

## **FELINE IDIOPATHIC CYSTITIS**

### ***What is cystitis?***

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

### ***What are the causes?***

We are not completely sure of the cause of this problem. It is most common in young adults, with more male cats reported as signs are more noticeable. Recent statistics have shown in 50% of affected cats a cause cannot be determined despite extensive diagnostics. Of the remaining cats, 20% have bladder stones, 20% a urethral obstruction (also referred to as "blocked"), less than 5% have a true infection, and the remaining cats are affected by tumors, trauma or a combination of other factors.

Feline cystitis has been associated with environmental stress in many cats. It is currently believed that these cats have an imbalance in the way their brain controls hormones. They are especially sensitive to environmental stress, and due to cascade of hormone changes it manifests as bladder inflammation.

### ***What are the clinical signs?***

Feline cystitis can appear with a variety of clinical signs, including:

- Bloody urine
- Straining to urinate (may be mistaken for constipation)
- Inappropriate urination
- Urinary obstruction (commonly referred to as "blocked")

A cat need only demonstrate some of these signs to be considered affected. This syndrome has been described in cats for nearly 100 years and continues to be a common condition. The chief obstacle in eradicating this condition seems to be that any number of inflammatory conditions (infection, tumor, bladder stone, etc.) in the urinary bladder will produce the same symptoms.

### ***How is it treated?***

There are two main categories of cats affected with cystitis:

*Obstructed Cats:* Urinary or urethral obstruction is a true emergency in cats. Although rarely seen in females, male cats are most commonly affected due to the relatively narrow penile urethra. In these cats bladder inflammation can lead to precipitation of fine sand like material. This combines with mucous and cells from the bladder lining leading to formation of a plug that blocks the urethra (the tube leading from the bladder out of the body). Once obstructed toxins normally eliminated in the urine build up in the body and can lead to serious complications including death. Urinary obstruction is treated with removal of the blockage and fluids to flush toxins out of the body.

*Non Obstructed Cats:* The majority of cats affected by cystitis do not progress to urinary obstruction. For these cats, and previously obstructed cats treatment is aimed at managing the current symptoms and

preventing reoccurrence. A combination of diet and environment change coupled with medications may be prescribed including:

- *Prescription Diet:* Because many cats with cystitis display crystals in their urine a special pH controlled diet is recommended. Previously there were two types of diet available based on the type of crystals seen, but further studies have shown that the crystal type seen in urine samples changes throughout the course of the day and may not accurately reflect the true problem. Current diets aim to produce a neutral pH as well as reduce formation of the compounds responsible for these crystals.
- *Increased Water Consumption:* The highly concentrated urine produced by many cats can be irritating to the bladder lining. Increasing water intake will keep the urine more dilute and help to alleviate irritation. Feeding canned food, installing a water fountain or flavoring the water with low sodium chicken broth, tuna water or clam juice are all suggested to increase water intake.
- *Antibiotics:* Although true urinary tract infections are uncommonly associated with feline cystitis, antibiotics are often prescribed to prevent infection. In addition some antibiotics have anti-inflammatory properties within the bladder.
- *Steroids and Anti-Inflammatories:* These are used mainly to alleviate pain. Because steroids reduce the body's response to infection it is important to use these in conjunction with antibiotics when infection is possible.
- *Anti Anxiety Medications:* Because stress is an important component of feline cystitis, many cats respond well to medications such as amitriptyline and fluoxetine.
- *Other:* For some cats, especially those recovering from obstruction, narcotic pain medications or anti-spasmodics may be used.
- *Environmental Enrichment:* For long term control of feline cystitis, environmental enrichment is the most successful treatment. Some recommendations that have been published include:
  - o Each cat at home should have the opportunity to play with the owner or with another cat
  - o Each cat should be able to move freely about her home including climbing
  - o Each cat should have convenient access to a private rest area where other animals will not disturb him or an escape route should he be bothered. There should be no loud appliances in the rest area that might suddenly come on and be frightening.
  - o Scratching posts should be available.
  - o Toys should be regularly rotated and replaced.
  - o Each cat should be able to choose warmer and cooler areas within the home.
  - o There should be a litter box for each cat, ideally plus one extra. Litter boxes should be located in well-ventilated areas and should be kept clean. Boxes should be washed out weekly with a minimally scented detergent. Unscented clumping litter seems to be best. If there is more than one floor in the home, there should be a box on each floor. Litter boxes should be private enough that other animals will not be bothering the cat and loud appliances will not startle the cat during litter box use.
  - o Each cat should have her own food and water bowls. Feeding/watering stations should be safe so that other animals (like dogs) will not be startling the cat. Bowls should be washed daily.
  - o For more information on environmental enrichment, read about the Indoor Cat Initiative. (<http://indoorpet.osu.edu/>)

### ***Is it likely to happen again?***

Many cats have a recurrence of cystitis. A recurrence does not indicate that the current treatment is not working. These episodes can often be linked to acutely stressful situations such as visitors in the home, absence of an owner or addition of a new person or pet into the family, although many times a cause cannot be determined.