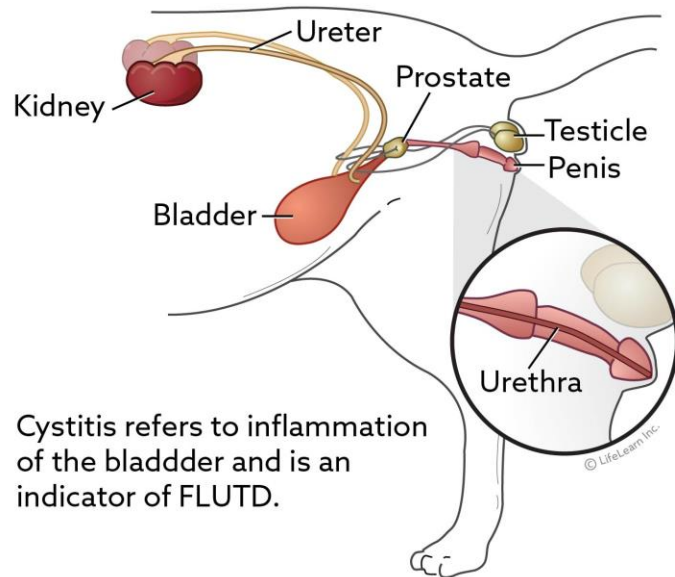


# Cystitis and Lower Urinary Tract Disease in Cats

Cystitis is a general term referring to inflammation in the urinary bladder. The term cystitis does not imply a specific underlying cause. In cats, diseases of the lower urinary tract (bladder and urethra) are often grouped under the term feline lower urinary tract disease (FLUTD). This is because it can be challenging to distinguish between the various diseases of the bladder, urethra, and urinary opening. If all the known causes of the disease have been eliminated, the condition is called feline idiopathic cystitis (FIC) or Pandora syndrome. Idiopathic is a term that means the exact cause is unknown (see the handout "Feline Idiopathic Cystitis" for more information).



## What are the signs of FLUTD?

Typical signs in cats with FLUTD are associated with inflammation and irritation of the lower urinary tract, such as:

- Pollakiuria (increased urination frequency)
- Dysuria (difficulty urinating)—affected cats often spend a long time straining in the litter box while passing only small quantities of urine (some cat owners confuse this with constipation or difficulty passing feces)
- Hematuria (blood in the urine)
- Urine that is cloudy or smells foul
- Urinating in unusual places
- Excessive grooming or licking in the genital region

- Complete urinary tract obstruction, resulting in the inability to urinate (mostly in male cats)—these cats usually strain to urinate persistently without producing any urine

With a urinary tract obstruction, it is essential to seek immediate veterinary care because it can be a life-threatening complication if untreated (and is very painful for the cat).

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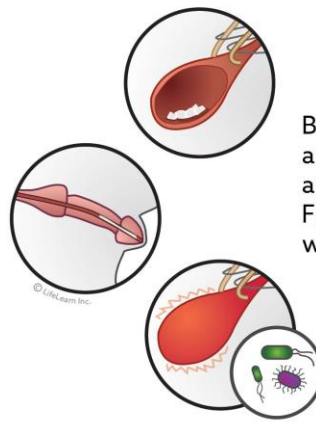
## What causes FLUTD?

"...about half of affected cats experience severe bladder and/or urethra inflammation without an identifiable cause."

There are many potential causes of FLUTD. The average age of onset is four years old. As previously mentioned, about half of affected cats experience severe bladder and/or urethra inflammation without an identifiable cause (idiopathic). These idiopathic cases must be differentiated from other potential causes so that appropriate treatment can be given.

Some other potential causes of FLUTD include:

- Urinary calculi or bladder stones (approximately 20% of all cases in cats under ten years of age)
- Bacterial infections (primary bacterial infections are rare in cats, although secondary infections can occur as complicating factors) are more common in cats over ten years of age; many older cats will have both bladder stones and a bacterial infection present
- Neoplasia (bladder or lower urinary tract tumor)
- Anatomical abnormalities - especially in younger cats with chronic or persistent urinary tract issues.
- Urethral plugs (blockage of the urethra with a mixture of crystals or small calculi/stones and inflammatory material)
- Trauma



Bladder stones, urethral plugs and bladder bacterial infections are three potential causes of FLUTD that your veterinarian will investigate.

## How is FLUTD diagnosed?

The initial diagnosis of FLUTD is based on identifying signs of lower urinary tract inflammation. The clinical signs displayed by the cat are often characteristic of FLUTD. A urinalysis will confirm the presence of inflammation or infection.

Initially, a cat with uncomplicated FLUTD may be treated symptomatically with pain medication, dietary modification, or, in certain circumstances, antibiotics. However, if the symptoms do not respond to this treatment or there is a recurrence of the clinical signs, additional diagnostic tests may be required to identify the underlying cause of the FLUTD.

## What further tests are required to diagnose the cause of FLUTD?

When clinical signs are persistent or recurrent, various tests may be required to differentiate idiopathic FLUTD from the other known causes of urinary tract inflammation. These diagnostic tests include:

- Laboratory analysis of a urine sample
- Bacterial culture of a urine sample
- Blood samples to look for other evidence of urinary tract disease or another systemic disease, such as kidney disease
- Radiographs (X-rays) and/or ultrasound examination of the bladder and urethra

## What is the treatment for FLUTD?

This depends on the underlying cause. For example:

- Bacterial infections of the lower urinary tract usually respond well to antibiotic therapy. See the handout "Urinary Tract Infections (UTIs) in Cats" for further information.
- If a cat develops a blocked urethra, emergency treatment is required to remove the blockage. Usually, the cat will be given a short-acting general anesthetic, and the urethra will be flushed or catheterized. Urethral obstruction occurs almost exclusively in male cats. Other treatment options may be recommended based on your cat's specific blockage.
- If bladder stones or uroliths are present, they must be eliminated. Depending on their type, they may be dissolved by using a

special diet or dietary additive, or they may require surgical removal. In some cases, this can be determined by the results of a urinalysis. See the handout "Bladder Stones in Cats" for further information.

There is no universal treatment for FLUTD. Each case has to be investigated to determine the underlying cause, and then the treatment has to be tailored to the individual cat. Sometimes, despite appropriate tests and treatment, clinical signs may still recur, requiring further therapy and diagnostic testing.

## How can FLUTD be prevented?

"FLUTD is more common in cats that have low water consumption and in cats that are inactive and obese."

It is impossible to completely prevent diseases of the lower urinary tract from occurring. However, FLUTD is more common in cats that have low water consumption and in cats that are inactive and obese. All these factors may relate, at least in part, to the frequency with which a cat urinates. Weight control and encouraging exercise and water consumption may be of some help in preventing FLUTD. As FIC is linked to an abnormal response to stress, environmental changes to reduce stress can help reduce recurrences.

If urinary calculi or crystals cause the symptoms of FLUTD, a therapeutic veterinary diet might be required, often long-term, to help prevent a recurrence.