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# Is Your Cat Stressed? It May Show Up as Feline Idiopathic Cystitis

February 21, 2014 | 17,307 views

## By Dr. Becker

If you're a cat parent, you may be familiar with the term *feline lower urinary tract disease*, or FLUTD. The disease is actually a collection of conditions that affects the bladder and urethra of cats.

Common causes of FLUTD include anatomic abnormalities, behavioral abnormalities, cystitis, urinary tract infection, uroliths (stones), neoplasia (cancer), neurologic disorders, and trauma.

Feline lower urinary tract disease is seen equally in male and female cats typically between the ages of two and six, who use an indoor litter box exclusively, are fed a dry food diet, don't get adequate exercise, are overweight, and who are stressed by their environment. About half the cats that experience one episode of FLUTD will have a recurrence.

One of the conditions under the FLUTD umbrella, and the most common, is feline idiopathic cystitis (FIC). About two-thirds of kitties with FLUTD have this form of the disease. Feline idiopathic cystitis is the technical term for inflammation of the bladder (cystitis) without a known cause (idiopathic).

## Feline Idiopathic Cystitis: More Than a Simple Bladder Problem

Recent studies of FIC point to the importance of stress reduction and environmental enrichment in treating cats with the disorder. In an Ohio State University study<sup>1</sup> of 12 healthy cats and 20 cats with FIC, it was observed that healthy cats behave as if they're sick when their routine is altered. For example, sickness behaviors like refusal to eat, vomiting and litter box avoidance tripled in healthy cats whose routines were disturbed.

The study also suggests that cats with FIC experience significant symptom reduction in an enriched environment. In cats with the disorder, symptoms improved by 75 to 80 percent when they were fed at the same time each day, their litter boxes stayed in the same location, and regular playtime was encouraged.

Dr. Tony Buffington, a professor at Ohio State University's College of Veterinary Medicine, in a study published in the *Journal of Internal Veterinary Medicine*,<sup>2</sup> suggests FIC is part of a larger disorder that he suggests be referred to as "Pandora" syndrome.

*"A name like 'Pandora' syndrome seems appropriate for at least 2 reasons," says Buffington. "First, it does not identify any specific cause or organ, and second, it seems to capture the dismay and dispute associated with the identification of so many problems (evils) outside the organ of interest of any particular subspecialty."*

In other words, the disorder called feline idiopathic cystitis can't be accurately assessed as simply inflammation of a single organ (the bladder) with no identifiable root cause. Instead, it appears to be the result of a potentially wide range of problems that extend beyond the bladder and lower urinary tract.

**'FIC appears to be associated with complex interactions among the nervous system, adrenal glands, and urinary bladder.'**

## Story at-a-glance

- Feline lower urinary tract disease (FLUTD) is a collection of conditions that affects the bladder and urethra of cats. One of these conditions – the most common – is feline idiopathic cystitis (FIC), which is inflammation of the bladder with an unknown cause. About two-thirds of cats with FLUTD have FIC.
- Recent studies of FIC point to the importance of stress reduction and environmental enrichment in treating cats with the disorder. In addition, it seems the disorder is more than simple inflammation of a single organ. FIC appears to be associated with interactions among the nervous system, adrenal glands and the bladder. Environment also clearly plays a role in the disorder.
- FIC is a diagnosis of exclusion, meaning there are no anatomic abnormalities visible via x-ray or ultrasound imaging, and a urinalysis with sediment examination and culture and sensitivity, rules out a bacterial infection.
- The treatment objective for cats with acute feline idiopathic cystitis is to reduce stress and provide pain relief as necessary. Reducing stress involves environmental modification and/or enrichment and has proved to be an effective tool in treating cats with FIC.
- Improved litter box cleanliness and placement, better access to fresh water and food sources, increased owner interaction, access to private areas, and a moisture-dense canned or raw food diet have all proved to improve symptoms in cats with FIC, and reduce flare-ups.

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According to Gregory F. Grauer, DVM, writing for *Today's Veterinary Practice*, FIC appears to be associated with interactions among the nervous system, adrenal glands and the bladder. Environment also clearly plays a role in the disorder. Some cases of FIC are linked to the GI, cardiovascular, respiratory, nervous, and immune systems, as well as the skin. The symptoms associated with other organ systems seem to increase and decrease in intensity similar to the symptoms of cystitis.

Symptoms of FIC directly related to the lower urinary tract include increased permeability of the bladder lining and wall, and decreased urine output. The causes of decreased urine output and frequency of urination include neutering of male cats, confinement, insufficient physical activity, insufficient water intake, dirty or poorly located litter boxes, aggression among cats in a multi-cat home, obesity, arthritis, and perhaps viruses.

According to Dr. Grauer, when we look outside the lower urinary tract, cats with FIC have symptoms of increased tyrosine hydrolase in the brain, increased blood levels of noradrenaline, decreased cortisol levels after ACTH stimulation, and increased uroepithelial paracellular permeability, all of which translate into an increased stressed response leading to increased inflammation and decreased bladder and urinary defenses.

The role of stress in kitties with FIC, while more difficult to quantify, is often revealed when symptoms are linked to recent events such as boarding, traveling, a new person or pet in the household, the use of pet sitters, or even inclement weather. Another stressor in homes with more than one cat is [intercat aggression](#) due to competition for food, litter boxes, space, etc.

## Diagnosing and Treating Feline Idiopathic Cystitis

Upon physical examination, an otherwise healthy cat with FIC with no urinary tract obstruction may have a small, easily expressed bladder; bladder walls that have thickened; pain in the area of the bladder upon palpation; and/or blood in the urine.

FIC is a diagnosis of exclusion, meaning there are no anatomic abnormalities visible via x-ray or ultrasound imaging, and a urinalysis with sediment examination and culture and sensitivity, rules out a bacterial infection.

Kitties with FIC typically have sterile urine, so they do not require antibiotic therapy. However, historically, cats with FIC were given antibiotics, and then when symptoms abated within five to seven days, everyone assumed it was due to the medication. However, the vast majority (around 95 percent) of young cats with signs of FLUTD or FIC have sterile urine, so when symptoms subside within a few days to a week, it has nothing to do with antibiotic therapy. It's simply the nature of the disorder that symptoms wax and wane. Controlled studies show that over 70 percent of cats with FIC also respond to placebo treatments.

The treatment objective for cats with acute feline idiopathic cystitis is to reduce stress and provide pain relief as necessary.

## Stress Reduction and Environmental Enrichment

Environmental modification/enrichment to reduce stress is proving to be an effective management tool for kitties with FIC.

Toward that end, [litter box cleanliness](#) is one of the most important aspects. Litter boxes should be cleaned frequently (scooped at least once daily and fully sanitized at least weekly). They should be located a distance from noisy areas, and should give cats easy access to and from them so there's no feeling of being trapped or unable to escape.

It's also important to have the right number of boxes (one for each cat in the household, plus one extra), as well as the size and shape your cat prefers.

In a multi-cat household, especially, access to more than one source of fresh water and food may help reduce stress, avoid intercat aggression, and increase water intake. It's also important that food and water stations are in safe, secure locations. In the wild, cats not only hunt prey, they *are* prey for other animals. They feel most vulnerable while eating, drinking or eliminating. This vulnerability creates stress when a cat's food dish or litter box is in a noisy or high traffic area.

Increased interaction between you and your kitty with FIC may also reduce her stress. Petting, grooming, and play activities that stimulate hunting behavior may help. Discover what type of toy (prey) she responds to and engage her in play.

Increasing your cat's access to private areas may also be beneficial, especially if there are other pets in the home. Your cat needs her own resting place and a hiding place (sometimes these are the same spot) where she feels untouchable.

I have had good success calming stressed out kitties with both [Spirit Essences](#) and [OptiBalance cat and kitten formulas](#). You might also consider [EFT](#) or [TTouch](#) for animals. I also suggest using [Feliway](#) pheromone spray, and homeopathic remedies. I have had the best success managing anxiety-based physical ailments using this modality.

Last but not least, if you're still feeding a dry food diet, I strongly encourage you to [transition](#) your kitty to a high-quality canned diet, and then to a raw diet, if possible. Studies show the benefit of moisture-rich canned and fresh food diets in improving the symptoms of FIC. In fact, in my experience, a balanced, species-appropriate canned or fresh food diet can prevent many cases of lower urinary tract disease in kitties because it eliminates dietary and metabolic stress.