

# The Effects of Housing on the Stress Levels of Cats Boarding at Catteries and Animal Shelters

by Chris Wearne

The manner in which cats are housed during short stays at a cattery, or when strays are placed temporarily in animal shelters, can have a significant impact on the stress levels of those cats. Stress has a negative effect on the welfare of animals and so should be minimised wherever possible. Thoughtful housing design and careful appraisal of cats before they are placed in a particular type of housing can minimise the stress associated with the change in environment.

The stress levels in cats boarding at catteries are influenced by the density of the housing, or in the case of single cages, the area of the cage, the quality of the housing, whether the cats have been socialised with con-specifics, and whether the cats have been socialised with humans.<sup>1,2</sup>

Stress has a negative impact on the welfare of animals and is associated with a variety of problems. Increased stress can lead to an increase in the incidence of spraying, destructive behaviour, inappropriate vocalization, overgrooming, and increases the likelihood of an animal biting.<sup>3-6</sup> All of these potential consequences are undesirable in a commercial situation.

The relative degree of stress in the cats considered below is given on a seven-point scale. The measure is termed the "cat stress score". This method is non-invasive, relying on posture, expressive movements and interactions with other cats.<sup>6</sup> This is of considerable importance as lay people are able to use the measure with only limited training.<sup>6</sup>

The number of cats per square metre of floor space in a group enclosure is highly correlated with the stress of the cats within that enclosure.<sup>1</sup> As the number of cats per square metre increases so too does their stress levels. It has been found that cats in a group enclosure become "very tense" when more than 0.63 cats per square metre are present.<sup>1</sup> The category "very tense" as defined by the cat stress score is associated with flattened ears, dilated pupils and reduced movement.<sup>1</sup> In the interest of the cats' welfare it would be prudent to ensure that a minimum of 1.6m<sup>2</sup> of floor space be available for each cat in a group housing situation. This figure will, of course, vary with the quality of the housing and the personality of the cats enclosed. These variables will be discussed separately.

Cats housed in single cages show higher stress levels when there is less floor space available. A cat placed in a cage with an area of 0.7m<sup>2</sup> displays more signs of stress than if placed in a cage with an area of 1.0m<sup>2</sup>.<sup>1</sup> As with group housing these figures will vary depending on the quality of the cage and the cat itself. At present no research has been conducted to determine the minimum floor space that a cat requires when placed in a single cat cage. Based on the research that has been completed thus far it would seem that the cats should be placed in as large a cage as is possible in order to reduce stress.

The quality of the housing refers to its ability to provide its residents with a low stress environment. Important features found in high quality housing are elevated shelves for resting and scratching posts.<sup>1</sup> In order to reduce stress in boarding cats as much as possible these features should be present. It is worthwhile noting that the research conducted on group housing included these desirable features, and thus the figures obtained are probably conservative.<sup>1</sup> The research conducted on single cages used cages that had neither of the above features.<sup>1</sup> As a result, the cats involved in the latter experiment would probably have had lower stress levels had a shelf and scratching post been present given the same floor space.

Cats that have been socialised with con-specifics show less stress when housed in a group situation than non-socialised animals.<sup>2</sup> When non-socialised cats are placed into a group

enclosure they may show either passive or active unfriendliness to other cats, and tend to stay further away from the other cats than socialised cats.<sup>2</sup> The unfriendliness shown by the non-socialised animals could provide an explanation as to why the established members of the group also show increased stress when a non-socialised cat is introduced into the group.<sup>2</sup>

Non-socialised cats housed in single cages show a reduced stress level compared to those housed with a group.<sup>2</sup> Therefore the welfare of a non-socialised cat can be significantly increased by housing them in single cat cages. Housing such cats singly also removes a source of stress to other cats who may be housed in a group enclosure.<sup>2</sup> In addition, owners should be made aware of benefits of widely socialising their kittens. This transfers a portion of the responsibility for the cats' welfare from the boarding houses and animal shelters to the owner.

Cats must be socialised with people in addition to other cats. This socialisation occurs independently of that with other cats and is thus a separate undertaking during a cat's development.<sup>2</sup> Cats that have not been socialised with humans show a high stress response when housed in either a group or single situation.<sup>2</sup> This is most likely due to the almost continual human presence at catteries or animal shelters. The welfare of cats that have not been socialised with humans may be improved by finding other methods of housing these animals when the owner is away.<sup>2</sup> This might be achieved by keeping the cat at home and having a familiar person come in to feed it and clean its litter tray. This is, however, not possible with feral or stray cats and thus the best alternative may be to minimise human presence.

Obtaining an animal's history wherever possible, allows the locating of that animal in a form of housing that will minimise the stress placed upon it.

Placing a cat in appropriate housing given its socialisation history and ensuring that there is adequate floor space, be it in group or single cat enclosures has been shown to be important in the reduction of stress responses. Because, many animal shelters and catteries are managed and staffed by lay people, a lack of knowledge concerning animal welfare is a considerable problem in many of these establishments.<sup>7</sup> It must, therefore, be highly desirable to establish a system to provide critical personnel with knowledge of the welfare implications of housing.

In conclusion, the welfare of cats in boarding houses and animal shelters may be improved by measures that minimise stress. The density of cats held in group housing should not exceed 0.6 cats per square metre. The largest cage possible should be used to hold cats singly. Cats that have not been socialised with conspecifics should be housed singly, while cats that have not been socialised with humans should not be housed at a cattery or shelter if at all possible. Lay people responsible for running these establishments should be made aware of the implications that housing has on the welfare of cats.

## References

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