

Cystitis and Lower Urinary Tract Disease in Cats

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What is cystitis?

Cystitis is a general term referring to inflammation in the urinary bladder. The term cystitis does not imply a specific underlying cause.

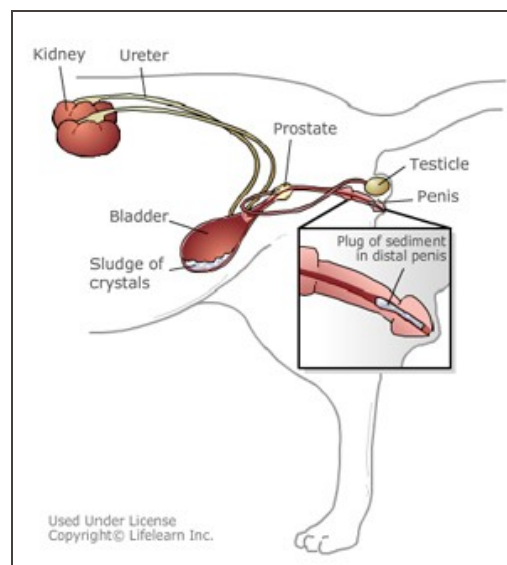
In cats, diseases of the lower urinary tract (bladder and urethra) are often grouped under the term feline lower urinary tract disease (FLUTD). This is because it can be difficult to distinguish between diseases of the bladder and urethra, and many diseases will affect both structures. If all the known causes of the disease have been eliminated, the condition is called Feline Idiopathic Lower Urinary Tract Disease (iFLUTD). To indicate that this is an exclusionary diagnosis see our separate handout entitled Feline Idiopathic Lower Urinary Tract Disease.

What are the signs of FLUTD?

Typical signs in cats with FLUTD are those of inflammation and irritation of the lower urinary tract. The common signs are:

- Increased frequency of urination called *pollakiuria*.
- Difficulty in urinating or *dysuria*. Affected cats often spend a long time straining in the litter box while passing only small quantities of urine.
- The presence of bloody urine called *hematuria*.
- Foul smelling or cloudy urine
- *Complete urinary tract obstruction* resulting in the inability to urinate. These cats usually strain to urinate persistently without producing any urine.

With a urinary tract obstruction, it is important to seek immediate veterinary care because blockage to the flow of urine can be a life-threatening complication if untreated.



What causes FLUTD?

There are a vast number of potential causes of FLUTD; as previously mentioned, some cats experience severe inflammation of the bladder and/or urethra without an identifiable cause. These idiopathic cases must be differentiated from other potential causes so that appropriate treatment can be given. Some of the potential causes of FLUTD are listed below:

- Urinary calculi or bladder stones
- Bacterial infections (primary bacterial infections are rare in cats, although secondary infections can occur as complicating factors)
- Neoplasia - tumor
- Anatomical abnormalities
- Urethral plugs - blockage of urethra with a mixture of crystals or small calculi/stones and inflammatory material

How is FLUTD diagnosed?

The initial diagnosis of FLUTD is based on the identification of 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 antibiotics or dietary modification. However, if the symptoms do not respond to this treatment or if there is 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, a number of tests may be required to differentiate idiopathic FLUTD from the other known causes of urinary tract inflammation."

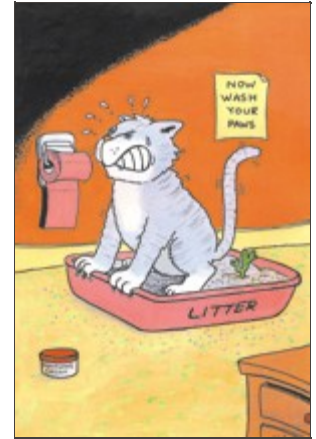
When clinical signs are persistent or recurrent, a number of tests may be required to differentiate idiopathic FLUTD from the other known causes of urinary tract inflammation. These diagnostic tests include:

- Laboratory analysis of a urine sample
- Bacterial culture of a urine sample
- Blood samples to look for other evidence of urinary tract disease or other systemic 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.
- 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.
- If bladder stones or *uroliths* are present, they will have to be removed. Depending on their type, they may be able to 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.



"Treatment has to be tailored to the individual cat."

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.

How can FLUTD be prevented?

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 may be of some help in preventing FLUTD.

If urinary calculi or crystals caused the symptoms of FLUTD, the feeding of special diets may help prevent recurrence.