

CYSTITIS AND LOWER URINARY TRACT DISEASE

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 grouped under the term 'feline lower urinary tract disease' (FLUTD). This is due to the fact that it can be difficult to distinguish between diseases of the bladder and urethra, and many diseases will affect both structures.

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 therefore:

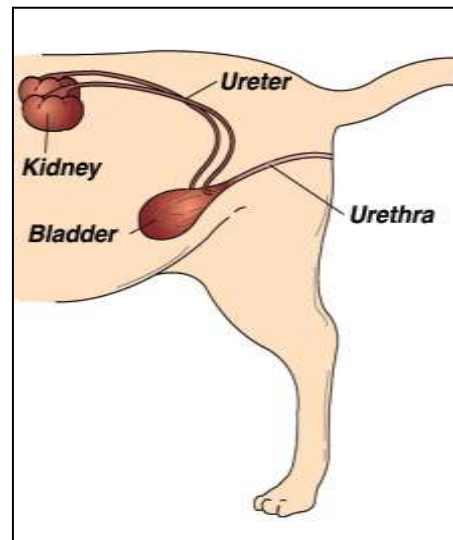
- Increased frequency of urination.
- Difficulty in urinating (spending a long time straining on the litter tray while passing only small quantities of urine).
- The presence of bloody urine or a foul odor.
- Complete urinary tract obstruction resulting in the inability to urinate (straining persistently without producing any urine).

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

What causes FLUTD?

There are a vast number of potential causes of FLUTD, but many cats experience severe inflammation of the bladder and/or urethra without an identifiable cause. This is known as 'idiopathic' or 'unknown' FLUTD. 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:

- Idiopathic - unidentifiable cause



- Urinary calculi or bladder stones
- Bacterial infections
- 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. However, if the signs 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 investigations 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) of the bladder and urethra
- Ultrasound of the bladder

The information from these tests should help to identify a specific treatable underlying cause if present.

What is the treatment for FLUTD?

This depends on the underlying cause. For example:

- Cases of idiopathic disease may respond to treatment with anti-inflammatory or analgesic ('pain-relieving') drugs, but it is crucial that you *only* use drugs specifically prescribed by your veterinarian, because many human products are extremely dangerous to cats.

- Bacterial infections of the lower urinary tract usually respond well to antibiotic therapy.
- If a cat develops a blocked urethra (this occurs almost exclusively in males), emergency treatment is required to remove the blockage, which may require flushing of the urethra while the cat is given a short-acting anesthetic.
- If bladder stones (calculi) are present, they may have to be removed surgically or, depending on their type, they may be able to be dissolved by using a special diet or dietary additive

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 lower 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, encouraging water intake (e.g. wet food, water fountains etc) and encouraging exercise may be of some help in preventing FLUTD.

If a cat develops urinary calculi (stones) or crystals, the feeding of special diets (available from veterinarians) may help to prevent FLUTD.