

# Feline Lower Urinary Tract Signs/Disease, Idiopathic

## ABOUT THE DIAGNOSIS

Feline urinary syndrome (FUS), feline idiopathic cystitis (FIC), and feline lower urinary tract signs or disease (FLUTS/D) are interchangeable names given to the same cluster of urination-related symptoms that cats often display when they experience bladder problems. These symptoms include straining to urinate, frequent urination, bloody urination, urinating outside the litter box, pain while urinating, and urinating small frequent volumes. The unifying theme in these symptoms and syndromes is that there is no infection, no bladder stone, no behavioral cause, and no identifiable defect in the urinary system. In other words, FLUTS/D is a disorder of inflammation and pain that makes urination uncomfortable for cats but that has no defined cause. It is a very common problem in cats.

A cat is known to have this disease when he/she shows some or all of the symptoms described above in the absence of all other urinary disease processes. Therefore, a series of tests is always necessary to try to identify other problems, such as a bladder infection or bladder stone, which might cause symptoms similar to FLUTS/D but which would require specific treatment (certain antibiotics, or stone-dissolving medications or diets, or even surgery) to alleviate an identifiable problem. Tests that are used for assessing urinary problems in cats include a complete blood panel, urinalysis, x-rays, urine culture, and abdominal ultrasound. When a cat has symptoms of urinary difficulty and these tests produce normal results, then FLUTS/D is considered to be the cause.

The characteristic problem of FLUTS/D is inflammation of the urinary bladder (cystitis). The protective mucous layer that lines the inside of the urinary bladder is deficient in cats with FLUTS/D, which allows the harsh chemicals of the urine to contact the deeper tissues of the bladder, causing irritation of the bladder wall. While much is known about the symptoms and characteristics of cats with FLUTS/D, the exact cause of the disorder remains unknown. In this manner, FLUTS/D is almost identical to a similar urinary syndrome, interstitial cystitis, which occurs in humans, especially middle-aged women.

In some cats, the diagnosis of FLUTS/D may be unclear. A good source for a second opinion is an internal medicine specialist veterinarian (directories: [www.acvim.org](http://www.acvim.org) [North America]; [www.ecvim-ca.org](http://www.ecvim-ca.org) [Europe]) and you should speak with your veterinarian about seeing one of these specialists as necessary.

## LIVING WITH THE DIAGNOSIS

First and foremost, it is essential to determine if a cat with these symptoms has an identifiable and treatable disease that can be eliminated using appropriate treatments (antibiotics for a bacterial infection, diet therapy or surgical removal for stones, etc.). This requires the tests described above. Without these tests, inappropriate medications and unsuccessful outcomes (symptoms persist or worsen, adverse reactions to medications) are common.

Second, if the tests are negative, which confirms FLUTS/D (by exclusion), other potential causes of inappropriate urination need to be eliminated from suspicion. A simple and vital preventative step you can take is to make sure that the household has several litter boxes (one for each cat, plus one additional box) and that they are entirely cleaned daily. It can be useful to observe your cat urinate to make sure the cat squats (not standing and marking vertical surfaces) and to observe the volume of urination. Is the puddle the size of a quarter? Is it like a cup of water spilled? This

information will be extremely useful to the veterinarian in assessing the possibility of FLUTS/D.

Third, a factor that is commonly felt to cause or worsen FLUTS/D is stress. This may be identifiable (construction in the home, recent move, a new baby, puppy, or kitten in the home), or it may be more subtle. Reducing and removing stress when possible will often help or even eliminate symptoms of FLUTS/D.

Finally, if the stress initiator cannot realistically be removed, then there are some medications that may be beneficial.

Often symptoms will resolve on their own within a few weeks, independent of any medication or changes in the home. The difficult problem is that symptoms often come back. Some cats can have a bout of FLUTS/D that lasts a couple of weeks and resolves on its own without treatment and never have a problem again. Other cats with FLUTS/D develop symptoms every couple of months and have problems for weeks on end each time. Your cat may be on either end of this spectrum of severity or somewhere in the middle.

## TREATMENT

Increase water intake. Ways of encouraging cats to take in more water include: providing plenty of clean and fresh water sources; making sure that bowls are cleaned regularly and water is changed frequently (at least twice daily); providing wet cat foods; and providing a source of moving water (purpose-made cat water fountains or just leaving a faucet that is accessible to the cat to drip several drops per minute). The goal behind increasing water intake is to dilute the urine, which is less irritating to the inner lining of the bladder surface.

Psychological therapy involves identifying and reducing or removing stressors in the environment. Separating cats into different rooms of the home can be useful if the cats have a tendency to fight or don't seem to get along. Providing a perch near a closed window so a cat can be distracted by the outdoors also can be helpful. Your veterinarian can provide additional information on important and simple techniques for environmental enrichment that may be as effective or more so than medications. An excellent source of information is a veterinary website dedicated to this issue: <http://indoorpet.osu.edu/cats/>.

Hormonal or pheromone therapy has been suggested and recommended by many veterinarians. There are several over-the-counter (nonprescription) products that are claimed to provide calming hormonal stimulation. Few if any of these has been scientifically tested. There are many people who subjectively feel these provide significant benefit.

Glucosamine and chondroitin supplements are used for treatment of arthritis by many veterinarians and physicians. It has been theorized that there may be benefits to an inflamed bladder if a cat is given a glucosamine and chondroitin supplement. This is because the mucous layer of the bladder lining and the protective fluid of the joints are very similar chemically. Many glucosamine and chondroitin supplements have been shown to be nontoxic and have few side effects, but their benefits are unclear and still somewhat controversial. Use of glucosamine and chondroitin therapy in cats with FLUTS/D shows some promise, but it is not a wholly curative therapy.

Nonsteroidal antiinflammatory drugs have been theorized to aid in cats with FLUTS/D by directly reducing the inflammation of the bladder and/or providing pain relief. A very limited number of these

drugs is tolerated well by cats, essentially all by veterinary prescription only. Be careful to NEVER give an antiinflammatory pill or syrup to a cat if it is a human medication; many of these are toxic to cats, and have been fatal with just one dose. Even prescription nonsteroidal antiinflammatory medications designed for cats may cause adverse side effects including gastrointestinal irritation, gastric ulceration, and kidney damage. These medications should be administered only after consulting with your veterinarian, at appropriate doses, and with frequent recheck to monitor for signs of adverse side effects.

Opioid drugs are prescription analgesics (painkillers) that have been used for breaking the “pain cycle” of bladder irritation and to provide relief from symptoms. These drugs are often difficult to prescribe and administer outside a hospital setting, so they are reserved for cats whose pain level is so high that they require hospitalization. These drugs also can have significant side effects and the hospitalization should include patient monitoring for these effects.

Anti-anxiety and psychotropic drugs are available for cats, and these also have shown some promise for treating FLUTS/D. While few if any of these have been appropriately scientifically tested, they seem to help individual cats and can be considered in difficult or persistent, recurrent cases.

### DOs

- Test for—and eliminate the possibility of—different urinary diseases that could produce symptoms that mimic FLUTS/D but actually are entirely different and require completely different types of treatments.
- Try to make realistic and reasonable adjustments to your household to reduce stress.
- Provide plenty of clean litter boxes.
- Try to increase water intake, provide clean fresh water, and wet cat foods.
- Consider trying over-the-counter “de-stress” hormones or pheromones as part of the treatment plan.
- Consider glucosamine and chondroitin supplementation. Cats only need a small amount; consult your veterinarian for appropriate dosages. This can often be sprinkled on food, which means there is no need to administer a pill.
- Consider nonsteroidal antiinflammatory or opioid therapy; these should be done under the guidance of your veterinarian for extreme cases. Follow-up monitoring is important with these drugs.

### DON'Ts

- Don't give up. Often, symptoms resolve on their own and may never come back. Give your cat some time to heal.

## WHEN TO CALL YOUR VETERINARIAN

- Recurrence of symptoms.
- If symptoms change (urinating larger volumes, foul-smelling urine, worsening signs of pain, etc.).
- Signs of secondary side effects of medications including poor appetite, vomiting, diarrhea, and lethargy.

## SIGNS TO WATCH FOR

Your veterinarian may ask you certain questions about what you see your cat do. Knowing the answer to these questions can be very helpful in determining the severity of FLUTS/D, or even whether an alternate cause is the problem instead.

- How is your cat actually urinating? Squatting or standing? Small amounts or large? Blood? Odor worse than normal?
- Where is the cat urinating? On the bed? In the laundry, etc.? In one particular place or all over the home?
- When is the cat urinating? When you have guests? During the day or at night, etc.? This information can help with the initial diagnosis and, of course, is useful for monitoring how the problem is evolving—deteriorating or improving.

## ROUTINE FOLLOW-UP

- Follow-up should be tailored to the specifics of each cat. Some cats will need more frequent rechecks (for example, if taking daily medications). Others will respond quickly and will need few if any rechecks. Your veterinarian can provide guidelines for rechecks that are appropriate for your individual cat.

*Other information that may be useful: “How-To” Client Education Sheet:*

- How to Collect a Urine Sample



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