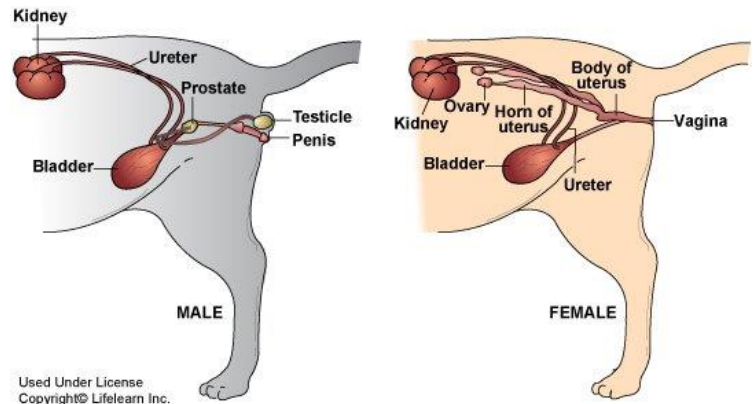


## Feline Urinary Disease

### What is Feline Urinary Disease?

Feline Lower Urinary Tract Disease (FLUTD), also known as idiopathic cystitis, is a common syndrome in cats. Symptoms include discomfort when urinating, straining to urinate (but still producing urine), pollakiuria (small, frequent amounts of urine), foul smelling or cloudy urine, bloody urine, or urinating in inappropriate locations. In many cats, especially younger cats, this is caused by sterile inflammation, not an infection. Male cats who develop FLUTD are at risk of urethral obstruction, a life-threatening emergency where the urethra becomes blocked and the cat cannot urinate.



### What causes sterile bladder inflammation?

In some cats an infection is the cause of the inflammation, although infection is less likely in younger cats. In about 20% of cats bladder stones are identified. In most cases an underlying cause of the inflammation cannot be found despite extensive testing. Many factors are implicated, including stress, inappropriate diet, obesity, seasonal allergies, and genetic predisposition. Stress is the most commonly implicated cause, and can be due to anything which disrupts a cat's normal routine, such as houseguests, changes in environment, moving, owners being out of town, or aggression from other pets in the house.

### How is FLUTD diagnosed?

Your veterinarian will start with a thorough discussion of your cat's history and environment and a physical examination. In most cases a urine sample will be analyzed to rule out other potential causes of bladder disease, such as infection. Your veterinarian may recommend a urine culture and sensitivity test if infection is suspected, to help identify the type of infection and select appropriate treatment. If microscopic crystals are identified in the urine your veterinarian may recommend an abdominal x-ray to look for larger bladder stones (although crystals can form for many reasons and can be present without a stone). If infection, bladder stones, and other underlying causes of abnormal urination are ruled out, your veterinarian will likely diagnose FLUTD.

### How is FLUTD treated?

Treatment of feline urinary disease (FLUTD) typically consists of a combination of medications, diet, and environmental changes.

Medications – If your cat is having an active flare of FLUTD, your veterinarian may prescribe anti-inflammatories for pain and discomfort, and antibiotics to prevent secondary infections. Other medications to prevent urethral spasm, control pain, and reduce anxiety may be recommended.

Supplements – Some supplements have been shown to decrease inflammation throughout the body, including in the bladder. We recommend Dasuquin, 1 capsule daily for maintenance, to manage cats with FLUTD.

Diet – Several diets are available to manage feline urinary disease, including Hill's Prescription Diet c/d and c/d stress, and Royal Canin SO. Your veterinarian will make a recommendation based on your cat's particular needs, based on factors such as urine pH, the presence of crystals, weight, and other health considerations. Weight management is also key for cats with FLUTD, since obesity significantly increases the risk of flare ups. Keep in mind that for these diets to be effective they should be fed EXCLUSIVELY, and your cat should eat this diet for long-term maintenance.

Water – Increasing water intake is one of the hallmarks of FLUTD treatment. This is because when your cat drinks more water the urine is more dilute (decreasing crystals and other inflammatory mediators in the urine), and they will flush the bladder by urinating more frequently. Your veterinarian will likely recommend canned food as a component of your cat's diet (since canned food has higher water content). You may also consider things like a water bowl with a chiller/recirculator to keep the water tasting fresh, or leaving a faucet dripping if your cat likes to drink from the sink.

Environment – Most cats with urinary disease will develop an aversion to their litter boxes over time, since they associate the discomfort they feel when urinating with going in the box. Providing multiple boxes, ideally in more than one location, will give your cat options to choose from. We also recommend UNSCENTED clumping cat litter, and boxes without lids or covers, to reduce odors which may be associated with litterbox aversion. The litter should be scooped daily, and the box should be completely dumped and thoroughly cleaned with soap and water at least every few weeks.

Tip: large storage bins and wrapping paper storage bins make great litter boxes for large cats who dislike the confined space of traditionally sized litter boxes.

Stress Management – Identifying and avoiding particular triggers of stress for your cat can help reduce flare ups of urinary disease. If stressful situations are unavoidable, consider supplements or medications to manage stress:

- Feliway – over the counter pheromone which exerts mild calming effect. Available in sprays, collars, and plug-ins. Ideal for longer-term stressful situations, such as inter-cat aggression.
- Solliquin – over the counter chewable supplements with several research-supported nutritional supplements shown to reduce mild to moderate anxiety. Can be used long term or for short term stressful situations (moving, home renovations, house guests, etc.)
- Prescription medications (Fluoxetine/Prozac, Trazodone) – reserved for cats with severe anxiety, may be recommended by your veterinarian for either short or long term use depending on response to other environmental and diet changes.

## Male cats with urinary obstruction (blocked cats)

Although urinary obstruction can occur in female cats due to large bladder stones, becoming “blocked” occurs mostly in male cats. This is because males have longer and narrower urethras which are more easily obstructed. The urethra can become obstructed by stones, “plugs” consisting of clotted blood and/or crystals, or even just spasm of the urethra due to inflammation. Urinary obstruction is A LIFE THREATENING EMERGENCY. If a cat is not “unblocked” within several hours severe complications can occur, such as permanent kidney damage, electrolyte abnormalities affecting the heart, and even rupture of the bladder. If your cat is blocked your veterinarian will run bloodwork to determine the status of the kidneys and electrolytes, then sedate your cat to pass a urinary catheter to relieve the obstruction. Most male cats remain in the hospital for 2-4 days with the urinary catheter while the underlying cause is treated, and so your veterinarian can monitor urine production and correct kidney or electrolyte abnormalities with IV fluids.

If the urinary obstruction is not relieved by a urinary catheter, or if a cat has had episodes of urinary obstruction multiple times, your veterinarian may recommend a procedure called a perineal urethrostomy (PU). This procedure shortens the urethra and essentially allows male cats to urinate more like female cats, thus bypassing the narrowest part of the urethra which is most commonly obstructed. Keep in mind that a PU does not cure the underlying FLUTD, just reduces the likelihood of obstruction, so special diets and management of urinary disease will continue to be important for your cat’s long term health.