



Feline Lower Urinary Tract Disease And Feline Interstitial Cystitis

What is Feline Lower Urinary Tract Disease?

Feline lower urinary tract disease, or FLUTD, is not a single disease but a term that describes a number of conditions that affect the bladder and urethra (tube carrying urine from the bladder to the outside of the body) of cats. It is most commonly seen in cats that are less than 10 years old, overweight, live an indoor lifestyle with little exercise, and eat dry food.

What are the signs of FLUTD?

Regardless of the underlying cause there are several signs that cats with FLUTD often demonstrate:

- Straining to urinate
- Frequent or prolonged attempts to urinate
- Crying when urinating
- Excessive licking of the genital area
- Urinating outside the litter box
- Blood in the urine

* These signs are also seen in cats with an obstructed urethra, which is an emergency requiring immediate medical treatment. **If you see these signs and your cat produces little to no urine and is becoming increasingly distressed, call us immediately.**

What causes FLUTD?

Urolithiasis – bladder or urethral stones. This occurs when minerals from the diet that are normally urinated out collect to form a stone. Sometimes they cause urethral obstruction, other times they just cause bladder irritation. They are to be treated by either flushing the bladder, surgically removing them from the bladder, or using a special prescription diet to dissolve the stones. Often a combination of the three is used, and a special diet is usually required for the remainder of the cat's life to prevent future stones.

Urethral obstruction – partial or total blockage of the urethra prevents the passage of urine out of the body. This can cause death in 24 hours if not treated. It is caused by either stones or plugs containing a mixture of minerals, cells, and a mucus-like protein. Male cats are more susceptible to obstruction than females because of their longer, narrower urethra. This is treated by placing the cat under anesthesia, passing a catheter to relieve the obstruction, and giving IV fluids to correct dehydration and electrolyte imbalances. Antibiotics and medications to help restore normal bladder function are sometimes needed. For cats that have a recurring obstruction problem, a surgical

procedure called perineal urethrostomy is recommended. It creates a larger opening in the urethra just under the anus, similar to the anatomy of a female cat. Possible side effects of the surgery include bleeding, urinary incontinence, infection, and stricture of the surgical site causing further obstruction.

Bladder cancer – this is very rare in cats.

Urinary tract infection – this is very rare in cats under the age of 10. Less than 3% of cats 1-10 years old with the above described signs have a bacterial infection.

Feline Idiopathic Cystitis or Feline Interstitial Cystitis – also called FIC, this is the most common cause of FLUTD signs. This disease is complex, multifactorial, and not completely understood. It is diagnosed by excluding all other causes and there is no cure. The goal of treatment is to decrease the severity of symptoms and to increase the symptom-free interval.

How is FLUTD diagnosed?

Ideally, every cat with lower urinary tract problems should have a urinalysis, urine culture to rule out infection, and radiographs (x-ray) to rule out stones. Some cats empty their bladder so frequently with this disease that a urine sample is nearly impossible to collect, particularly for culture. Other lab work such as a complete blood count and serum chemistry may also be recommended to check kidney function and rule out any underlying disease. When there are no specific abnormalities on tests, FIC is diagnosed.

What causes FIC?

In FIC, the bladder is inflamed and painful, but no obvious cause can be found. We don't have a complete answer to what causes FIC, but new research suggests these cats may have an abnormal or incomplete layer of glycosaminoglycans (GAG) lining the bladder. This layer protects the bladder tissue from irritating urine components. When it is deficient and urine contacts the sensory nerves of the bladder it creates neurogenic inflammation, causing a painful bladder. In addition, it has been suggested that stress causes an increased response to the inflammation that begins in the brain and creates a vicious cycle of feedback. What we know for sure is there are several risk factors that these patients have in common including indoor lifestyle, obesity, dry cat food diet, multiple cat and multiple pet households, and other concurrent health conditions.

What treatments are there for FIC?

Many treatments have been tried and the only thing we know for sure is that there is no one thing that works all the time in every patient. A multimodal approach seems to be most effective, understanding that any sudden changes to a cat's routine have the potential to cause additional stress.

- **Increase water consumption** – The more water the cat takes in, the more dilute the urine will be and therefore contain less irritating components. The easiest way to increase water consumption, and **the only treatment that has proved in**

scientific studies to reduce signs of FIC, is to feed canned food exclusively.

Cats may also drink more water from a sink, fountain or glass than from a regular water bowl. They may also like water with ice in it.

- **Litter box management** – A cat with FIC may stop using the litterbox because it associates the box with pain. Creative thinking may be required to lure them back to the box. You might consider new boxes, more boxes, different locations, different litter, and always frequent cleaning of litterboxes. Experts recommend at least one litter box per cat in the house, plus one.
- **Pain management** – We will likely send at least one kind of pain medication home to help minimize the symptoms of FIC
- **Clean urine stains** – It is important to remove all urine odor from places the cat has urinated or they will return to those areas to eliminate. We recommend enzymatic cleaners such as Urine-Off
- **Reduce stress/environmental enrichment** – Minimize major changes in routine and make every effort to make the indoor environment more stimulating to the cat. In general, you must provide safe, quiet areas they can use to get away from other household members, opportunities for play and owner interaction, and vertical places to climb. See www.indoorcat.org for many specific ideas how on how to accomplish this.
- **Weight loss** – this is a good idea for several health reasons, but obesity is also a known risk factor for FIC. See www.thepetcenter.com/imtop/catweight.html for ideas on weight loss in cats.
- **Pheromones** – Feliway, this is a synthetic analog of feline facial pheromones, which is the substance a cat leaves when it rubs its face on something. These pheromones may help reduce stress.
- **Polysulfated glycosaminoglycans (GAGs)** – Since an abnormal GAG layer in the bladder may be part of the problem, then supplementation of these may be part of the solution. This supplement comes as a flavored powder capsule for cats.
- **Bladder and urethra contractility modifying drugs** – These drugs may be necessary to help your cat's bladder return to normal function after an episode of urethral obstruction.
- **Mood altering drugs or substances** – Antidepressant medications have been tried in cases that have not responded to the above treatments. Catnip is a natural mood-altering substance that is easy to try as well.

What is the prognosis for FIC?

Episodes of cystitis are self limiting and usually last 4-7 days each. Fifty percent of cats will have another episode within one year. It is impossible to predict if your cat will relapse or not. In a very small percentage of cats, signs may never resolve.

If you have further questions, please contact the clinic at the above telephone number.