

Feline lower urinary tract disease (FLUTD)

Feline lower urinary tract disease (FLUTD) is an umbrella term used to describe a group of problems associated with the lower urinary tract (bladder and urethra) of cats.

Although FLUTD can occur at any age, the associated problems are usually seen in middle-aged, overweight cats that get little exercise and have little or no outdoor access. Potential stressors, such as changes in routine, moving to a new home, or living in a multi-cat household, also may increase the risk of FLUTD.

What are the signs of FLUTD?

Major signs of FLUTD include the following:

- Straining in the litter box
- Urinating only small amounts, often
- Crying out while urinating
- Licking the genital area
- Urinating outside the litter box
- Blood in the urine

Note that cats with an obstructed urethra (the tube that carries urine from the bladder to outside the body) will also show these signs but will pass little or no urine and seem increasingly distressed.

How is FLUTD diagnosed?

The specific problem or cause underlying an episode of FLUTD can be difficult to diagnose. Your veterinarian will ask you questions about your cat and their environment, perform a thorough physical examination, and likely test a urine sample for pH, concentration (or “specific gravity”), and the presence of crystals, blood, and indicators of inflammation and infection. If the main cause remains unknown, additional tests may be recommended, such as urine bacterial culture, abdominal X-rays or ultrasound, bloodwork, and other urine tests.

It is important to note that the specific cause may not be found, even with a thorough diagnostic evaluation. In addition, some cats can have multiple episodes of FLUTD, and the specific cause underlying each episode may be different, with more than one cause possible per episode. For these reasons, a thorough evaluation is recommended for each episode.

The cause of the FLUTD episode, if found, plays a role in determining the treatment. Additional treatment is based on abnormalities found during the diagnostic evaluation,

and may include fluid or electrolyte therapy and medications to manage pain, nausea, and anxiety.

What are some common causes and treatments of FLUTD?

UROLITHS (URINARY STONES)

A common cause of FLUTD is urinary stones, also called uroliths, which can form in the bladder and/or urethra, causing irritation or blockage. These stones can be made of different minerals, most often struvite (magnesium ammonium phosphate) or calcium oxalate. X-rays and/or ultrasound are usually needed to confirm their presence.

Treatment for struvite stones typically involves feeding your cat a special stone-dissolving diet, prescribed your veterinarian. For oxalate stones, or for struvite stones that return or resist diet changes, surgical removal is generally recommended. Fortunately, minimally invasive procedures often can be used to remove urinary stones, with little to no recovery time for cats and less discomfort than with the traditional, more invasive surgical options (cystotomy or urethrotomy). Your veterinarian also may recommend medication and/or diet changes to help prevent future stones.

URINARY TRACT INFECTION

Infection of the urinary tract with bacteria, fungi, parasites, or viruses can cause signs of FLUTD. Although bacterial infections are more common than other types of urinary tract infections, they are still relatively uncommon in cats.

This said, urinary tract infection is a common cause of FLUTD in cats (especially females) older than 10 years of age. Cats in this age group are at risk of other health issues, like kidney disease and diabetes, which can cause changes to the urine that support infection. In younger cats, urinary tract infections are an uncommon cause of FLUTD because the acidity and concentration of their urine prevents infection.

If your cat is suspected of having a urinary tract infection, your veterinarian will likely collect a urine sample for bacterial culture (to identify the infecting organism) and antibiotic susceptibility testing (to determine the best drug to treat it). Treatment often depends on the severity of the infection and the identity of the infecting organism. This may include fluid therapy, urinary acidifiers, and/or appropriate antibiotics.

URETHRAL OBSTRUCTION

Urethral obstruction (blockage) is the most serious cause of FLUTD, and is potentially life-threatening. Affected cats strain to urinate and produce little or no urine. Although it may seem like they're constipated and trying to pass stool, straining in the litter box is more often a sign that the urethra is blocked.

Urethral obstruction is most often found in male cats one to 10 years of age. Male cats (neutered or intact) are at greater risk than females because their urethra is longer and

narrower. Common causes of obstruction include urethral plugs (soft material containing minerals, cells, and mucus-like protein) and urinary stones. Once the urethra becomes completely blocked, urine starts to back up into the kidneys. Without treatment, the kidneys fail, toxins build up in the blood, and electrolyte imbalances occur, leading to death, often in less than 24 to 48 hours.

Urethral obstruction is an emergency and requires immediate veterinary care.

Urethral obstruction is an emergency and requires immediate veterinary care. Your veterinarian likely will try to dislodge the obstruction by flushing sterile solution through a narrow tube (catheter) placed up and into your cat's urethra. Once the obstruction is removed, the catheter may be left in place for a few days to allow swelling to go down. Further treatment depends on your cat's condition. Dehydration and electrolyte imbalances are treated with intravenous fluid therapy. Your veterinarian also may prescribe pain medication, a stone-dissolving diet, and other medications to make your cat more comfortable.

If your male cat continues to experience urethral obstruction despite treatment, your veterinarian may recommend a surgical procedure called perineal urethrostomy. The purpose of this procedure is to widen the urethra, decreasing the chance of future obstructions.

FELINE IDIOPATHIC CYSTITIS

Feline idiopathic cystitis (FIC)—also called interstitial cystitis—is the most common cause of FLUTD in cats less than 10 years of age. As the term “idiopathic” suggests, the exact cause is unknown. This complex disease involves both the urinary system and other body systems. Chronic anxiety from perceived threats, such as conflict with another cat in the household, is believed to play a major role. Affected cats—particularly male cats—also may have urethral obstruction.

In most cases, episodes of FIC are short-lasting, and cats without urethral obstruction often improve within a week, without treatment. However, a large proportion of these cats will have at least one other episode within one or two years. Less commonly, FIC can persist, never totally going away. Stress or anxiety can make episodes worse.

Stress or anxiety can increase the risk and severity of feline idiopathic cystitis.

There is no specific diagnostic test for FIC. The disease is commonly diagnosed by ruling out other causes of FLUTD and examining the inside of the urethra and bladder with a special device (cystoscope). There also is no specific treatment or cure, which can make FIC frustrating to manage for all involved.

The current goals of treating cats with FIC are to decrease the severity and frequency of FIC episodes. A key aspect of this involves making changes to your cat's environment to increase their sense of control and reduce their sense of threat, a strategy known as “multimodal environmental modification” or MEMO. General examples include changes that support your cat's need to feel safe and express their preferences on things like

litter boxes or play. Diet changes and certain medications also may be helpful. Your veterinarian can help you recognize when your cat feels threatened and provide treatment recommendations based on your cat's individual needs.

OTHER CAUSES

Less commonly, FLUTD may be caused by tumors of the urinary tract, anatomical abnormalities, or injury to the urinary tract or spinal cord. In these cases, treatment varies, depending on the cause.

What does my cat need to support good urinary health?

You can help keep your cat healthy and prevent lower urinary tract disease by providing the following:

- Safe places to rest and sleep, including a cat carrier as an option
- An environment that meets your cat's sensory needs (taste, sight, smell, sound, touch)
- Access to clean, fresh water at all times
- An adequate number of litter boxes (usually one more than the number of cats in the household), with the type of litter and litter box size and type (covered or uncovered) that your cat prefers
- Safe access to litter boxes, such as in quiet areas of the house
- Clean litter boxes, with waste ideally removed twice a day and litter changed once a week (or more often as needed)
- Daily opportunities for play
- A healthy weight
- As positive, consistent, and predictable an environment as possible

If you have multiple cats, provide separate areas for sleeping, eating, water, litter box use, scratching, climbing, and play to minimize conflict between cats and allow each cat to be separate from the others if preferred.