

# Environmental Enrichment for Confined Cats

Judi Stella, Traci Shreyer and Tony Buffington

The Ohio State University College of Veterinary Medicine

This document provides a brief summary of factors that affect the welfare of confined cats. Although we offer specific environmental enrichment recommendations for cats caged in shelters, research facilities, veterinary hospitals, or boarding facilities, the same principles also can be applied to client-owned, indoor-housed cats. **The overarching principle is to always offer any resource change as a choice, so the cat can express its preferences. Observe the cat's reaction and discontinue or remove anything that causes the cat to jump, cower, hide, shake, or otherwise act fearful or nervous.** For additional information please refer to the resource list at the end of the document.

1. **Basic resources**- Every cat should have these resources at its disposal.

- a. **Litter box**- many types of boxes and litters can potentially be used; the choice depends on the resources available to the caretaker and the cat's preferences. Important points to keep in mind include:
- Provide a box that is big enough for the cat (preferably 1.5 times the length of the cat)
  - Most cats prefer a fine grained, soft, "scoopable" litter; offer the same litter the cat uses at home whenever possible.
  - Ensure the litter is deep enough; cats prefer to dig around (without hitting the bottom of the litter pan) and then bury their eliminations.
  - Scoop eliminations from the box frequently, at least daily - twice a day is optimal for caged cats.
  - Clean with mild dish soap at least weekly.
  - Place the litter box in the front half of the cage. Fearful cats tend to spend most of the time in the rear of the cage, so placing the box in the front decreases the likelihood cats will rest in it (which is a red flag – discussed in 7 below).

**\*If the cat isn't using the box then try something different**

- b. **Food and water**- Provide the same food and water in the same place in the cage at the same time every day. If feeding both dry and canned food, offer them in separate bowls. Offer the same food the cat eats at home whenever possible.
- c. **Hide**- Cats use boxes to keep warm, to escape threats, and to scratch and perch on. Cardboard boxes work well, and are cheap and disposable. Place the box in the rear half of the cage with the opening facing the **side, not the front**, of the cage.
- d. **Bedding**- Needs to be large enough to provide warmth and comfort (e.g., large towel). Because most cats prefer familiar bedding, change it only when soiled rather than daily.
- e. **Toys**- Offer different types and textures to permit the cat to express its preferences. Rotate toys at least once a week.
- f. **Other enrichments** that can be offered include music (played softly; <60 dB), catnip or grasses, food treats, playtime out of the cage with other cats (if they like other cats *and* being out of the cage), and extra attention like brushing or playing from a familiar, dedicated person.

2. **Environment**- These factors may be stressful for confined cats.

- a. **Light** is an environmental cue that allows confined cats to become accustomed to daily activities. Lights need to be controlled by a timer that provides a predictable light-dark cycle from day to day if natural light cannot be provided. If a timer is not possible, then turn lights on and off manually at the same time each day. Do NOT turn lights on and off each time someone goes in and out of the room. We are not aware of light intensity recommendations for confined cats; the general recommendation for rodent housing is < 400 lux 1 meter from the floor (light meters can be obtained free for use on smart phones).
- b. **Noise** levels must be kept to a minimum (<60 dB – quiet conversational level; dB meters can be obtained free for use on smart phones). Speak in quiet voices when in the presence of cats, and conduct

conversations outside of the cat room whenever possible. House barking dogs as far from cats as possible. Close cage and room doors quietly, and avoid sudden and unexpected noises, which are especially disturbing to cats. Eliminate other environmental noises in the facility, such as water from hoses, newspaper being unfolded, trash bags, etc., to the extent possible, or provide white noise or music to help block these sudden auditory intrusions.

- c. **Odors** from dogs, other cats, alcohol (from hand rubs), cigarette smoke, cleaning chemicals (including laundry detergent), etc., must be minimized because they all can be aversive and stressful to cats, especially when confined in a cage so they can't move to avoid exposure to them.
  - d. **Temperature:** Cats prefer warm, 85-100 degrees F (29-38C), temperatures. Most cat housing areas are not this warm, so be sure to provide bedding that allows cats to get warmer if they choose. If using towels, make sure they are large enough for the cat to get under or to make a nest from. Shredded paper in a box can also be used. If providing an additional heat source (e.g., heating pad or Snuggle Safe) be sure the cat can move away from the heat source to another comfortable resting area whenever it wants to.
3. **Daily routine**- A consistent, predictable (by the cat!) daily routine is essential. Most animals, including cats, prefer consistent daily routines. Conduct cleaning and feeding procedures at the same time each day, by the same person to the extent possible. Clean cages in the same order, and in exactly the same way, **each** day. Put all cage furnishings in the same place every day, and house cats in the same cage throughout their stay. Routine cleaning can be stressful for confined animals, and this level of temporal consistency improves their ability to cope with the confined environment. Conduct all cat-related activities as consistently as possible, and minimize traffic in and out of the cat area.
  4. **Familiar caregiver** - This is a very important part of effective cat management. Cats adapt better to new environments when they can interact with the same friendly person each day. Given time constraints, quality of interactions may be more important than quantity of interactions. The familiar person needs to visit each cat daily, open the cage door, talk, pet, play with the cat and offer food treats. The cat will look forward to the visit and become active and/or interactive when the person comes into the room. The person will become familiar with the usual affect and behavior of each cat, so they can quickly recognize any changes in behavior. The familiar person also handles the cat during any medical procedures or other potentially stressful situations to comfort the cat.
  5. **Familiar objects** – Whenever possible in shelters, boarding facilities and veterinary practices, provide the cat with the food and litter it is used to at home, and use its carrier as a hiding structure in the cage whenever feasible to do so.
  6. **Low stress handling**- Cats are both predator and prey. As such, they have weapons (teeth and claws) that they can and will use if they feel threatened. More often they will choose to run or hide when threatened, and even though we have only the best intentions when performing husbandry and medical procedures, the cat often perceives them as threatening. The use of low stress handling is important to both the handler and the cat. Cats are much easier (and more fun) to work with when they look forward to being handled. During husbandry this may be accomplished by letting the cat out of its cage during cleaning for a little fun and exercise, or by training the cat to get on a perch by rewarding this behavior with treats and praise. Cats can be fed high value food such as baby food or tuna, or be gently restrained using a towel or clipnosis<sup>3</sup>, during medical exams, treatments, nail trims or grooming procedures. Having a familiar person handle the cat during threatening procedures also helps minimize the stress associated with the procedure. Remember: less is more when handling cats, both fewer people and less restraint. Never yell at or punish a cat, as this can only be perceived as a threat.

7. **Cage Set-up**- House cats in upper rather than lower cages whenever possible to avoid the threat of being approached from above. Provide a hide box and perch in each cage whenever possible. A cardboard box can be used as both as the cat will sit on top of it as well as inside of it. Provide plentiful bedding, a litter box, and food and water as described above. Covering cage doors with newspaper or towels aids in minimizing potentially threatening stimuli. If using Feliway, spray bedding or cage away from the cat (the vehicle is aversive to cats), then wait 10 minutes and place the cat in the cage. Repeat application every 2 hours as needed. Alternatively, provide a plug-in Feliway diffuser in all cat housing areas. Standardize the cage set-up throughout the facility so that it becomes predictable, both to the cats and to their caretakers.

**\*\* Remember - always offer new things (food, litter, litter box, playtime, etc) as a choice.  
Let the cat choose at his/her own pace.**

8. **Moving cats** – When cats need to be moved, placement in a carrier is recommended. Always cover the transport carrier to decrease stimulation and avoid increasing perception of threat. Although not intuitively obvious, decreasing visual stimulation reduces arousal in cats. If a carrier is not available, securely wrap the cat in a towel covering the head to decrease stimulation.

9. **Red Flags** are behaviors indicating that something may be wrong in the cat area. Their presence warrants investigation of the environment, and closer monitoring of the cats to identify and resolve the problem.

- a. **“Resting” in litter boxes.** Cats do this when they want to hide, but are not provided with an appropriate box, when they are sick, or when they are cold or otherwise having trouble coping with the environment.
- b. **Sickness behaviors.** These include variable combinations of vomiting, diarrhea or soft stool, no eliminations in 24 hours, urinating or defecating out of the litter box, anorexia or decreased appetite, lethargy, and not grooming. Each cat’s appetite, eliminations, and sickness behaviors need to be recorded by the caretaker daily to ensure proper monitoring.
- c. **Cage Condition.** Cages that show no use since the last cleaning or are in disarray may indicate anxiety and/or fear.
- d. **Aggressive behavior.** Cats are not generally aggressive so this may indicate fear or pain.
- e. **Sudden change in behavior.** Anytime a cat’s behavior changes (particularly in a negative way) one should monitor the individual closely.

Most importantly, get to know your cats. What do they like, don’t like? How do they normally greet you? Are they vocal or rarely talk? Where is the favorite place on their body to be scratched? What is their favorite toy, treat? How much do they normally eat? How often do they urinate, defecate each day? When something about their usual routine changes, monitor the cat and investigate the environment. If you know your cats, you can ensure they are happy cats!

#### **Additional resources:**

1. Additional cat care and welfare information for owners and veterinarians.
  - a. [Our environmental enrichment website](#)
  - b. [The Catalyst Council](#)
2. [More information on low stress handling](#)
3. [Clipnosis for low stress handling](#)
4. [Enrichment Strategies for Laboratory Animals from the Viewpoint of Clinical Veterinary Behavioral Medicine: Emphasis on Cats and Dogs.](#)
5. [Morgan KN, Tromborg CT. Sources of stress in captivity. Applied Animal Behaviour Science 2007;102:262-302.](#)