

Idiopathic Feline Lower Urinary Tract Disorder (FLUTD)

FLUTD is a disease of the urinary tract causing affected cats to make frequent, straining attempts to urinate, often accompanied by blood in the urine. It may be a recurrent problem in cats of any age or sex. It is particularly troublesome and obvious in male cats because it may result in blockage of the urinary tract, preventing normal elimination of urine. Complete blockage of the urinary tract is a medical emergency. Cats obstructed longer than 12 hours become toxic. After 36 hrs of obstruction, cats are critically ill and may die.

Normal urinary tract anatomy

The kidneys filter the blood to produce urine, which contains waste products that must be eliminated from the body. Urine passes through small tubes (ureters) to the bladder which functions as a bag for storage of urine. Urine exits the bladder and body through the urethra. The urethra and bladder are the sites of urinary tract inflammation and obstruction in FLUTD.

What causes urinary tract obstruction in FLUTD?

The obstruction is caused by an accumulation of mucus, proteins, blood and sometimes crystals and bacteria. In FLUTD these substances can aggregate into particles capable of plugging the urethra.

What causes FLUTD?

The exact cause of this disorder is still unknown (this is what “idiopathic” means), but is likely multifactorial in origin. It has been associated with the following factors, none of which is considered a sole factor important in every case.

- Obesity
- Lack of exercise
- Stress
- Low water intake
- Dry food
- Any condition that may promote urine retention (i.e. a dirty litter pan)
- Anatomical problems (small urethra, bladder defects)
- Bladder injury
- Viral infections

Recent research has found a similarity between FLUTD and a disorder in women known as interstitial cystitis. Based on these similarities, veterinarians have begun using some human medical therapies that have shown promise in controlling the symptoms of FLUTD. These include the use of *metacam* - an anti-inflammatory and painkiller and *glycosaminoglycans*, which may help in the healing of the inflamed urinary tract. Antibiotics are prescribed if bacterial infection is suspected.

The average age of a cat with FLUTD is 4 years. Of all cats with FLUTD:

- 50% will not have a cause that can be identified despite extensive testing.
- 20% will have bladder stones.
- 20% will have a urethral blockage.
- 1-5% will have a true infection.
- 1-5% will have a urinary tract cancer.
- 1-5% will have had trauma to the urinary tract (i.e., have been hit by a car)
- 1-5% will have a combination of a bladder stone and an infection.

Signs of FLUTD

The most frequently recognized sign of FLUTD is increased urgency to urinate. A previously well-housebroken cat that suddenly violates its training is typical. Affected cats will often urinate in sinks, bathtubs, on floors, in plants, in beanbag chairs and even on owners. Some affected cats will use their box more than 50 times a day. Despite the frequent attempts to urinate, only small quantities- even just drops of bloody urine are passed. Affected cats typically become lethargic, want to hide, and may lose their appetite. Many male cats will incessantly lick their penis and cause severe trauma to the external urethral

opening.

Urinary Tract Obstruction

A cat that is completely obstructed will quickly become toxic. Typically the obstructed cat is depressed, vomits, becomes dehydrated and cries when attempting to urinate. He may object to his owner lifting him by the abdomen. If obstruction persists for more than 12 hours, it is a medical emergency. The cat may collapse, have difficulty regulating its body temperature, have seizures, labored respirations, and finally die.

Obstructed cats must be hospitalized and sedated in order to have the urethral obstruction removed. A urinary catheter will be placed and the bladder flushed. Intravenous fluid therapy is usually necessary. The IV and urinary catheters will remain in place for 2-3 days to help assure that the obstruction will not recur. A urinalysis will be run and x-rays and bloodwork may be necessary. Most cats will go home with medications and a special diet to help prevent reobstruction.

Chronic medical management of FLUTD

The following are general care instructions to which your veterinarian may add special instructions tailored to your particular cat.

1. Make sure your cat is urinating. Scoop the litter box daily to encourage frequency of urination. It is best to provide a litter pan for each cat.
2. Provide free choice, clean, fresh water that is changed daily. Some cats prefer running water or drinking from unconventional containers.
3. Use all medications exactly as prescribed by your veterinarian, even if your cat's condition seems to have improved.
4. Feed at least part of your cats diet as canned food. Your vet may recommend a prescription diet.
5. Minimize stress factors such as sudden changes in environment, emotional upsets, and obesity.

Environmental Enrichment

You may think a cat has plenty of toys and seems relaxed and well-adjusted, but the reality is that the cat's natural environment of living in the forest and hunting and eating mice regularly throughout the day is a far cry from sitting on a sofa, eating processed foods, and eliminating waste in a plastic box filled with clay. Most cats are fine with a domestic lifestyle, but the FIC cat is special and has a special sensitivity. Stress can be minimized by allowing choices for the cat in terms of where to play, rest, eat, and eliminate.

Here is a summary of recommendations that have been published by researchers:

Each cat at home should have the opportunity to play with the owner or with another cat if they choose.

Each cat should be able to move freely about her home including climbing if they choose.

Each cat should have convenient access to a private rest area where other animals will not disturb them or has an escape route should they be bothered. There should be no loud appliances in the rest area that might suddenly come on and be frightening.

Scratching posts should be available.

Toys should be regularly rotated and replaced.

Each cat should be able to choose warmer and cooler areas within the home.

There should be a litter box for each cat and ideally one extra. Litter boxes should be located in well ventilated areas and should be kept clean. Boxes should be washed out weekly with minimally scented soap and water. 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 him during litter box use.

Each cat should have their own food and water bowls. Feeding/water stations should be safe so that other animals will not startle them during litter box use.

The brand, flavor, or format of the food (dry vs canned) should be kept fairly constant. If it is changed, allow your cat a choice of new food vs old food at least for a while before changing over and do not change more than once a month.

Many people are surprised to find that environmental enrichment has been effective in prevention since it does not involve medication or diets but it is important to remember that what makes a cat vulnerable to urinary issues is a problem with neurochemicals involved in stress. For more information on environmental enrichment, read about the Indoor Cat Initiative at www.vet.ohio-stat.edu/indoorcat.htm.

Recurrence of FLUTD

Some cats have severe bouts of recurrent FLUTD despite all efforts. Further diagnostic evaluation would include a complete physical exam, blood and urine tests, x-rays and ultrasound. In some cases special x-rays using contrast media will provide better definition of anatomical defects. Sometimes tumors, bladder wall defects or bladder stones are identified and are best treated surgically.

Conclusion

It should be remembered that 90% of all cats are not affected by FLUTD. There is no reason to restrict the diet of a cat that has never been affected by FLUTD. Increasing water consumption and feeding canned food may provide the best ways of preventing recurrence.