

HOUSE-SOILING (CATS)

House-soiling in cats, also often called feline inappropriate elimination, is the most common behavioral complaint of cat owners. Problem behaviors can be urine and/or stool deposited outside of the litter box, or marking behaviors such as spraying or horizontal urination in small amounts. Spraying and marking behaviors are covered separately in our handout on 'Marking behaviors in cats'.

Could there be a medical reason that my cat is house-soiling?-

Medical diseases of the urinary tract can cause inappropriate elimination. There are many such conditions, including stones and crystal formation in the bladder, bacterial infections, and a group of inflammatory diseases of the bladder and urinary tract of unknown origin that cause pain and an increased urgency to urinate. Diseases of the kidneys and liver can cause the cat to drink more and urinate more frequently. In addition, age related cognitive (brain function) decline and endocrine disorders such as hyperthyroidism and diabetes, may lead to changes in elimination habits including house-soiling. Medical problems that lead to a difficulty or discomfort in passing stools, poor control or an increased frequency of defecation could all contribute to house-soiling with stools. Colitis, constipation, and anal sac diseases, are just a few of the medical problems that need to be ruled out when diagnosing the cause of inappropriate defecation. Another consideration is the pet's mobility and sensory function. Medical conditions affecting the nerves, muscles, or joints, could lead to enough discomfort, stiffness or weakness that the cat may not be able to get to the litterbox, climb into the litterbox, or get into a comfortable position for elimination.



In summary, if elimination is associated with pain or discomfort, or if access to the litterbox is difficult or uncomfortable the cat may begin to eliminate outside of the box. In addition, those cats with increased frequency of elimination (especially if the litter box is not cleaned more frequently) and those with decreased control may begin to soil the house. A complete physical examination, urinalysis and in some cases additional diagnostic tests such as blood tests, radiographs or a urine culture, will be needed to rule out medical problems that could be causing or contributing to the cat's elimination problem. Some problems may be transient or recurrent so that repeated tests may be needed to diagnose the problem. Once a cat has persistently eliminated outside of the litter box for medical reasons, the cat may learn to eliminate in the wrong location.

What could the problem be if it is not medical?

Diagnostic possibilities for elimination problems in cats include litter, litter box, and location aversions, and substrate and location preferences. Frustration or stress can also influence feline elimination behavior. Keep in mind that the initiating cause of non litter box use may have been medical or a change in the

environment. However, the problem could now be maintained by the cat having learned to eliminate somewhere other than the litter box. When frustration, stress, anxiety, or marking are suspected to be the cause, drug therapy and behavior modification techniques may be effective. See our separate handout on 'Marking behaviors in cats' for treatment.

How do we determine the behavioral cause?

When all medical problems have been treated or ruled out and the house-soiling persists, a complete and comprehensive behavioral history will be necessary in order to establish a diagnosis and treatment plan. This includes information about the home environment, litter box type and litter used, litter box maintenance and placement, and the onset, frequency, duration and progression of problem elimination behaviors. Other factors to note include new pets in the household, any household changes that might have occurred around the time the problem began, and any patterns to the elimination such as the time of day, particular days of the week, or seasonal variations. Relationships between the soiling cat and other animals and people in the home need to be examined. The number and placement of litter boxes is extremely important in multi-cat households and if inappropriate or undesirable for one or more of the cats, may contribute to the house-soiling.

Other information required is whether the cat is using the litter box at all, and the location of inappropriate elimination including types of surface, whether on horizontal or vertical surfaces, and whether it is urine, stools or both.



How do I determine which cat is eliminating when there is more than one cat?

When there are multiple cats in the home, it may be difficult to determine who is actually soiling. Confinement of one or more cats may be necessary to discover who is not using the litter box. However, if social conflicts between cats contribute to the problem, separating cats may make the problem diminish or stop. A fluorescent dye can be administered to one cat, and the soiled areas can then be evaluated with a "black" light to determine if that is the cat that is house-soiling.

What factors should I look at to correct this problem?

Two areas that need to be addressed are litter box maintenance and litter box location. Litter box maintenance refers to how the box is cleaned. For some cats, it is necessary to keep the litter box scrupulously clean. This may mean changing the box daily, or at least removing fecal matter every day. All litter boxes should periodically be totally emptied and cleaned. If clumping litter is used, daily scooping is needed and at least semi weekly emptying and cleaning. The choice of litter material is important. Some cats prefer a plain clay litter material without any odor control matter added. Other cats may prefer fine clay litter materials that clump and allow for frequent, easy litter box cleaning. Cats may be reluctant to use the litter box if it has been recently deodorized or if the cat dislikes the odor of the cleansers (so rinse well after cleansing).

If the same litter box has been used for several years it may hold a residual odor. Discard the old one and obtain a new one. Another factor that may need to be changed is the type of litter box. If the cat has always used a covered litter pan, a change in body composition or mobility may make removing the cover important. If a cat has become overweight, it may no longer fit comfortably in a covered pan. An elderly

cat that may have musculoskeletal changes such as arthritis may also find climbing into an uncovered pan, or a litterbox with lower sides, much easier. A covered pan may allow other cats to ambush a cat as they exit. And, covered pans may hold in odors that are associated with infrequent cleaning.

The location of the litter pan can often be important for cats that do not use their litter box. Some cats may be unwilling to use a box that is difficult or inconvenient to access, or if the box is located in an area that the cat finds unappealing or unpleasant. For example, a box that is in the far recesses of the basement or near a furnace or washing machine may be undesirable. Older cats can find stairs an obstacle and be unwilling to go into the basement to use the litter box.

When there are multiple cats in the home, multiple pans in multiple locations may be needed. It is speculated that cats may not share the space they have equally, and be unwilling to go to some locations to use the litter box. If the relationship between cats is not harmonious, one cat may feel threatened when trying to get to the litter box and choose to go elsewhere. Most cats prefer privacy when they eliminate. If the litter box is located in a high traffic or noisy area in the home, the cat may avoid it. Moving the pan to another quieter location may encourage the cat to return to litter box use.

How can I stop the cat from eliminating on spots in the home?

A cat may not use the litter box if it prefers another location. This can often be determined by a careful history into where the elimination is found. If it is always found in one place, this indicates a location preference, while elimination on one particular surface type or texture (such as carpeting or tiled floors), indicates a substrate preference. For treatment, if it is happening in only one or two places, the cat should be prevented from being in that location without supervision. When no one is home, or you are asleep, the cat may need to be confined. When you are at home, you should always know where the cat is. This can be accomplished by watching the cat or by using a bell on an approved cat collar or a leash and harness. Alternately, the location could be made aversive to the cat using devices mentioned in other sections. If the cat does not like where the litter box is due to disruptions in that location, moving the box to a quieter, more secure location may also aid in getting the cat to return to regular litter box usage. The surface can be made less appealing by changing the surface texture (remove the carpeting), or by making the surface uncomfortable (double-sided sticky tape, a plastic carpet runner with nubs up, remote punishment or booby-traps). In some cases, access to the area can be permanently prevented by closing off doors to the area, by putting up barricades, or confining the cat away from the problem area. The appeal of the surface can also be reduced by eliminating all odors that might be attracting the cat back to the area by cleaning and then by applying commercial odor neutralizers. Sometimes changing the function of the area by turning it into a feeding, playing, sleeping or scratching area may reduce the cat's desire to eliminate in the area.

How can we make the litter area more appealing?

Besides making the location where the cat has eliminated aversive or inaccessible, the litter box needs to be made attractive to the cat. From the history, it may be possible to first determine some of the reasons that might be deterring the cat from using its litter box or litter area and these can first be resolved to increase the appeal of the litter. For example, more frequent cleaning, or switching litter materials may be all that is needed. Then, try to determine what litter, location, and type of box might be preferable to your cat.

How can I tell what my cat would prefer?

To determine the most suitable litter for your cat, first determine what type of litter your cat seems to be avoiding and what type of surface your cat prefers to use. Then set up two boxes that are identical and fill

the boxes with two different types of litter. Some cats may prefer a clumping litter, cedar shavings, recycled newspaper, or plastic pearls. For cats that prefer solid or hard surfaces, an empty litter box, or one with minimal litter might do. A carpeted ledge around the box, artificial turf or some discarded or shredded carpet might help to increase the appeal for cats that prefer to eliminate on carpets, while some potting soil or a mixture of sand and soil, may be preferable for cats that eliminate in plants or soil. Making a good choice may require a little imagination and should be based on the type of surfaces in the home on which the cat is eliminating. If you prefer scented brands of litters, make sure this is also acceptable to your cat by comparing to an unscented brand. In your preference testing, if you find one litter type that is a clear favorite, discard the second type and continue your testing with other products. For cats that use hard surfaces you could also try an empty litter box, while cats that prefer carpet, may do better with some carpet strips, artificial turf or a carpeted ledge around the box.

To determine the most suitable box for your cat, you might want to look at the design of the box and find different types for preference testing. Use the litter type that was most preferable to the cat and try it in a variety of boxes to determine what the cat prefers. You might consider boxes with hoods and no hoods, a very large box, such as a plastic storage container, a box with lower sides or a ramp for access, boxes with or without litter liners and perhaps even self-cleaning types of litter boxes (appealing to some cats and frightening to others).

To determine if the cat has a clear location preference, you might begin by a litter box in the location where the cat eliminates. If the cat uses the box in that location, it should be left there for one week. Then the box can slowly be moved to a new location. This needs to be done very carefully to be sure that the cat follows the box and continues to eliminate in the litter box as it is moved. Most importantly, the box should be moved only 6-8 inches at a time. Then it should be left in each place at least one day. When trying to go from one room to another, or up or down stairs, longer distances can be covered as long as the cat follows the box and continues to use it. A room with better access or lighting or an area with more or less privacy from owners and other pets might be preferred. By altering the location of the litter box you might even be able to find something that has been deterring the cat (toilet, furnace etc) in the previous location.

I've made the litter more appealing and the house-soiling areas less appealing but the cat continues to eliminate in inappropriate areas. What next?

Even after making the litter area more appealing, decreasing the appeal of the soiled areas, and perhaps anti-anxiety drugs for anxiety induced or marking problems, the habit may persist. Confinement to an area with bedding, water and a litter box (and away from the areas that have been soiled) is often necessary to re-establish litter box use. Generally a small room such as a laundry room, extra washroom, or bedroom where the cat has not previously soiled should be utilized. Also be sure to confine your pet in an area where the litter box and litter area are appealing, where there are no obvious deterrents, and that has surfaces that the cat is unlikely to soil. In rare cases where the cat will not use its litter box at all, confinement in a cat cage with perches or a large dog cage with a floor pan covered in litter and a ledge for perching and sleeping may be needed to get the litter use restarted. Most cats will require confinement to this area for one to four weeks, (the longer the problem the longer the confinement period) to re-establish good litter use. Confinement however, may not be required all of the time. For example, if the cat only eliminates out of its box at night, or when the owners are preparing for work, then these are the only times that the cat may



need to be confined. Many cats, when supervised will not eliminate in the inappropriate areas so that these cats can be allowed out of confinement when the owner is available to supervise. It may also be possible to allow cats out of confinement with minimal supervision for the first few hours after the cat has eliminated in its litter box. Allowing release from confinement and some food treats immediately following elimination may also serve to reward use of the litter box. Over time, cats that have been confined are gradually given more freedom and less supervision. However, there will be some cats that will use the box in confinement but once back out in the home revert to elimination in other locations.

I am finding the urine on vertical surfaces like walls and backs of furniture. What does that mean?

When cats urinate on vertical surfaces, it is known as spraying. This is a feline marking behavior. Usually the cat backs up to a vertical surface, raises their tail, treads with their back feet, the tail may quiver and a stream of urine is directed backwards. Marking includes spraying urine on vertical locations as well as elimination of small amounts of urine in multiple locations and occasionally defecation. A behavioral history should help differentiate marking behavior from other elimination behavior problems. A cat may mark due to the presence of other cats both inside and outside of the home. Many behaviorists feel that cats mark their environment in response to “stress” or anxiety. Spraying and marking cats are covered in a separate handout ‘Marking behaviors in cats’.

What are the general treatments for elimination problems?

Treatment focuses on modifying both the environment and pet to re-establish regular litter box usage. Commonly the cat will need to be confined when it can’t be supervised. The litter material, box and location may need to be made more appealing (or remove those factors that are reducing the appeal). The cat will need to be prevented or deterred from returning to the soiled areas, and if there is an anxiety or marking component drugs may be useful. Litter trials (using two or more litter types), location trials (using two or more locations) and litter box trials (using two or more different box types) may be useful for determining the cat’s preferences (see our handout on ‘House-training – using the litter box’ for details).

Are drugs useful in treating this problem?

Drug therapy can be a helpful adjunct where stress, anxiety, marking or a medical component is involved. It requires a thorough understanding of the indications, contraindications and potential side-effects of the various drugs. An accurate diagnosis is needed to determine if such therapy will be helpful and which drug to choose. If the behavior is due to a surface substrate preference, location preference or any type of aversion, drug therapy is unlikely to be helpful. Commonly used drugs include buspirone, antidepressants and benzodiazepines.

My cat is defecating outside of the litter box, what should I do?

Much of the same information as for a urination problem is needed to make a diagnosis in defecation problems. If the defecation is found in a linear pattern be sure to ask about intercat aggression (the cat is defecating while fleeing) and possible constipation. Cats may defecate outside of the litter box if they are mildly constipated, so this should be evaluated, especially in older cats. If medical problems are ruled out, the same diagnostic and treatment considerations as in urine house-soiling will need to be considered.