Bacterial infections of the bladder and foods containing high levels of protein and minerals such as magnesium, phosphorus, and calcium have been linked to bladder stone formation. Minerals form crystals, and crystals join together to form uroliths, or stones. Some dogs are born with an inability to metabolize certain protein components and are susceptible to bladder stone formation because of this defect.

**Diagnosis**

If your veterinarian suspects that your pet has uroliths, he or she may perform some or all of the following diagnostic tests: palpation (examination by touching) of the urethra and bladder to feel stones, urinalysis, urine culture, blood tests, X-rays to see if stones are present, ultrasound to see if stones are present and special X-rays using dyes that show bladder stones that do not appear on routine X-rays. If possible, your veterinarian will analyze any uroliths your pet may have passed in the urine so he or she can prescribe appropriate therapy.

**Treatment and Home Care**

For some stones (calcium oxalate and those lodged in the urethra), surgery may be the only effective treatment. But today, many stones may be dissolved by feeding a special food with reduced amounts of minerals and proteins or a special food plus medication. If a bladder infection is present, antibiotics are also necessary. Your veterinarian will monitor your pet's progress with X-rays and urinalyses to verify the bladder stones are dissolving.

Home care consists of making sure your pet is urinating properly and watching for signs of reobstruction. You should also provide access to fresh, clean water, make sure each cat in the household has its own clean litter box and give all
prescribed medications. Be sure to follow your veterinarian's instructions for care and activity restriction if surgery was performed and return to the hospital for all scheduled follow-up lab tests and X-rays and suture removal.

**Nutritional Plan**

If your pet has bladder stones, your veterinarian may recommend a special food to dissolve the stones. These foods work by reducing the minerals or building blocks that make up bladder stones. They also affect the urine pH and increase urination to help flush the urinary tract. Most stones are dissolved in 4 to 16 weeks, depending on their size and number. Up to 50% of all pets with bladder stones have a recurrence of the problem unless the risks for bladder stone formation are managed as described below. Not all types of stones can be dissolved with diet, so your veterinarian may recommend surgery to remove the stones.

**Struvite Uroliths**

Struvite uroliths and crystals are dissolved with Hill's® Prescription Diet® s/d® Canine and s/d® Feline Dissolution pet foods. After the stones are dissolved, Prescription Diet® c/d® Canine Urinary Tract Health and Prescription Diet® c/d® Feline Bladder Health pet foods will aid in managing the nutritional risks that contribute to struvite stone formation.

**Ammonium Urate Uroliths**

These uroliths sometimes can be dissolved with drugs and Hill's® Prescription Diet® u/d® Canine Non-Struvite Urinary Tract Health pet food. The same formula will aid in managing the nutritional risks that contribute to their recurrence.

**Calcium Oxalate Uroliths**

Surgery is the most effective means of removing these uroliths. Hill's® Prescription Diet® u/d® Canine Non-Struvite Urinary Tract Health and Prescription Diet® c/d® Feline Bladder Health pet foods will aid in managing the nutritional risks that contribute to the recurrence of calcium oxalate uroliths.

**Cystine Uroliths**

Cystine uroliths may be dissolved by feeding Hill's® Prescription Diet® u/d® Canine Non-Struvite Urinary Tract Health dog food and giving certain drugs. Prescription Diet® u/d® Canine Non-Struvite Urinary Tract Health dog food also aids in managing the nutritional risks that contribute to the recurrence of cystine uroliths.

**Transitioning Food**

Unless recommended otherwise by your veterinarian, gradually introduce any new food over a seven-day period. Mix the new food with your pet's former food, gradually increasing its proportion until only the new food is fed.

To help your pet accept the food, try warming the canned food to body temperature, hand feeding for the first few days, or mixing the dry food with warm water (wait ten minutes before serving). Feed only the recommended food. Don't feed additional salt or any snacks that may contain sodium. Be patient but firm with your pet. This is important because the success or failure of treatment depends to a large degree on strict adherence to the new food.

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**Home Care Instructions**

Client's Name: _________________________________________________________

Patient's Name:  _________________________________________________________

Medication(s):  _________________________________________________________

Nutritional Recommendation:  ___________________________________________________

Follow-Up Appointment: _______________________________________________________  (Hospital Stamp Area Above)

REGULAR VISITS WILL HELP OUR VETERINARY HEALTH CARE TEAM PROVIDE FOR YOUR PET’S BEST INTEREST.