

Feline Bladder Infections

True bacterial bladder infections are pretty uncommon in younger cats (less than 10 years old), but they do occur. They are more common in older cats because they may be secondary to other age-related disease processes. The symptoms of bacterial bladder infection are the same as those seen with feline lower urinary tract disease (FLUTD) and may include straining to urinate, inappropriate urination (out of the litter box), licking at the prepuce or vulva excessively, and obvious blood in the urine. Bladder infections can lead to crystal formation and urethral blockage, a life-threatening emergency situation.

When a cat appears with related symptoms, it should be examined by the veterinarian as soon as possible. A urinalysis, blood panel, and x-ray are performed as an initial diagnostic profile. A urine sample is collected by the veterinarian in order to perform the urinalysis (UA). Care should be taken to avoid contaminating the sample with artifact. The "cleanest" method of collection is called a cystocentesis - passing a very fine needle through the abdominal wall directly into the bladder. Less ideal respectively are passing a urinary catheter and collecting a voided sample, since contaminate may be introduced from outside of the body.

The urine sample is analyzed for blood, inflammatory cells, bacteria, and crystals. A specific gravity measures urine dilution caused by increased water consumption or kidney dysfunction. A reagent dipstick tests for nitrite (bacterial metabolite), pH, glucose (to screen for diabetes), and bilirubin (produced by the liver). A portion of the sample is centrifuged to separate solids from the urine such as cells, casts of the renal (kidney) tubules, bacteria, and crystals. This material is called urine sediment. Bacteria observed in the sediment are diagnostic for infection but are not always observed.

The urine may be sent to a reference laboratory for a culture and susceptibility (C&S). The sample is incubated in a special agar or broth, a food medium to grow bacteria. When bacterial growth is present, the organisms are isolated and tested to determine their species. Then they are exposed to a battery of antibiotics on a susceptibility disc. This information will tell the doctor which antibiotic to prescribe and what dose will be effective. Also, the C&S will give some idea as to how the infection will respond to treatment.

Abdominal x-rays are taken to check for the presence of bladder and kidney stones, especially if crystals are found in the urine sediment. If bladder stones are discovered, they must be removed or dissolved if possible. The stones will harbor bacteria and make resolution of the infection impossible. X-rays can also reveal a congenital defect in the bladder wall called a persistent urachus. This is a remnant of the tube that connected the bladder to the umbilicus before birth. It can also harbor bacteria and make the infection persist despite antibiotic therapy. A blood count and chemistry panel will help determine whether the bladder infection is secondary to underlying organ dysfunction. Kidney disease is very common in older cats.

When your veterinarian prescribes an antibiotic for your cat's bladder infection, is critical to give it as instructed. Antibiotic resistance is a real problem in bladder infections. Also, a urinalysis

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should be repeated at the end of the treatment period to gauge the response to the antibiotic. If time lapses between treatment and rechecking, the infection may recur, causing the need to repeat diagnostics.

