**FELINE LOWER URINARY TRACT DISEASE (FLUTD)**

**What is FLUTD?**
Feline lower urinary tract disease (FLUTD) is a group of conditions which cause inflammation of the lower urinary tract (bladder, urethra, penis/vagina) in cats. These conditions are often associated with the formation of crystals or stones in the urinary tract, particularly the bladder. In some cats – especially males – these crystals or stones will completely block the urinary tract preventing urine from being passed. Without immediate treatment these “blocked cats” will die.

**Risk Factors Associated with FLUTD**
There is not one single cause of FLUTD, and each case will vary from cat to cat. Your vet will always need to perform some diagnostic tests to find out exactly what's happening in your cat. There are several risk factors that have been shown to be important.

**Food:** High levels of certain minerals in food can increase the chance of crystal formation in urine. Food also influences the acidity/alkalinity of the urine, which can also lead to crystal formation. A high urine pH (alkaline urine) can contribute to the production of struvite stones, whereas low urine pH (acidic urine) can produce calcium oxalate stones. Therefore, feeding a food which results in an appropriate urine pH is an essential part of treating and managing FLUTD cats.

**Behaviour:** Lack of exercise, confinement indoors, reduced water intake, and even dirty litter trays may cause your cats to urinate less frequently which can lead to the development of FLUTD.

**Body condition:** Excess weight can also predispose a cat to FLUTD.

**Gender:** Although both males and females are equally likely to develop signs of FLUTD, desexed males are much more likely to develop complete urinary obstruction. The male’s urethra is much narrower than females, making it more prone to blockage.

**The Signs of FLUTD**
FLUTD can be very uncomfortable and, if blockage occurs, life threatening. Early recognition of the signs of FLUTD is critical. Contact your vet straight away if you notice any of the following:

- Changes in urination – Small amounts of urine passed at an increased frequency, urinating outside the litter tray, or urinating in different places to usual (accidents outside the litter tray, etc.).
- Straining to urinate (often mistaken for constipation) - a tense hunched posture, arched back, crying whilst urinating.
- Abnormal urine (blood stained or dark urine).
- Changes in behavior (licking genital area frequently, restless, listless, hiding away, refusing to eat).
**REMEMBER:** a male cat that is not urinating frequently requires immediate veterinary attention, as a life-threatening blockage may be present. These cats may be vocalising cries of pain, straining constantly, vomiting or drooling, be unresponsive, and/or may have a tender or enlarged abdomen.

**Diagnosis of FLUTD**
Because there are several causes of FLUTD, your vet will need to perform some diagnostic tests. The first step is obtaining a urine sample so that the pH and sediment can be assessed. In some cases, the urine may need to be sent to a laboratory for a detailed examination. It is vital to find out if crystals are present and if so, what type. Urine crystals can be successfully managed by feeding an appropriate prescription diet. A blood test may be needed to assess the overall health of your cat, and in particular, the state of their kidneys. More complex cases may sometimes require further procedures such as x-rays.

**Treatment of FLUTD**
1. **Relieving the blockage:** This requires general anaesthesia to pass a catheter into the bladder to drain the urine. Although a general anaesthetic poses a higher risk if the cat is very sick, there is no alternative in “blocked” cats. The urinary catheter is secured in place for at least three days and the cat wears an Elizabethan collar to prevent them from chewing the catheter out. The cat will need to be hospitalized during this time.
2. **Intravenous fluid therapy:** The cat is put onto IV fluids (a drip) to correct dehydration and electrolyte imbalances. This treatment also helps to flush out the kidneys and bladder and maintain a steady production of urine.
3. **Medications:** Antibiotics are usually used to treat and/or prevent infections in the bladder. Other medications which are used include anti-inflammatories, pain relief and sedatives, as well as drugs to relax the bladder wall and help stimulate urination.
4. **Diet:** A special prescription diet is the cornerstone of the treatment and ongoing management of cats with FLUTD. The type of food chosen by your vet will depend on the type of urinary crystals your cat has. It is important to realize that your cat will need to be on a prescription diet life-long to manage their disease and to prevent the problem from recurring. You will not be able to feed them any extra treats, food scraps or supplements. It is important to encourage your cat to drink plenty of water – provide plenty of clean, fresh water at all times. Feeding canned food can be helpful in increasing water intake. Your vet will make any necessary recommendations for the feeding and ongoing management of your cat.

**Prognosis**
Cats can die from this condition even after the best treatment, particularly in cases of severe blockage. Death is usually due to shock or irreversible kidney damage/kidney failure. The success of treatment is determined by how quickly the cat is brought in for treatment. Unfortunately, FLUTD can recur and once your cat has had one bout of FLUTD, they are more likely to get another. A life-long prescription diet is the key to successfully managing these cats, and they can lead long and happy lives when fed the correct diet. Periodic urine tests will be needed to monitor your cat. Your vet will recommend a specific program for you cat.