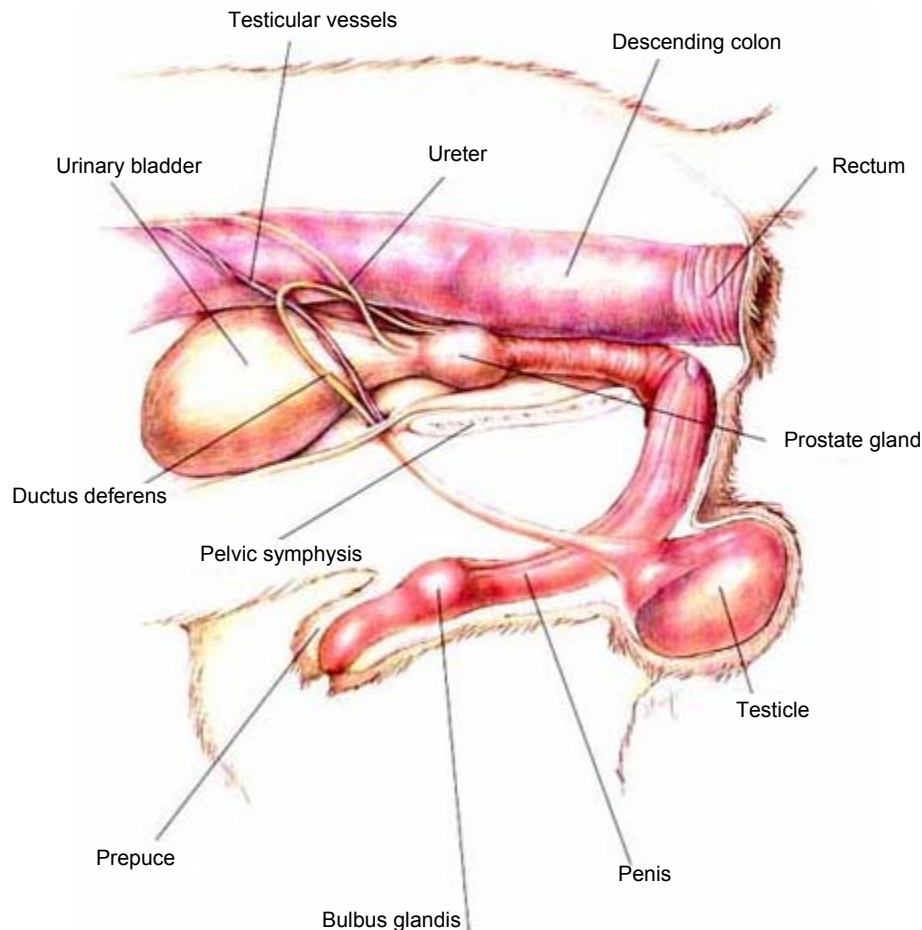




Reducing the Risks of Canine Lower Urinary Tract Disease



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The lower urinary tract includes the bladder and urethra, the tube that connects the bladder to the outside. The most frequently seen disorders of the urinary tract include bladder infections and stones. This client education sheet will help you learn more about the risks of lower urinary tract disease and will review your veterinarian's plan for keeping your pet healthy, as well as follow-up with the veterinary health care team.

Risk Factor Management for Canine Lower Urinary Tract Disease

A risk factor is a condition or characteristic that predisposes an animal to disease. For example, high blood pressure in human beings increases the risk of stroke and heart and kidney failure. The importance of identifying risk factors is that sometimes the risk factor (high blood pressure, for example) can be eliminated or controlled to prevent or lessen the severity of the disease (stroke, for example). Veterinarians also recognize risk factors in pets. The extent to which such risk factors are managed will help determine the length and quality of your pet's life.

Risk Factors

Risk Factors for lower urinary tract disease in dogs include the following:

- Foods that contain excess protein, magnesium, phosphorus, and calcium.
- Bacterial infections of the bladder.
- Urine crystals. Crystals are the building blocks for bladder stones.
- Trauma to the urethra.
- Genetics. Some dogs are born with defects in their ability to metabolize certain protein components. Breeds with such problems include; Dalmatians, Miniature Schnauzers, Bulldogs, Yorkshire Terriers, and Dachshunds have increased incidence of bladder stones.
- Sex. Some types of bladder stones are more common in male dogs. Other occur more often in females.
- Diseases involving the parathyroid glands and some types of tumors.
- Defects of the cardiovascular system.

Although prior lower urinary tract disease is not necessarily a risk factor, it does indicate an increased probability that your dog will develop lower urinary tract disease again.

Detecting Risk Factors

Frequent and complete veterinary checkups are especially important as your pet ages. Your veterinarian will be able to prepare a list of risk factors for your pet based on the history you provide, results of the physical examination and diagnostic studies, and his or her knowledge of disorders that commonly affect pets of similar age, breed, and sex.

Managing Risk Factors

Based on your pet's risk profile, your veterinarian may recommend one or more of the following:

- Adequate exercise.
- Medications. Antibiotics and other preparations may be necessary to prevent some types of bladder stones.
- Continuous access to fresh water supply.
- Means to promote frequent urination such as more frequent walks for dogs.
- Routine examinations and diagnostic regular urinalysis are the best ways to detect early changes that can be managed to protect your dog's health.

Nutritional Plan

Your veterinarian may recommend a dietary change to reduce the nutritional risks that contribute to lower urinary tract disease. Optimal nutrition provides the right amount of nutrients for tissue maintenance and repair. More important, optimal nutrition should reduce the building blocks for bladder crystals and stones, and contribute to the formation of urine with a pH appropriate for crystal dissolution. Your veterinarian may recommend a food that avoids excess levels of calcium, phosphorus, and protein. Such foods include the Hill's® Science Diet® brand of dietary pet foods. Depending on your dog's urine characteristics and risk profile, your veterinarian may recommend Hill's® Prescription Diet® therapeutic foods which further restrict calcium, phosphorus, and protein that contribute to stone formation.

For more information about canine lower urinary tract disorders ask your veterinarian for copies of the *Hill's Client Information Series* handouts titled "Canine Urethral Obstruction" and "Bladder Stones."

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.

If your pet is one of the few that doesn't readily accept a new 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. Be patient but firm with your pet.

Presented as an educational service by



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.