

Idiopathic Cystitis in Cats

Wendy Brooks, DVM, DABVP

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(Also known as Pandora Syndrome and formerly known as FUS)

Feline lower urinary tract disease is the term describing the following group of clinical signs regardless of cause:

- bloody urine
- straining to urinate (can easily be mistaken for straining to defecate)
- urinating in unusual places
- urinary blockage (almost exclusively a male cat problem and constitutes an emergency)
- licking the urinary opening (usually due to pain).

Additional Resources

- [Lower Urinary Tract Disease in Cats](#)
- [Urinary Blockage in Cats](#)
- [Inappropriate Elimination \(House-Soiling\) in Cats](#)

A cat need only demonstrate some of these signs to be considered affected.

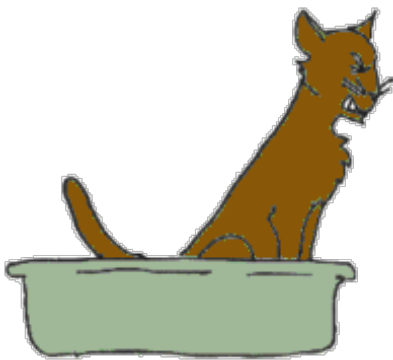


Illustration by Wendy Brooks, DVM

This syndrome has been described in cats for nearly 100 years and continues to be a common condition. The chief obstacle in eradicating this condition seems to be the fact any number of inflammatory conditions (infection, tumor, bladder stone, etc.) in the urinary bladder will produce the same symptoms. It turns out that the majority of young and middle aged cats end up having a condition called idiopathic cystitis, which, unlike stones and infection, does not show up as a concrete finding on a test; instead it is a psychosomatic problem that stems from inability to handle stress. If routine tests are negative in a younger cat with these symptoms, most likely the cat is suffering from FIC.

The urinary bladder is lined with glycoproteins called PSGAGs. This material basically insulates the tissue of the bladder from the urine it contains. Urine can vary greatly in pH and can contain abrasive crystals in addition to assorted toxins and irritants that the kidneys have removed from the bloodstream and concentrated.

If the lining of the bladder becomes patchy, the tissue of the bladder is directly exposed to the urine and inflammation results. The bladder PSGAG layer becomes patchy when the cat is experiencing anxiety. For decades, management of FIC focussed on reducing urinary

crystals, changing urinary pH, and improving the PSGAG layer of the bladder. What seems to be the most effective approach is addressing the stress that caused the problem in the first place.

The Clinical Course of FIC: Recurrent, Painful, and Stress-Related

As the struggle to understand this common but confusing syndrome continues, some features of FIC have been observed:

- Lower urinary tract signs tend to recur and most cats will probably have another episode eventually depending on environmental stresses.
- There is an association with environmental stress or change.
- FIC seems to be a younger cat's problem with episodes decreasing in frequency as the cat gets older.
- Urinary [crystals](#), previously believed to be central to the syndrome, seem to be involved only peripherally.
- Numerous therapies have been used to curtail the episode once it has started but because the episode seems to last a week or two regardless of treatment, it is hard to be sure what is working.
- As difficult as it is to address an episode in progress, more success has been achieved in preventing future episodes.

No therapy has been found successful in curtailing an episode that has already started. During the active episode, all we can do is manage the cat's urinary pain/spasms and get started on managing the environmental stress that triggered the condition in the first place.

Male cats can develop a [urinary obstruction](#) from the mucus and crystals associated with this condition. If your cat is male, it is crucial to be sure he is able to urinate and if there is any question about that, he should be taken to the vet immediately.

Treatment of the Unobstructed Cat with Active Symptoms

Such patients include:

- Most female cats with FIC.
- Male cats with FIC that do not have a urethral obstruction.
- Male cats with FIC who have had their urethral obstruction relieved but are still suffering from their present FIC episode.

As we have mentioned, no definitive therapy has emerged for reliably curtailing the episode but we can do several things to make the cat more comfortable.

Anti-spasmodics and Tranquilizers

These medications help the painful urethral spasms that occur with the inflammation associated with the episode. They also help the urethra dilate so that urine can pass. Typical medications might include: acepromazine, phenoxybenzamine, prazosin, or diazepam.

Analgesics

These medications may be straight pain-relievers with no anti-inflammatory effects or actual anti-inflammatory pain relievers. Typical medications might include the [fentanyl](#) patch, [buprenorphine](#), [tramadol](#), [robenacoxib](#), or others. FIC is quite painful and proper pain relief is crucial.

If the cat develops a full or partial urinary obstruction during the episode, ***THIS IS AN EMERGENCY*** and the obstruction must be relieved at once. If dangerous urinary toxins have built up, intravenous fluid therapy will be needed to reverse the life-threatening situation. This condition is almost exclusively seen in male cats.

Why Do only some Cats Get FIC?

We know that cats that get this syndrome have a unique imbalance in the way their brain controls hormones. These cats are neurologically different in a way that makes them extra reactive to any change in their world, extra anxious, and extra sensitive to pain relating to the back half of their bodies. They are different from other cats but as long as they live in a predictable environment with the same food, same schedule, private food, rest and toilet resources etc., you might never know you had a sensitive feline in the family. Typical or common triggers for FIC might include:

- Stress among the humans in the home (final exams, arguments, sickness etc)
- Someone (or another animal) moving in or out
- Construction in the home or outdoors
- Weather change or earthquake
- New furniture
- Moving to a new home
- Changing to a new brand of food
- Humans changing schedules as to when they are home.

FIC cats are very sensitive and can flare up with symptoms over events that humans frequently discount or pay no attention to. Most pet owners, however, are aware that the cat in question has a personality that is somewhat anxious or sensitive.

Preventing Future Episodes

Environmental Enrichment

Many people are surprised to find that environmental enrichment is effective in preventing future FIC episodes. You might think your cat has plenty of toys and seems relaxed and well-adjusted but reality is that the cat's natural environment of living in the forest and hunting/eating mice regularly throughout the day is a far cry from sitting on a sofa, eating processed foods, and eliminating waste in a plastic box filled with clay. Most cats are fine with the domestic lifestyle but the FIC cat is special and has special sensitivity. Stress can be minimized by allowing choices for the cat in terms of areas for playing, resting, eating, and eliminating. Just providing more toys is unlikely to be adequate. Most of the time the cat in question needs a private area for "me time" (separate feeding, rest, and/or toileting area).

The American Association of Feline Practitioners has published a set of guidelines for an [enriched feline environment](#). The bottom line is:

- Each cat should have the opportunity to play with the owner or with another cat if desired.

- Each cat should be able to move freely about its home including climbing if desired.
- Scratching posts should be available.
- Toys should be regularly rotated/replaced.
- Each cat should be able to choose warmer and cooler areas within the home.
- There should be a litter box for each cat, ideally plus one extra. Litter boxes should be located in well-ventilated areas and should be kept clean. Boxes should be washed out weekly with a minimally scented detergent. Unscented clumping litter seems to be best. If there is more than one floor in the home, there should be a box on each floor.
- Litter boxes should be private enough that other animals will not be bothering the cat and loud appliances will not startle the cat during litter box use.
- Each cat should have his own food and water bowls. Feeding/watering stations should be safe so that other animals (like dogs) will not be startling the cat. Bowls should be washed daily.
- The brand, flavor, or format of the food (dry vs canned) should be kept fairly constant. If it is changed, allow the cat a choice of new food vs. old food at least for a while before changing over and do not change more than once a month.

Another excellent resource is the [Indoor Pet Initiative](#) sponsored by the Ohio State University.

Canned Food and Urinary Formulas

For decades, FIC was felt to be dietary in origin. In fact, when feline commercial foods were reformulated in the 1980s to create a more acid urinary pH, the incidence of feline cystitis dropped spectacularly. Urinary crystals (usually [struvite](#)) are important in the male cat syndrome of urinary obstruction which is a complication of FIC and scientific studies have found benefit to using urinary diets to prevent future FIC episodes.

Studies seem to indicate that canned urinary formulas are more successful than dry. The increased water content of canned food is usually credited for this, but it has also been proposed that it is the aroma, sight and sound presentation and owner interaction involved in feeding canned that makes the difference. Still, increasing water consumption is frequently recommended to decrease future episodes of FIC.

Some cats may benefit from medication and/or supplements for anxiety (see our [House-Soiling](#) information).




What if My Cat Doesn't Seem to be Anxious?

If your cat does not seem to fit the picture or there has been no obvious stressor at home, keep in mind the FIC diagnosis is exclusionary, which means other tests are negative. Be sure diagnostics have not been skipped (urinalysis, ultrasound of the bladder etc.). FIC is the most common diagnosis in younger cats with lower urinary symptoms but it is best not to play the odds and miss a bladder infection or stone.

It is worth mentioning again that male cats with FIC can develop a life-threatening obstruction that is an emergency.

If you have a cat who is straining in the litter box, urinating in unusual places, or demonstrating any of the signs listed at the top of this page, be sure to see your veterinarian promptly.

Related resources

- [Lower Urinary Tract Disease in Cats \(also known as FLUTD\) - May 10, 2019](#) 
- [Urinary Blockage in Cats - July 19, 2018](#) 
- [Inappropriate Elimination \(House-Soiling\) in Cats - July 10, 2018](#) 

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