Feline Inappropriate Elimination - The Number 1 Behavior Problem of Cats

Feline inappropriate elimination (FIE) is a common behavioral problem reported to veterinarians, accounting for approximately 50% of all behavioral referrals. Unfortunately, not only is FIE a common problem, it is also a leading reason for relinquishment of cats. It is a cold hard fact that cats who fail to use the litter box weekly are four times as likely as the average cat to be relinquished, and if they eliminate outside the litter box daily, these odds increase to over 28:1. About 4% of cats urinate outside the litter box weekly, and 1% eliminate outside the litter box daily. 9% of adult cat owners mention FIE as a problem to their veterinarian, and 10-24% of cats will have such a problem in their lifetime. In most behavior clinics, house soiling constitutes over 50% of referrals, with aggression coming in as a second most common behavior problem, constituting about a third of all referrals.

There are several reasons why cats eliminate outside the litter box—some of them have to do with cats’ natural tendencies and others to do with the circumstances they find themselves in, though often both factors operate together. The four main causes of FIE are litter box aversion, urine marking, hormonal issues, and medical problems. Usually, veterinarians are quick to check for medical problems and to appreciate the effect of intact/unneutered status on urine marking. Most deal with these two contributing factors efficiently, leaving house soiling and urine marking as the main conditions brought to a behaviorist’s attention. Distinguishing between these two conditions can be quite a problem and is the key to addressing with FIE. In straightforward litter box problems, the cause is usually quite evident after certain simple questions have been asked. Some of the questions should pertain to prior medical issues and factors that may have led to anxiety connected with litter box use. Litterboxes are used infrequently, if at all, for either urination or defecation or both. Urine marking, on the other hand, if not hormonally driven, is almost always associated with territorial stress. In this condition, fairly normal litter box use, coupled with the strategic location of urine marks, helps to distinguish this problem. It is true, however, that in some cases house soiling and urine marking can exist concomitantly.

Litter Box Aversion

Some people think of cats as being just plain fussy—and to some extent they are—but many fail to use litter a box facility where it is improperly set up, unattractive, or in some cases, frankly repugnant to the cat.

Clinical features of simple litter box problems are as follows:
- elimination is always on horizontal surfaces
- carpets and rugs are often targeted
- frequently only two to three locations are used
- the litter box is used little, if at all
- the litter box may be used for defecation but not urination or vice-versa
One helpful piece of information can sometimes be obtained by asking questions about a cat’s behavior around the litter box. What is helpful to know is, does the cat spend any length of time in the box? Does he hover around it and look somewhat tentative? Does he balance on the side of the box, and does he scratch in the litter? In the most extreme form of litter box aversion, the cat will approach the box, sniff at it—somewhat disdainfully—and then walk away. A slight improvement over this situation is the cat showing some interest and perhaps putting two feet into the litter, but then shying away. The next stage of attractiveness might be the cat getting in the litter box but appearing somewhat uncomfortable in there and spending very little time in the litter, possibly balancing on the sides of the box, and even after successful use of the litter, the cat may hot-foot it out of the box and scratch on the walls or carpet near the box. All these signs or any combination of them means that the cat is not comfortable with the facilities. Appropriate litter box behavior involves the cat approaching the box enthusiastically, jumping into it willingly, spending time investigating, choosing just the right area, digging a hole, turning around, eliminating, and then inspecting his handy work before covering up the urine or feces. The cat then skips lightly out of the box.

Reasons for cats not wanting to use their litter box are sometimes obvious, like a dirty, filthy box that’s scooped infrequently or having the box positioned next to a furnace or other noise maker. That said, elementary matters like this have often been addressed before a case of FIE is presented to a behaviorist so we are left with somewhat or more subtle issues to research and address. Common owner errors include having too few boxes, locating boxes in and undesirable location, using a type of litter that the cat does not appreciate, having the litter too shallow, a box that not cleaned often enough, one that is cleaned with harsh chemicals, and the use of liners, hoods, and plastic underlay. Any one or more of these can cause an issue. The correct number of litter boxes is one more than the number of cats in the house. Especially if there’s a problem, I advise at least one box per floor of the house. Boxes should be positioned away from scary machinery like washing machines and fans and should be located in warm, comfortable areas not cold, damp, draughty cellars.

The litter type that is preferred by most cats is that which most closely approximates to sand. This is because the cat’s wild ancestor, the African wild cat, lived in a sandy environment, and sand is a natural substrate for elimination. The closest approximation on the supermarket shelves is the scoopable litter, preferably fine-grained and preferably not contaminated with odors of the perfumy variety that are designed to make the box smell pleasant for people. The litter depth should be at least 4 inches, and that depth should be maintained during subsequent scoopings. Non-hooded boxes are preferred by cats, so if there’s an issue, it is helpful to remove hoods that are once again designed only for the owner’s preference, not the cat’s. A variety of non-hooded litter boxes will work, but they should be the right size—which is approximately one-and-a-half times the length of the cat—and sufficiently wide so that the cat can turn around easily.
Litter box hygiene is important; when there is a problem, even scoopable, clumping litter should be replaced every 2 to 4 weeks and the box washed out under warm running water. The box should be scooped at least once a day, and boxes themselves might need to be replaced at the beginning of treatment because the plastic can retain the scent of chemicals. If litter box hygiene is not maintained, we have what I refer to as the “Port-o-Potty Syndrome” where the cat, though keen to use the box, is driven away because the litter box smells repugnant. After two weeks of use, scoopable litter that looks clean, can begin to smell. One way that scoopable litter can be kept fresher is with the use of the Zero Odor litter spray. During the first two weeks of scooping fresh litter, this may not be a necessary measure, but after 2 weeks even scoopable litter begins to have a detectable odor which can be nixed with this spray.

Another method of making the litter more attractive is to use real pheromones, such as felinine, a sulfur-containing amino acids that is present in cat urine. Small amounts of this compound will attract the cat back to the litter box, but unfortunately, it is hard to come by. An opposite treatment is to make soiled areas unattractive; though this is unlikely to be successful on its own, it can be a helpful complimentary measure. The use of repellant sprays such as Boundary or Silver Foil may be used to render an area unattractive/off limits, as can citrus-scented air fresheners, feeding meals on the target area, and various other aversive strategies like using Scaat™ compressed air spray.

The real solution to dealing with litter box problems, however, is to make the litter box facility 5-star; that is, super attractive for the cat, using the best litter, preferably the unscented, scoopable variety, having the right depth of litter (4 inches), clean boxes in sufficient number, and ones that are conveniently located, easy to access, open to the air, and uncomplicated by liners, hoods, and plastic underlay – that usually does the trick. As a quick aside, it is possible to toilet train a cat. To do so is inexpensive and can be fun for the owner, but unless the training is ongoing, relapses occur. One has to question whether it is right to train the cat to do something which is against the flow of nature, so to speak. I prefer not to engage toilet training as part of rehabilitation.

Defecation outside the litter box is almost always a litter box problem. Typically defecation is close to the box, in its immediate vicinity, and the litter is used little if at all for this function. Treatment is the same as for urine marking and success is almost guaranteed.

Whether the problem is urination or defecation outside the litter box or both, there can be a medical cause associated with it, either one that is ongoing or previously existed. The most obvious medical causes of inappropriate elimination are cystitis or some other bladder condition, renal problems, diabetes mellitus (sugar diabetes), diarrhea or constipation, or pain on elimination for any reason. Diagnosing and addressing the relevant medical conditions is imperative. Some cats with medical issues will gravitate towards using a bathtub or sink instead of the litter box, and some veterinary specialists believe that this is a key sign of former or ongoing medical complications.
Finally, some pariah cats may have difficulty in reaching the litter box which is guarded by a bullying cat who effectively ambushes it. Needless to say, all these issues have to be addressed at the source, but in resolving them, even for a simple litter box problem of this causation, anti-anxiety medicine can sometimes be helpful.

**Urine Marking**

Urine marking is a completely separate issue and with a different clinical appearance. One of the cardinal ways of diagnosing it is by paying attention to the location of elimination incidents. They are always interesting and informative. It used to be said that urine marking occurred on vertical surfaces only. Certainly when urination is on a vertical surface, the problem is one of urine marking. If a cat is seen backing up to a vertical surface, treading, tail quivering, and urinating a fine stream, the problem is urine marking in the form of spraying. Unfortunately, some cats urine mark on horizontal surfaces, too, so simply applying the vertical location rule is not always diagnostic. The most important aspect of urine marking is that it has strategic significance, and as such the locations of urination are often many and varied, though the list of urine-marked areas is often quite typical.

Because urine marking is often triggered by interactions with other animals, especially other cats—either other indoor cats or cats outside the home—urine marks will be directed to signal territorial ownership of these key locations. If, for example, urine marking is directed at window sills, blinds, or baseboards under the window, then urine marking is a response to perceived threat from outside cats or possibly even wild animals. If urine marking is directed toward furniture or inside doors, then issues with other cats in the house may be to blame. Urine marking on people’s property—whether it is their clothes, bed, computer keyboard, briefcase, or place that a person sat—means that there is some anxiety concerning the people in the house. Cats urine mark on shopping bags because they are new and on heating registers because they deliver a plume of odors from some other location. It is not always clear why cats urinate on appliances, but one theory is they represent a super-normal stimulus because of the warmth they generate. When dealing with urine marking, it is especially important that you know who the true offender is. In multi-cat households, this is best determined by either separation, the use of an innocuous fluorescin dye given by mouth which will stain the urine fluorescent green.

Ideal treatment of urine marking is to identify and address the source of stress. If the stressor can be avoided that is the best solution, though sometimes issues between cats can be addressed by desensitization. Often urine marking is not resolvable by behavioral means alone, however, and pharmacological treatment with an anti-depressant like Prozac has been shown to be highly effective. Another medication that can be of some value is the mild anti-anxiety drug buspirone which offers some advantages, though it is hard to administer.
Detection of Urine Soiling & Urine Marks & Proper Clean-Up

Whether the cause of FIE is a litter box problem or urine or fecal marking, appropriate detection and thorough clean-up is absolutely imperative. Urine marks, hitherto undetected, can be found using a black light, and it is important to treat each one. The best clean-up agent is the product Zero Odor. There is the original Zero Odor “Odor Neutralizer” product - which is excellent at eliminating the scent of previous “accidents” - and Zero Odor Stain – a more concentrated product for stain removal. Second best odor neutralizer is Nature’s Miracle, with perhaps AIP and OxiClean coming in a distant third.

Summary

Litter box problems are easy to recognize and easy to address. The success rate after treatment should be close to 100% without the use of medications in almost all cases. Urine marking is a tougher problem and usually does require the use of medications like Prozac and buspirone. With these pharmacological tools, urine marking also can be addressed in the vast majority of cases with a 90-100% reduction in marking incidents over the course of a month or so. In all cases medical problems must be ruled out before treatment is initiated. Also, it is as well to consider in neutered male cats refractory to medical treatment, the faint possibility of the cat having a retained testicle. (I.e. only one was removed at the time of the neuter surgery). A retained testicle can be diagnosed by blood testosterone assay, preferably following an HCG challenge. If all these measures are addressed in the right combination for any of the problems leading to FIE, a solution can usually be found, saving the cat from what would otherwise have been almost inevitable relinquishment.