So my cat has feline lower urinary tract disease

What is feline lower urinary tract disease?
Feline lower urinary tract disease is an umbrella term used to describe any type of disease that affects the lower urinary system (bladder). Disease can include urinary bladder stones, urinary bladder tumors, urinary tract infections, idiopathic cystitis (see below) and many less common diseases. Lower urinary tract disease may be non-obstructive (meaning the cat can still urinate) or obstructive (meaning the cat cannot physically urinate due to a urethral plug, stone, tumor, or spasm). Female cats rarely have obstructive disease.

What is idiopathic cystitis?
Idiopathic cystitis is a sterile inflammation of the bladder. The cause is still unknown but stress is thought to play a role. Idiopathic cystitis is the most common cause of lower urinary tract disease in younger cats (50-60% of cases seen). Cats typically are two to six years old when they have their first episode. Clinical signs may subside in five to seven days but may reoccur at any time. About 2/3 of cats with idiopathic cystitis will have a reoccurrence of clinical signs. As cats age the frequency of recurrence tends to decrease. There is no reason to use antibiotics with idiopathic cystitis.

What is obstructive disease?
As mentioned above, some cats with lower urinary tract disease become obstructed meaning the cat cannot urinate and the bladder becomes overfilled with the risk of rupture. This is a medical emergency and the cat must be seen right away as death can occur within 24-48 hours of not being able to urinate. Obstruction occurs almost exclusively in males. If your cat has an obstruction anesthesia will be needed to relieve the obstruction and an indwelling urinary catheter will be placed. Hospitalization with supportive care (pain medication, IV fluids, and urinary catheter care) is recommended for 24-72 hours. 25-33% of cats who have had an episode of urinary obstruction may re-obstruct during their life, sometimes months to years later.

What are the clinical signs of feline lower urinary disease?
The clinical signs for all types of lower urinary tract disease look similar and include:
- Frequent trips to the litter box or straining to urinate or small urinations or inappropriate urination.
- Bloody urination.
- Over grooming of the genital region.

How is feline lower urinary disease diagnosed?
The history of clinical signs and physical examination is usually enough for the doctor to be concerned this may be the problem. The next step after an exam is to try and obtain a urine sample for analysis at the laboratory. The urine is examined not only for blood but also for normal kidney function values and normal urine chemistry. Additional tests may be indicated after the urinalysis is done and depends on the suspected disease:
- Urinary bladder stone- urinalysis may show blood or crystals in the urine. Radiographs or x-ray of the abdomen reveal all but two types of stones and are the primary diagnostic for urinary bladder stones.
- Urinary tract infection- urinalysis may show red blood cells, white blood cells, and bacteria. A urine culture may be recommended if suspicion of a urinary tract infection exists and the urinalysis did not
show bacteria or if you cat has had multiple urinary tract infections recently. The culture will determine if/what kind of bacteria is present and what antibiotic will treat the infection.

- Idiopathic cystitis- urinalysis may show red blood cells and crystals. Idiopathic cystitis is a diagnosis of exclusion meaning other common causes of lower urinary tract disease appropriate for the patients age, must be ruled out.

**What is the treatment?**
The treatment depends on what disease is diagnosed:

- Urinary bladder stone-
  - Diet- One type of stone (struvite) is dissolvable with a prescription diet. Younger cats are more likely to have struvite stones. The diet is fed exclusively for four weeks and then the cat has a second set of abdominal x-rays completed to reevaluate the stone. If the stone is smaller or gone a lower urinary tract diet is continued long term to prevent the formation of another stone.
  - Surgery- for cats whose stone fails to dissolve with the diet or for cats with a very large stone a cystotomy (bladder surgery to remove the stone) is recommended. This can be done at the Feline Medical Clinic.

- Urinary tract infection-
  - Antibiotics are used to treat the infection and the urine must be rechecked at the completion of the antibiotic course to ensure the infection has resolved.

- Idiopathic cystitis: Therapy involves a combination of treatments. The immediate goal is to get them through the initial episode without obstructing while the long term goal is to prevent recurrence of the clinical signs.
  - First episode/ acute episode
    - Pain medication- an opioid is prescribed to help decrease discomfort your cat is feeling.
    - Subcutaneous fluids- fluids will help flush out the bladder and increase comfort.
    - Anti-spasmodic- typically used in young males who we are concerned may actually obstruct. It works to relax the muscles of the urethra and allows them to urinate easier.

  - Long term management
    - Decreasing stress – this is crucial as stress can trigger an episode.
      - Add resources- more food and water stations, more litter boxes, and more lounging/hiding locations.
      - Consider use of a calming supplement (zylkene or solliquin)- ask us for details!
      - Remove stressful triggers if triggers are known.
      - Anti-depressants- Some cats become very agitated after a first experience with the disease and helping them cope emotionally may help with future occurrences or prevent them.
    - Diet- increasing canned food will naturally help keep the urine more dilute and thus decrease the incidence of a recurrence. A prescription diet may be recommended. Prescription diets work to keep the pH of the urine in a specific range that is unfavorable to crystal formation. Electrolyte levels in the foods encourage increased water consumption.
  - Close monitoring for recurrence of signs is important! If signs are seen a veterinary appointment is recommended.

**What if I want to learn more?**
Lower urinary tract disease can be confusing! Please let us know if you have any questions or would like a more in-depth handout!

**Sources:** The Feline Patient 4th Edition 2011
Handout created by Dr. Zaya McSky, DVM