



Guide To Feline Inappropriate Elimination

Feline elimination problems are the leading behavioral complaint of cat owners. An adult cat without elimination problems will use the litterbox an average of 5 times per day – that's a lot of potential for problems! Most people don't realize that there are different categories of elimination problems – medical and behavioral, and sometimes a little of both are involved.

There are three main diagnostic categories of elimination problems:

1. **Medical**
2. **Marking**
3. **Toileting Problems**

A cat with elimination problems must always receive a thorough physical examination by a doctor. The technician and doctor will obtain detailed history from you and your doctor may choose to perform certain diagnostic tests to rule out and/or address underlying medical issues.

A complete history given to the technician or doctor is essential for the proper diagnosis and treatment of feline elimination problems. The history should include information about:

1. **Frequency and pattern of elimination or marking** (*number of episodes per week or only when owner goes out of town, etc.*).
2. **Locations** (*cat only sprays near one window, etc.*).
3. **Substrates** (*cat only eliminates on carpet, etc.*).
4. **Elimination behaviors** (*whether cat digs prior to and tries to cover afterwards.*).
5. **Litterbox history** (*type of litter, any changes in litter, type of box, location of box, etc.*).
6. **Corrections and cat's response to corrections** (*you yell at the cat when you find a spot and the cat hides under bed, etc.*).
7. **Social environment and history** (*new cat in neighborhood, new baby in family, etc.*).
8. **Cleaning strategies** (*how often you scoop the litterbox, and how often the litterbox is dumped, wash and replaced with new litter.*).
9. **Diet history** (*type of food, feeding schedule, and any dietary changes.*).
10. **Medical history** (*history of urinary tract infections, urine crystals, etc.*).

If the cat is urinating inappropriately, the doctor will probably want the following diagnostic work-up to include:

- **Urinalysis** (sterile sample collected directly from the bladder) and urine culture and sensitivity (if an infection is suspected)
- **Complete blood count (CBC)**
- **Full or partial blood chemistry panel** (to rule out insufficiencies or problems with organs such as the kidneys)
- **Thyroid profile** (usually in older cats)
- **Radiographs** (if bladder stones or similar problems are suspected)

If the cat is defecating inappropriately, the doctor will probably want the following diagnostic work-up to include:

- **Complete blood count (CBC)**
- **Full or partial blood chemistry panel** (to check for organ-related problems)
- **Thyroid profile** (usually in older cats)
- **Rectal exam w/ anal gland evaluation** (to check for masses, impaction, etc)
- **Fecal flotation** (to check for internal parasites)
- **Radiographs** (to evaluate internal structures for abnormalities if suspected)

Medical Problems

There is a wide range of possibilities and diseases that are associated with medically-based elimination problems, including diseases of the bladder, gastrointestinal tract, endocrine system and musculo-skeletal system. This is why such a wide range of diagnostic testing is necessary. Your doctor needs to establish the exact cause of the inappropriate elimination to be able to properly treat the problem.

Many cats get urinary tract infections or urine crystals which makes urinating very painful. They associate the pain of urinating to the litterbox itself and will therefore try to find an alternate place to urinate to avoid the pain. Makes sense, right?





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In cases of a urinary tract infection, your doctor will want to send a sample of urine to an outside laboratory to establish the exact type of bacteria present (called a Urine Culture and Sensitivity test). This will allow her to prescribe the best antibiotic to kill off that specific bacteria. In the meantime, (while the results of the urine culture are still pending), the doctor will most likely prescribe a broad-spectrum antibiotic for your cat that is good at treating a wide range of infections. Also, in cases of a long-haired cat, the fur in the rear-area may need to be kept short to discourage stool and dirt from accumulating and re-infecting the area.

For urine crystals (which form when the pH of your cat's urine gets too high or too low), your doctor may prescribe oral medications corresponding to the specific pH of the urine. For example, if your cat's urinary pH is too acidic, a buffering medication will likely be dispensed, and vice versa. Also, there are prescription foods that your doctor may recommend that will effectively maintain the pH of your cat's urine, once it is at an acceptable level.

There are also problems associated with the kidneys, thyroid function, and musculo-skeletal system that may be to blame for your cat's inappropriate elimination. If your cat has a renal (kidney) insufficiency, he may have to urinate more than what is normal and simply cannot make it to the litterbox on those occasions. Also, arthritis may make climbing into a high-walled litterbox virtually impossible so your cat will find a place that is more easily accessible to eliminate.

Marking Problems

Urine marking is considered a normal communication behavior in both male and female cats but is considered unacceptable in our homes. Sexual sterilization drastically reduces the incidence of urine marking; 90% of intact males show a significant decrease in marking behavior after being neutered. During estrus ("heat"), female cats show an increase in urine marking, therefore, spaying her will minimize this marking. Still, about 10% of males neutered before puberty and about 5% of females spayed before puberty show problems with urine marking.



Marking is a communication tool that often involves urine sprayed on vertical surfaces or small puddles of urine deposited on horizontal surfaces with special social significance. There usually isn't a pattern of substrate use (for example, not just on carpet but on a variety of different surfaces). Inappropriate defecation is rarely involved.

Social problems between cats are often present with urine marking. The motivation for urine marking may be territorial or involve anxiety and stress. Territorial marking behavior may be stimulated by multiple cats sharing a common living area or the arrival of new cats into an established territory. Situations that create anxiety or stress in a cat such as the addition of a family member, change in work schedules, moving or remodeling the house may also lead to urine marking.

Treatment of Urine Marking

To treat urine marking, you should generally be trying to reduce conflict and stress in the environment.

Stray cats and neighborhood cats should be discouraged from entering the territory of the resident cat. For example, if you feed the stray animals in the yard, this should be stopped. You may also need to block the view from windows if your cat is aroused by the presence of other cats outside the home.

If there is tension between cats in a household, the cats may need to be separated for time periods during the day or one cat may need to wear a bell so that the other cat can avoid interactions.

An "environment of plenty" should be created in multiple cat households. This involves creating multiple feeding areas, multiple elimination areas, and multiple single cat sleeping perches at different vertical heights throughout the home. Positive interaction time (playing with a toy or grooming) should be spent with each cat on a daily basis.

Adequate management of soiled areas and litterboxes may help to reduce marking. Clean urine marked spots with an enzymatic cleaner (*Nature's Miracle*) to discourage repeat spot marking. Provide one litterbox per cat plus one additional. Scoop the box daily and completely dump the box weekly.



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If there are only a few target spots for elimination, try to make those areas aversive by covering them with aluminum foil, placing upside down contact paper (sticky side up), placing upside down vinyl carpet runner (nub side up), or potpourri at the sites. Also, since cats are known not to eliminate and eat in the same spots, the cat's food and water can be placed at the soiled site after proper cleaning. However, be cautioned that if the actual cause of the marking is not addressed, the cat can simply choose another location to mark.

Other forms of marking such as bunting (facial marking) and scratch marking should be encouraged. To encourage scratch marking, scratching post and/or pads should be placed around the home, with the highest concentration in areas where the marking is occurring.

Feliway, a synthetic version of the feline facial pheromone, may help to encourage feline facial marking. It is assumed that cats will not urine mark in locations where they have previously performed facial marking. *Feliway* is also known to increase emotional stability in a variety of situations and thereby decreases urine marking. It has a 95% success rate when used for 30 days and comes as a spray or as a diffuser. To use the spray, apply one squirt per day in the area that is being marked for one month or until the cat starts facial marking that area, then decrease to once weekly until there are no relapses in the marking. The diffuser is plugged into a standard electrical outlet and provides a constant release of the pheromone over an area of 500-600 square feet and lasts for about one month. It should be continued until there is no relapse of the marking.

Even though pheromone therapy can be useful in treating urine marking, medications have been in use longer and are proven to stop marking. Before starting drug therapy, a physical examination, CBC, blood chemistry panel and urinalysis should be conducted on the cat. This is to make sure all organs are in good working order to metabolize and handle the effects of the medication. If the cat needs to stay on the medication long-term, regular (every 6 months) exams and blood screens will be necessary to evaluate the effects of the medications on the body systems. If a medication is effective at controlling the urine marking, it should be continued for an additional 2 to 4 months. Then you can attempt to wean the cat off the medication over 2 to 4 weeks by reducing the dose or the frequency of dosing. If there is a relapse in marking during the weaning process, return to the lowest effective dose and maintain treatment for another 2 to 4 months before attempting to wean the cat again. Oral medications are preferred over other routes of administration, because although transdermal creams are gaining popularity for ease of administration, little is known about their actual absorption rates and how well they actually work.

Toileting Problems

Toileting problems are often triggered by medical causes, litterbox aversions or preferences or anxiety. A cat with a toileting problem usually deposits significant quantities of urine and/or feces on horizontal surfaces. A substrate-use pattern is often identified (for example, always uses the carpet).

Litterbox aversion is a common cause of inappropriate toileting. If the litterbox is dirty, cats will often choose another, cleaner spot to eliminate. Each cat will tolerate a different level of litterbox cleanliness. However, if you suspect any sort of litterbox aversion, the litterbox should be kept scrupulously clean. Aversion may include the location of the box, style of the box and type of litter.

Anxiety is sometimes the cause of inappropriate elimination. Cats that have been ambushed by another household pet when previously using the box may be nervous about placing themselves in that situation again. A cat that is uncomfortable with the presence of a new boyfriend or infant in the house may be too anxious to walk past those new family members to access the box. This is social anxiety at work.

Treatment of Toileting Problems

The focus of treating toileting problems should be based on providing a very attractive litterbox while reducing the attractiveness or accessibility of inappropriate target spots. The soiled areas should be cleansed with an enzymatic cleaner (*Nature's Miracle*) to discourage repeat spot soiling and you can use the techniques described above to make a spot less desirable (up-side down carpet runner, etc).

If your cat has an aversion to the style of box, substrate, or location, let him tell you what he prefers. To determine substrate preference, place two boxes right next to each other, one





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containing sand-like scoopable litter and the other containing clay litter. The cat will promptly determine which he prefers if given the choice. Next, if you usually keep litterboxes with hoods, put one with a hood and one with no hood right next to each other. Once you have determined substrate and style preferences, place numerous boxes of the cat's preference at different areas around the house, including different levels of the house. Now you should know exactly what your cat prefers which will dramatically decrease the problem of litterbox aversion and anxiety.

Studies show that unscented, scoopable (clumping) litter in un-lined and un-hooded litterboxes is preferred by most cats. Kittens naturally seek out sand-like material for elimination after about 5-6 weeks of life, so adult cats will probably be more inclined to prefer the sand-like quality of scoopable litter.

If the cat has chosen one or two areas in the house to eliminate, the new attractive litterbox should be placed at those locations. If the cat uses the box, it can be gradually (1 inch per day) moved to a more appropriate location, if necessary.

Litterboxes should be scooped at least once daily, preferably twice daily. A minimum cleaning schedule involves completely changing clay litters weekly and scoopable litters once every other week. Litterboxes in a home should equal the number of cats plus one additional. They should also be the correct size (a 16 lb. cat will need a jumbo-sized litterbox). Uncovered litterboxes are preferable to covered boxes because "out of sight is out of mind" and owners will often forget to clean the covered boxes. The litterboxes should be placed in easily accessible locations around the home.

This may seem like kind of a given, but do not disturb the cat when it is using the litterbox. Never attempt to give medications when the cat is using the litterbox, and children and other pets should not be allowed to harass the cat when it is using the litterbox.

With both marking and toileting problems, avoid punishing the cat when soiled areas are discovered. If the cat is caught in the act of eliminating inappropriately, use a startle technique (clap loudly or sharply say the cat's name) to stop behavior, but realize that this will not solve the problem.

Although getting your cat back into the litterbox is challenging, it is possible. Remember that every cat exhibiting inappropriate elimination of any sort needs to have a thorough physical examination by a doctor, a possible diagnostic work-up, and complete historical evaluation. After a diagnosis is made, whether it be medical or behavioral, a rational therapeutic plan can be discussed and tailored to fit your specific situation.

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