

Cystitis in Cats (FUS/FLUTD)

**What is cystitis?**

The term "cystitis" literally means inflammation of the urinary bladder. Although this is a general term, there is a common form of cystitis that occurs in male and female cats. This disease is also known as Feline Urologic Syndrome (FUS) or Feline Lower Urinary Tract Disease (FLUTD).

This disease affects the bladder rather than the kidneys, resulting in the production of tiny crystals and blood in the urine. The cat often urinates much more frequently than normal, usually with the passage of only a few drops of urine. This may be confused with constipation. The disease will also cause many cats to urinate in places other than the litter box, often on hard surfaces such as tile floors, countertops, sinks and bathtubs.

**What is the cause?**

Cystitis is believed to be a multifactorial disease, meaning there is no single definitive cause. Instead, several underlying factors can contribute to the development of FUS/FLUTD. Bacterial infections are the most common cause of cystitis in dogs and humans, but most cats with cystitis do not have bacteria in their urine.

**What are the clinical signs?**

Most cats with cystitis exhibit blood in the urine and discomfort while urinating. The discomfort is usually mild, but can become much worse if it is not treated.

Female cats may develop stones in the bladder that must be surgically removed.

Male cats may develop enough crystals in the urethra (the narrow tube carrying urine out of the body) to cause an obstruction. This obstruction prevents elimination of urine from the bladder, causing the cat to become very ill. This is a life-threatening emergency. A female cat does not often become obstructed due to the larger urethra, but this too can be very serious and uncomfortable for the cat.

**How is cystitis treated?**

Each cat with cystitis is treated according to the changes in the urine (pH, crystals, blood, etc.), the type of crystals present, the presenting clinical signs (straining, increased frequency, etc.) and the presence or absence of a bladder stone or urethral obstruction.

If neither a bladder stone nor urethral obstruction is present, medication will generally relieve the discomfort. A urinalysis is necessary to determine the proper medication. A special diet will also help to dissolve some of the crystals in the urine and hasten recovery.

If the cat has an obstruction of the urethra, a catheter is passed into the bladder while he/she is under a short-acting anesthetic. The catheter is frequently left in place for about 24 hours. The cat is discharged from the hospital when it appears unlikely that obstruction will reoccur, usually one to two days later. If he/she is experiencing kidney failure and toxemia, intravenous fluids and additional hospitalization are needed.

**How long will treatment take?**

Following initial treatment, it may be necessary to return in seven to 10 days for a recheck of the cat's urine. This is very important because some cats will appear to feel much better while the urine still contains blood or crystals. If medication is stopped based on how the cat appears to feel, treatment may be terminated prematurely and a relapse will probably occur.

**Is cystitis likely to recur?**

Many cats have a recurrence of cystitis. In some cases, the disease may be resistant to treament and a chronic problem can develop.

**Can it be prevented?**

Certain diet adjustments can be helpful in minimizing recurrence, depending on the type of crystals found in the cat's urine. Although we do not believe any commercial cat food causes cystitis, we do recommend feeding a premium quality dry and canned food.

If struvite crystals are present, they can be dissolved in acidic urine. Therefore, diets that cause urinary acidification are recommended for cats with this condition. However, if your cat's crystals are not struvite, acidification may actually make recurrence more likely, so a non-acidified diet is appropriate.

The crystals in the urine should always be analyzed for their composition. This is the most important step in preventing future problems.

**Can urethral obstructions have complications?**

Yes, for some cats. The most common complication of urethral obstruction is bladder atony. Atony means that the muscles of the bladder wall are unable to contract to push out urine. This occurs when the muscles are stretched to an extreme degree. Not all cats with obstructions develop atony; in fact, most do not. However, if this occurs, longer hospitalization is necessary. The muscles will nearly always rebound and become functional again, but this may take several days to as long as a week.

Another complication that can occur is kidney damage. Although feline cystitis does not directly affect the kidneys, urine may back up into the kidneys and create enough pressure to temporarily or permanently damage them if the bladder becomes extremely enlarged. If this occurs, prolonged hospitalization will be necessary to treat the kidney damage. With aggressive treatment, most cats will recover their normal kidney function.

It should be noted that both complications are the direct result of an enlarged bladder. These problems may be prevented by prompt recognition of the disease and appropriate medical care.