through carrying and stroking their pet, the cat's capacity to cope with such contact may be severely reduced by the current increase in access to owners — particularly if combined with decreased access to outdoors.

The cat's primary coping mechanism is to escape from and hide from stressors — consequently the cat is frequently anxious on exposure to potential stressors and rarely remains

**Table 1. Potential behaviour problems in cats associated with reduced access to outdoors and suggested preventative actions or first aid advice**

Potential problem	Potential reason for behavioural change	Likely presentation	Advice for owners
Increased roaming – a situation that may become dangerous to the cat once normal use of outdoor areas resumes	Pheromone marking of previously novel outdoor areas as now 'safe and secure', with this marking resulting in the cat learning to use previously unused routes within their environment	Increased anxiety, resulting (on return to the home) in hiding or aggression redirected to other social stimuli Injuries from encounters with other cats or road traffic injuries	Cats used to outdoor access should continue to receive freedom of movement, but owners should remain vigilant and aware of their cat's outdoor activity and, if necessary, take steps to encourage their cat to gain the maximum amount of mental stimulation within a safe outdoor area such as their garden
Frustration-related redirected social aggression	If temporarily prevented from accessing the outdoor environment, there is considerable potential for frustration as a result of inability to carry out natural behaviours (Ley, 2016b). Frustration is likely to be enhanced if the cat is only recently restricted in its ability to investigate their environment, predate (even if predation is usually only targeted towards insects) and have complete or partial control over their ability to avoid indoor stressors and to access outdoor latrines	Aggression towards human family members who pass the cat, also ambushing of humans If within a multi-cat household, expect increased incidences of aggression and ambushing of conspecifics resulting in permanent breakdowns in previously tolerant or harmonious inter-cat relationships	If focused on humans, humans should wear padded clothing. If focused on other pets, the animals should be separated, each with full access to all necessary resources Provision of problem-solving environmental enrichment activities suitable for the cat's natural behavioural requirements. Failure of families to put time and effort into planning and providing such necessary stimulation can result in further aggressive incidents. If occurring in a multi-cat household, separate the cats and seek advice regarding re-building inter-cat relationships
Indoor toileting	Any restrictions on access to outdoors will disrupt normal toileting behaviour	Toileting in an area other than that intended by the owner	If not normally an indoor cat, try to continue access to outdoors
	Lack of provision of litter trays in areas where the cat would be comfortable with toileting		Cats not used to litter trays need access to trays in several sites, each site selected to be obvious to the cat yet in a relatively discrete and quiet position
	Lack of sufficient provision of litter trays to prevent intended 'blocking' by other household cats or inadvertent blocking by human activity		In multi-cat households, sufficient trays will need to be provided to prevent individual cats manipulating access. At least one litter tray per cat plus any extra – all in different areas of the home
	Failure to provide an appropriate litter		Cats unused to indoor latrines will be loath to use one with an inappropriate substrate (so a soil/sand mix may be better accepted than a proprietary litter)
	Failure of owner to maintain litter tray hygiene		Families may not understand the need for regular cleaning – cats used to toileting outdoors are likely to be very reticent to use a soiled latrine area
	Failure of owner to provide tray of adequate size or litter of adequate depth		Trays need to be large enough to accommodate the largest cat of the group – to enable it to sit several centimetres from the front, yet squat and its urine stream remain within the confines of the tray
Indoor marking	Any disruption of the normal routine may initiate urine marking behaviour – particularly in multi-cat households or if the cat is unable to access outdoor areas where marking would normally occur	Facial pheromone marking of furniture and doorways may intensify, but urine marking and scratch marking is more common in cats experiencing distress	The necessary activities are extensive – please see Hargrave (2019)

within proximity of the stressor for long enough to habituate to it (Casey and Bradshaw, 2008). Hence, if the cat has not had opportunities to become resilient to an intensely social, active and noisy environment, it is unlikely to cope well with the increased social exposure associated with intensified family activity within a household. Cats — particularly indoor cats and elderly cats, for whom movement may be painful — experiencing an increase in the activity levels within their homes will require an increase in the number of sites where they can access their resources (food, water, latrines, resting places) within the household (Cats Protection, 2017) but, in particular, they will need extra hiding places (e.g. raised areas and cardboard boxes providing hiding places on routes around the house — *Figure 1*).

The experience of distress will be further enhanced for those cats that might otherwise have exited the home at times of enhanced exposure to stressors, but because of the self-isolation of family members, are being kept within the home. Even those cats with established hiding places within the household may find it difficult to reach these havens of safety if children are playing in the house, or if other household cats are similarly distressed and hence also seeking the same hiding places. Hence it is inevitable that, during the COVID-19 social restrictions, many cats will experience increased anxiety within the home. Some of these cats will attempt to cope by increasing their hiding activity, but others will select other natural coping mechanisms such as urine marking and scratching behaviours — particularly if suitable hiding places are unavailable either because of a lack of provision or because of health conditions (e.g. arthritis) preventing access (particularly to safe, raised areas). However, it is this author's experience that, on experiencing the frustration associated with the failure of other coping mechanisms, more introverted cats will redirect their frustration into repetitive (and possibly, eventually harmful) self-care behaviours such as overgrooming. Once these behaviours are established, these coping strategies are highly likely to be retained within the individual cat's behavioural repertoire.



*Figure 1. Cardboard boxes provide inexpensive hiding places that can be arranged throughout a home.*

## Increasing mental stimulation to help cope with social and environmental changes

Cats naturally hunt and many experience a strong motivation to seek outdoor access in the early morning and early evening for opportunities to explore and predate (Ley, 2016b). Consequently, all cats benefit from opportunities for problem-solving activities within the home that mimic the types of behaviour that are used during predatory and exploratory behaviour. It follows that, at a time when cats may have reduced opportunities for outdoor access and/or be in need of opportunities to engage in positive emotional activity away from busy family members, that they will benefit from increased opportunities for mental stimulation through the provision of simple problem-solving activities that involve a mix of:

1. Human interaction — involving increased training (such as target training and the training of simple cooperative activities, such as a re-call or simple 'sit' — lured in the same manner as with puppies) and enrichment opportunities, and
2. Without excessive human intervention, encouraging independent activity and reduced reliance on humans for the provision of mental stimulation and emotional support.

Increased mental stimulation can be realised through maintaining a varied supply of specifically designed, problem-solving, toys; however, some ideas for home-made activities can be found on the FABC and Cats Protection websites (see *Useful contacts and resources*), but readers may also wish to investigate the websites of the major cat charities for other ideas. Games that are obviously designed for dogs, like the 'muffin tin game' that is shown on the Boredom Busters videos (see *Useful contacts and resources*), can be easily altered to entertain cats, for example, by using an egg box and ping-pong balls.

When advising cat owners to increase the amount of play and problem-solving activities that are offered to their cat, it is important to avoid initiating frustration associated with an unfulfilling completion to the task — frustration that may result in subsequent ambushing of, and aggression towards, a social stimulus within the home. This can be achieved by ensuring that games that do not involve puzzle feeding (e.g. a fishing rod-type game) end on a tasty treat (e.g. such as a prawn or other small food item) — thereby completing the entire behavioural process of 'hunting'.

## A special case — young cats that need to develop social and environmental resilience

Very young cats intended for the companion animal market are currently in a particularly vulnerable position regarding their developing emotional welfare. Many breeders retain cats within the breeding environment to 12 weeks of age (long after the close of the socialisation period) but, as new owners are currently unable to travel to collect them, kittens are now being kept in breeding establishments for far longer. This extra time spent within their breeding environment is time which would ordinarily be spent in acclimatising to, and developing resilience within, their new homes. As a consequence, it is of great importance that breeders are providing the necessary experiences and stimulation that will enhance future coping in their young charges (Horwitz and Pike, 2017) (*Figure 2*).

If potential owners contact a veterinary practice with a query about the cost and routine associated with the vaccination and neutering of a cat, it can be an excellent opportunity for staff to engage in discussions regarding the source of the cat and to give advice regarding the type of experiences the purchaser should ensure that breeders are undertaking with their new kitten. A detailed summary can be found in Hargrave (2018a, 2018b).

For those families that have recently taken on the care of a cat, it is important for veterinary staff to stress the need both to provide all necessary resources (Seksell, 2017) and to engage in expanding their kitten's resilience to the domestic world. However, often overlooked is the fact that all cats, but particularly kittens, require frequent and extended opportunities for quiet rest and sound sleep. Hence, it is necessary to emphasise the need to provide regular opportunities for 'quiet' times of separation from the family and family activity.

### Immediate veterinary first aid response to COVID-19 related emotional and behavioural welfare problems

Although relatively few practices actively support the behavioural development of kittens, at this time when owners may be less capable of coping with the rapid change in a kitten's play behaviour suddenly becoming a defensive response of aggression, it will be particularly important for practice staff to attempt to keep in touch with kitten owners. This can be done with ease using one of the many 'free' virtual platforms for meetings, with small groups being particularly useful as, in this author's experience, owners are more likely to admit to experiencing problems if they know that they are not alone! Many virtual platforms will also enable veterinary staff to share documents such as handouts — please see the websites of organisations such as FABC and the major cat charities for good quality, free handouts. In addition, kitten and cat owners can use the sound habituation product that is specific to cats, available on the Cats Protection website (see below).

Following a return to post-COVID-19 relative normality, it will remain important to take time to discuss the behaviour of



Figure 2. If not exposed to a wide range of social stimuli during the first 8 weeks of life, many cats will find it difficult to cope with the social stimuli in their home.

### Useful contacts and resources

- **Animal Behaviour and Training Council** <http://abtcouncil.org.uk/>
- **Association for the Study of Animal Behaviour Register of Certificated Practitioners** <https://www.asab.org/ccab-register>
- **Fellowship of Animal Behaviour Clinicians** <https://fabclinicians.org/covid-19>
- **Cats Protection**  
Coronavirus (COVID-19) updates from Cats Protection <https://www.cats.org.uk/help-and-advice/coronavirus>  
Socialising kittens <https://www.cats.org.uk/help-and-advice/pregnancy-and-kitten-care/kitten-socialisation>
- **International Cat Care** <https://icatcare.org/veterinary/>
- **People's Dispensary for Sick Animals** <https://www.pdsa.org.uk/what-we-do/blog/vet-qa-coronavirus-covid-19-advice-for-self-isolating-pet-owners>
- **RSPCA** <https://www.rspca.org.uk/whatweddo/latest/blogs/details/-/articleName/how-to-care-for-your-pets-if-you-re-ill-or-have-to-self-isolate-due-to-coronavirus>
- **World Small Animal Veterinary Association** <https://wsava.org/news/highlighted-news/the-new-coronavirus-and-companion-animals-advice-for-wsava-members>
- **Boredom Busters from Karen Wild** <https://www.youtube.com/playlist?list=PLwZbsct-laGvmWwdSMDTDZsa0r47Mrzbn>
- **Boredom Busters from Susan McKeon** <https://happyhoundstraining.co.uk/boredom-busters/>

cats during telephone triage discussions for medical problems, as any animal that is not in peak health will have a concurrent reduced capacity for coping with the current environmental and social stressors (Gowan and Iff, 2017; Karagiannis, 2017; Robertson, 2017). The resulting behaviours may be dangerous for the patient, owners and other animals within the household, and hence such discussions should not be optional. It will also be helpful if veterinary staff can check medical records and ask pertinent health-related questions when clients report behaviour change in their cat, as the link between ill-health, pain, discomfort and behaviour change is strong (Zulch, 2017). If staff feel unable to offer appropriate first-aid advice, then clients should be encouraged to contact their nearest ABTC registered clinical animal behaviourist.

### Longer term veterinary response to COVID-19 related emotional and behavioural welfare problems

When clients contact the practice with medical queries, if not an immediate emergency, staff may wish to try to initiate a short conversation about how the client's family and cat have coped with the restrictions associated with COVID-19. If the behaviour of the cat is mentioned, such conversations could be triaged towards the practice behaviour advisor. The *Veterinary Nurse* journal has published a series of articles on first aid behavioural advice for a range of companion animal species and these will form a useful tool to keep close to the reception desk telephone, to enable staff to refresh their memories regarding appropriate first-aid behavioural

## KEY POINTS

- Cats thrive in a consistent and predictable environment – an environment in which they have instant access to hiding places and avoidance activity. The current COVID-19 restrictions have removed this essential welfare element.
- Although the majority of cats will be bonded to their human carers, increased social activity is likely to cause at least occasional distress in cats.
- Cats cope with the stressors within a domestic environment through the use of choice – to engage or not to engage with ongoing activity. Current restrictions are reducing the cat's options of choice.
- Without the choice to avoid stressors, cats are likely to engage in a range of frustration-related behaviours that may include aggression to other social stimuli or self-harming repetitive activities.
- The inability to escape distress inducing social encounters may result in the physical abuse of cats by some owners.
- Without veterinary intervention to encourage owners to initiate efforts to enhance environmental and social resilience, young cats are likely to pay a high price in depleted emotional welfare for the COVID-19 related environmental and social restrictions.

advice. In addition, if practices do not have a designated behaviour specialist on their staff, clients should never be left feeling that help and support is not available, but should be referred to the nearest ABTC registered clinical animal behaviourist. Useful behavioural first aid advice for cats can be found in Hargrave (2019).

## Conclusions

As a predominantly asocial species with no innate requirement for social companionship from humans, cats cope with domestic life through retaining a constant level of choice regarding their use of both animate and inanimate resources. Many cats attempt to cope with domestic life by expressing their choice regarding social exposure to humans either by exiting the home for short periods or by accessing hiding places within the home. However, during the current human-centric social restrictions dictated by attempts to control exposure to SARS-CoV-19, for many cats the

opportunities for choice regarding avoidance of stressors have been severely restricted. It is this author's opinion that many cats will be currently suffering severely depleted emotional welfare and that the natural coping mechanisms that cats are forced to activate in the current conditions may persist past the relaxation of COVID-19 restrictions. It is an essential part of the veterinary role to support cat owners to ensure that, post COVID-19 restriction relaxation, behaviours for both clients and cats return to 'normal'. **CA**

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