



Is it a UTI or is it Pandora Syndrome? How to Read Your Cat's Stress Signs

Have you ever noticed your cat urinating outside of the litter box? This is termed "litterbox avoidance," and it can occur for a multitude of reasons. These reasons include an unclean litterbox, poor litterbox location, inaccessible litterbox due to bullying by another cat or dog in the household, or an association of painful urination with the litterbox itself. As clients begin to note these signs, the first instinct is to call your veterinarian for a "possible bladder infection." However, infection is often not the culprit at all.

The Vet Visit

Upon entering your appointment, the veterinarian will perform a complete physical exam and, often, several diagnostics including a urinalysis and imaging (x-rays). The veterinarian will also take into account the patient's medical history and environmental risk factors. Lower urinary tract signs, as described above, are extremely common in cats. These signs can be the result of a UTI, crystals in the urine, bladder stones, an obstruction of the urethra, or stress. When the diagnostic tests are normal (and they often are!) the diagnosis of Feline Idiopathic Cystitis (FIC) may be assigned. Simply, this is a term for inflammation of the bladder due to stress. In fact, this is the **most common** cause of lower urinary tract symptoms in cats. However, the frustrating fact is that there is not one specific test that can confirm this diagnosis. Nevertheless, cats with FIC tend to have several characteristics which include:

- Exclusively or almost exclusively kept indoors
- Younger than 10 years old
- Obese
- Living in a multi-cat household
- Known to have had previous bladder/urinary issues
- Generally described as being "nervous"

The Culprit? Stress.

Just like humans, stress can have severe effects on the bodies of cats. Cats, being both predators and prey, have a tendency for a strong flight response. With constant stress in the environment, cats can have a severe response where the stress becomes fuel for the creation of urinary issues, specifically FIC. It is their inability to adapt to the environment that creates chronic high stress. This inability to manage stress affects the bladder and other body systems (the immune system, GI tract, the heart, the skin, and the lungs) (See Table 1). This begs the question: Is FIC truly a bladder condition or just one side effect of a broader condition?

Table 1: Manifestations of Pandora Syndrome

Body System	Manifestation
Behavioral	Hiding, aggression, eating abnormal objects, urinating in inappropriate locations
Cardio (Heart)	Blood clots, cardiac disease
Metabolic (Hormonal)	Obesity, Type 2 diabetes
GI Tract	Vomiting, excessive hairballs, diarrhea, dental disease, finicky eating
Immune System	Upper respiratory infections
Respiratory	Asthma
Skin	Overgrooming, chin acne
Urinary	Bladder stones, FIC, spraying, chronic kidney disease

Treatment: A Multifold Path

Before long term management strategies can be addressed, the initial bladder pain and discomfort must first be managed. This usually includes pain management and anti-inflammatories prescribed for at home or more intensive therapy in a veterinary hospital. For more long-term management, the client must create a sense of stability and predictability for the cat, which aims at reducing stress in the home setting. We recommend the following 9 areas of treatment which focus on the cat's environmental needs:

- 1. Safety:** Provide safe places for the cat to watch over activity or hide. Provide multiple resting places according to the cat's preference. Ideal places include window seats, cat trees, covered cat beds, or accessible cubbies on the bottom of a bookshelf.
- 2. Pheromones:** These are chemicals that cats naturally secrete to transmit specific information to other cats.
 - a.** One synthetic pheromone is a diffuser that mimics the calming pheromones emitted by female cats while nursing their kittens. It is best used to decrease social tension in multi-cat households.
 - b.** Another synthetic pheromone mimics the pheromones transmitted through cats' facial glands to create a feeling of calm. This is a spray that can be used on blankets or as a diffuser at home.
- 3. Multi-cat Household:** It is essential that each cat in the household has its own set of resources (i.e. food, water, resting spots, and litter box) to prevent bullying by other cats.
- 4. Scratching Areas:** Scratching is a natural behavior for cats to communicate. To curb scratching of inappropriate items (i.e. furniture, carpet, etc), cat scratchers should be supplied based on the cat's preferences.
 - a. Up or Down?** Some cats like to stretch upward and some prefer digging into carpet
 - b. Texture:** Scratchers can be made of several materials (wood, cardboard, carpet, etc). If the cat is not using the current post, try switching materials.
 - c. Location:** Place scratching posts in prominent socially significant areas. If the cat is already scratching furniture or other items, place a scratching post next to those items.
 - d. Claw Management:** Trim the cat's claws regularly to decrease damage to household items. Soft plastic caps (Soft Paws) can be placed on the cat's claws to protect items from being destroyed.
- 5. Litterboxes:** Litterboxes should be offered with the following formula: [#of cats +1] litterboxes
 - a. Hygiene:** Scoop the litterbox daily. Ideally, wash the box completely with mild detergent at least monthly.
 - b. Location:** Locate the boxes in quiet, low-traffic areas that are easy to access. Spread them throughout the house to prevent one cat from blocking another's access. In a multi-story house, there should be 1+ litterbox available on each level.
- 6. Food and Water:** Food and water should be offered away from litterboxes and in multiple locations to prevent guarding by other cats. Like the litterboxes, food and water should not be placed in noisy or high-traffic areas.
 - a.** Some cats may be interested in re-circulating water fountains.
- 7. Social Interactions:** Cats often look to their humans as companions. It is important to offer play and snuggle time to each cat that enjoys these interactions. However, playtime should be initiated and ended by the cat.
 - a.** Offer a variety of games and toys; learn each cat's preferences.
 - b.** Training can provide a good bonding experience with cats. Clicker training is mentally stimulating for the cats (and is also impressive for social media videos!)
 - c.** If your cat enjoys affection, provide plenty of lap time and petting to reduce stress.
- 8. Solo Play:** Self-entertainment is great when the client is not at home. Start with 1 toy to gauge the cat's interest and then add, swap and rotate toys for environmental enrichment. Consider toys that dangle from door knobs, automatic laser toys, ball toys that can be filled with treats and chased around, etc.
- 9. Medication:** Sometimes medication is needed to control anxiety for cats when behavioral/environmental modifications do not seem to be enough to decrease anxiety levels. For these cats, the veterinarian will prescribe a medication based on each individual cat's anxiety. For cats that are difficult to give medications to at home, clients can try over-the-counter solutions, such as Pill Pockets, or they can have the medications tailored at a compounding pharmacy.

Conclusion

Pandora Syndrome is not always readily recognized but is extremely common in cats. Managing cats that display this syndrome does not have to be overwhelming. Your veterinarian can guide you through the changes that can ease your cats stress to alleviate some of the signs, such as urinary changes. With the appropriate steps and recognition, you can lessen the severity of your cat's symptoms, minimize the need for veterinary visits, and increase the cat's quality of life.

Dr. Alyssa Cornelius, DVM
CNY Veterinary Medical Services