

FELINE URINARY OBSTRUCTION

Feline Urinary Obstruction- a common life threatening emergency

Urinary blockage is an emergency and should be treated as soon as possible. Blockage of the urethra occurs when crystals, bladder stones, or plugs of mucus lodge in the urethra or tip of the penis preventing urine from exiting the bladder. The sooner the obstruction is relieved, the better the cat does. If the blockage is not relieved, the cat will suffer life threatening heart arrhythmias (abnormal heart beat) and will eventually go into cardiac arrest (the heart stops) and die due to a fatal increase of potassium in the blood.

Additional complications include bladder rupture and kidney damage. Most cats present for abdominal pain, crying and straining in the litter box. Some cats who have been blocked for more than a day present in a coma.

Urinary obstruction is a common occurrence & affects mostly middle to older aged neutered male cats, however, we have had a kitten present obstructed. The urethra is a long thin tube that connects the bladder to the penis and is prone to blocking in male cats due to its small diameter and long length (similar to a straw). Female cats have much shorter and wider urethra and do not have the problem of blocking like the male cats do. Urinary tract infections (UTI) predispose cats to blocking by causing irritation and spasms of the urethral smooth muscle. The most common type of crystal formed by cats is called struvite or triple phosphate, although other types such as calcium oxalate crystals can be seen as well. There appears to be a direct link between most supermarket brand commercial cat foods (even “low ash foods”) and crystal or stone formation in the bladder. Any cat that is at risk or has blocked previously should be put on a specially formulated diet to limit mineral intake & lower urinary pH for life. Cheap supermarket brands should be avoided.

Symptoms of Urinary Obstruction

- Straining / crying in the litter box (can be mistaken for constipation)
- Painful abdomen / reluctance to move
- Frequent licking at penis
- No urine in box
- History of recent UTI or blood in urine
- Vomiting
- Anorexia
- Lethargy
- Coma

Diagnosis of Urethral Obstruction

- History- often the cat has recently had a UTI or has been passing small amounts of bloody urine
- Physical exam- a large, firm, painful bladder is easily felt and there is no urine when the bladder is gently squeezed
- Often the tip of the penis is a dark purple color and occasionally one can see a

- crystal or mucus plug at the tip
- In very obese cats, sometimes a radiograph must be taken to see the bladder
 - After unblocking the cat, a urinalysis +/- culture should always be done to identify the type of crystal or presence of bacteria, and check the urine chemistry and pH.

Treatment of Obstructed Cats- stabilize & then unblock

The priority is to correct any electrolyte imbalances in the blood and relieve the obstruction.

- Stabilize the patient with IV fluids to treat shock & electrolyte abnormalities.
- The heart must be carefully assessed for any abnormal rhythms & treated accordingly if arrhythmias present.
- Blood electrolytes (potassium, sodium, and chloride) should be checked & high potassium levels should be corrected before anesthesia .
- Severely blocked cats with high potassium levels can often be unblocked without anesthesia.
- Recently blocked cats with normal electrolytes require anesthesia to unblock with a urinary catheter.

A small catheter is used to unblock the urethra and allow drainage of the urine from the bladder. A soft red rubber urinary catheter can then be placed and the bladder is flushed out several times with saline to try to remove as many crystals and bladder sludge as possible. Many veterinarians will leave the catheter in place for 24-48 hours to help the bladder drain allows the swelling of the urethra and bladder to resolve. Ideally cats are kept on IV fluids while the urinary catheter is in place to help flush out the kidneys & bladder. Medical treatment involves antibiotics, prednisone, and medications to relieve urethral spasms. Once the catheter is removed, the cats are further observed (ideally for another 24 hours) to monitor for passage of urine. All cats should be placed on a special urinary tract diet for at least three months after being blocked if not for life.

Prognosis- varies widely

- Good to excellent with early blockages and aggressive therapy
- Poor if cat presents in a comatose state, or severely shocky with heart arrhythmias
- Most cats stay between 2 – 3 days in the hospital, however, some cats can re-block within five days of the initial episode and they will require another unblocking procedure
- For cats who block several times, a surgery can be performed called a PU or preputial urethostomy.