

## Out-of-Box Elimination

Out-of-box elimination can be one of the most frustrating problems cat lovers deal with. In fact, it is the #1 behavioural reason why cats are relinquished to shelters. Fortunately, in many cases this issue can be resolved once the cause is identified and addressed. Below are the most common causes for out-of-box elimination, and some strategies are outlined that might help keep your cat thinking “inside the box.”

### Underlying medical cause

Quite often, out-of-box elimination is a symptom of an underlying medical issue. This is especially true if the problem appeared suddenly, if you notice signs of discomfort during elimination, or if your cat defecates out-of-box but continues to urinate inside the box. If your cat isn't spayed or neutered, this can be a contributing factor as well. In any case of out-of-box elimination it is advisable

to have your cat examined by a veterinarian to rule out medical causes. Cats tend to hide illness, so out-of-box elimination might be a crucial indication there is something wrong. Early examination and diagnosis is often key to successful treatment. Tests may include a physical examination, blood tests, urine testing or X-rays.



### The litter box environment

If no medical cause is found, your cat's out-of-box elimination may be them telling you that they are unhappy with the litter box environment you have provided. Making a few adjustments may be enough to lure them back to proper use.

1. **Clean your litter box daily.** Research has shown that physical obstructions, rather than odor, is the number one reason that cats prefer a clean litter box to a dirty one<sup>2</sup>. Removing waste daily is the most important thing you can do to ensure regular litter box use.
2. **Number of litter boxes.** Experts recommend that you have at least as many litter boxes as cats, plus one<sup>3</sup>. This means that if you have 2 cats, you should have 3 litter boxes. It is also important not to put these litter boxes right next to one another, especially in multi-cat homes
3. **Size of litter box.** Research shows that when given a choice, cats choose a larger litter box<sup>4</sup>. They also exhibit more signs of frustration in a smaller litter box<sup>5</sup>. This suggests a great preference for a larger litter box. Wouldn't you rather use a fancy washroom than a port-a-potty? Litter boxes should be at least 1.5 times the length of your cat, from nose to tail base<sup>3</sup>. Most commercially available litter boxes are simply too small. Try an under-bed storage tote!



- Litter substrate.** There are many types of litter on the market (pine, wheat, walnut, newspaper, silica...). Studies have shown that most cats prefer clumping clay litter<sup>6</sup>. If you are already using clumping clay litter, and your cat is still going out-of-box, try conducting your own preference test. Offer two litter boxes, each with a different type of litter substrate. Then, simply let your cat tell you which they prefer!



- Scent of litter.** Cat litter companies often add scent to the litter for the benefit of the people in the home. Many cats do not mind these scents. However, others can be more sensitive to them. If your cat's litter box is enclosed (e.g., is hooded or in a cupboard), the impact can be much greater. Consider switching to an unscented litter.
- Accessories.** Some cats are put off by litter box hoods, automatic cleaners, tracking mats, and litter box liners. If your litter box currently includes any of these items, consider removing them and see if this brings your cat back to the box.
- Accessibility.** It stands to reason that if your cat has difficulty getting into their litter box, they are less likely to use it. If your cat has mobility issues (e.g., obese, arthritic, missing limbs, geriatric), they may have difficulty getting into a high sided, elevated, or top opening litter box. Try a low sided litter box or cut an entrance into the side of your existing box.
- Depth.** Most cat litter manufacturers recommend using 2 to 3 inches of litter. This is because the product performs best at this depth rather than being related to cat preferences. You can experiment with different depths to figure out your cat's preference.
- Location.** Providing litter boxes in private, quiet locations is best. A common spot for litter boxes is beside the furnace or washing machine. The noise and vibration of these appliances can deter some cats from wanting to eliminate in these locations. Homes with multiple levels should also consider providing a litter box on each floor. This is especially true in multi-cat households or if your cat has mobility issues. It is also important to keep litter boxes away from food and water bowls. Would you want to "go" where you eat?

## Stress

Many cats are quite prone to stress and unfortunately, it can manifest as out-of-box elimination. Common stressors in a home include boredom, changes in their environment, and tense relationships with other cats in the home. If your cat's out-of-box elimination is caused by stress it is important to identify the cause, and then attempt to resolve the issue.

- **Boredom**
  - *Indicator.* Your cat is outgoing, inquisitive, and active.
  - *Strategy.* Provide additional enrichment in your home, including climbing/perching opportunities, toys, human interaction, and feeding puzzles. See [Enriching Your Home](#) for more information.



- **Changes to their environment**

- *Indicator.* Your cat's out-of-box elimination started after an event such as a move, vacation, or introduction of a new pet or family member. Cats prone to finding such changes stressful are often shy or anxious as well.
- *Strategy.* Ensure changes happen slowly whenever possible – consider introducing your cat to a new home gradually over time, starting with a sanctuary room. Associate new things with things your cat likes – have new family members take over feeding your cat and/or introduce new pets slowly in association with food (see [Introducing Your New Cat to Your Resident Cat](#) for more information). When changes are predictable, keep your cat in a space it may perceive as safe (a sanctuary room) and consider event-based anti-anxiety medications. If your cat is anxious in many situations, consider speaking to your veterinarian about a long-term anti-anxiety medication as well.

- **Tense relationships between cats.**

- *Indicator.* You observe stress-related behaviours (see [Cat Body Language](#) for more information) from one or both of your cats when they encounter each other. One of your cats may chronically hide. One cat may prohibit another from accessing resources (such as the litter box).
- *Strategy.* Ensure you are providing more litter boxes than cats, and that these litter boxes are in different parts of your home. Cats should be separated and reintroduced gradually (see [Introducing Your New Cat to Your Resident Cat](#) for more information). Consider speaking to your veterinarian about a long-term anti-anxiety medication to help with this process.

### Tips:

- Ensure you clean any soiled spots thoroughly with an enzymatic cleaner designed to remove cat urine, such as Nature's Miracle Just for Cats Urine Destroyer.
- If your cat often sees other cats out the window, this may result in out-of-box elimination. If you suspect this may be an issue, consider blocking your cat's access to see them or use humane deterrents to keep visiting cats off your property.
- Feliway™ or Feliway MultiCat™ are pheromone products aimed at reducing stress or improving inter-cat relationships. There is some debate as to whether or not they work<sup>7</sup>, but some owners claim that they have a profound impact on reducing their cat's fear. Consider trying a diffuser in your home.

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### Resources:

<sup>1</sup>Salman, M. D., Hutchison, J., Ruch-Gallie, R., Kogan, L., New Jr, J. C., Kass, P. H., & Scarlett, J. M. (2000). Behavioral reasons for relinquishment of dogs and cats to 12 shelters. *Journal of Applied Animal Welfare Science*, 3(2), 93-106.

<sup>2</sup>Ellis, J. J., McGowan, R. T. S., & Martin, F. (2017). Does previous use affect litter box appeal in multi-cat households? *Behavioural Processes*, 141, 284-290.

<sup>3</sup>Carney, H. C., Sadek, T. P., Curtis, T. M., Halls, V., Heath, S., Hutchison, P., Mundschenk, K., & Westropp, J. L. (2014). AAFP and ISFM guidelines for diagnosing and solving house-soiling behavior in cats. *Journal of Feline Medicine and Surgery*, 16(7), 579-598.

<sup>4</sup>Guy, N. C., Hopson, M., & Vanderstichel, R. (2014). Litterbox size preference in domestic cats (*Felis catus*). *Journal of Veterinary Behavior: Clinical Applications and Research*, 9(2), 78-82.

<sup>5</sup>McGowan, R. T., Ellis, J. J., Bensky, M. K., & Martin, F. (2017). The ins and outs of the litter box: A detailed ethogram of cat elimination behavior in two contrasting environments. *Applied Animal Behaviour Science*, 194, 67-78.

<sup>6</sup>Neilson, J. C. (2001). Pearl vs. clumping: litter preference in a population of shelter cats. *American Veterinary Society of Animal Behavior*, Boston, 14.

<sup>7</sup>Frank, D., Beauchamp, G., & Palestrini, C. (2010). Systematic review of the use of pheromones for treatment of undesirable behavior in cats and dogs. *Journal of the American Veterinary Medical Association*, 236(12), 1308-1316.

