

Urinary Tract Disease in Dogs

- **Urinary tract disease** is a very general term used to describe any one of several conditions that can affect any part of the urinary tract.
- Clinical signs associated with urinary tract disease vary depending on the exact condition.
- Some types of urinary tract disease can be reversed with treatment, while other conditions, such as chronic kidney failure, are irreversible. In the latter case, treatment may help slow the progression of the disease.
- **Urinary tract infections:** Bacteria can ascend through the urethra or travel through the blood and infect the urinary bladder, the prostate (especially in male dogs that have not been neutered), and the kidneys.
- **Urinary incontinence:** This condition occurs most commonly in spayed, female dogs. Pets with this condition often lose bladder control while they are sleeping. Dogs with spinal cord diseases or injuries can also develop urinary incontinence.

What Is Urinary Tract Disease?

The urinary tract consists of four parts:

1. Two kidneys, which produce urine
2. The ureters, tubes that transport urine from the kidneys to the bladder
3. The urinary bladder, where urine is stored
4. The urethra, which carries urine from the bladder to the outside

Any part of the urinary tract can be affected by disease. Here are just a few of the conditions that can affect the urinary tract in dogs:

- **Kidney failure:** *Acute* kidney failure is the sudden loss of kidney function, which may be caused by a number of factors, including decreased blood pressure, toxins such as antifreeze, ureteral or urethral obstructions, and diseases, such as leptospirosis and Lyme disease. If diagnosed early and treated aggressively, acute renal failure may be reversible. *Chronic* kidney failure is long-term loss of kidney function that cannot be reversed, but treatment may help slow the progression of the disease.
- **Kidney and bladder stones:** Dogs can form mineral crystals and stones in any part of the urinary tract. These crystals and stones can irritate the lining of the urinary tract or block the flow of urine, which is a medical emergency.

In addition, puppies may be born with congenital defects affecting the urinary tract, and older dogs may develop cancer in the urinary tract.

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What Are the Clinical Signs of Urinary Tract Disease?

The signs vary depending on the specific type of disease, but may include:

- Increased drinking
- Passing more or less urine
- More frequent urination
- Straining to urinate
- Inability to urinate (this is a medical emergency!)
- Bloody or foul-smelling urine
- Painful back (where the kidneys are located)
- Urinary accidents in the house
- Vomiting (sometimes containing blood)
- Halitosis (bad breath)

Common Conditions

- Lethargy (tiredness)
- Dehydration
- Anorexia (appetite loss)
- Weight loss

How Is Urinary Tract Disease Diagnosed?

Your veterinarian will begin by taking a medical history of your pet, including asking about possible exposure to toxins and ticks. He or she will also perform a thorough physical exam to look for clues to the potential urinary tract disorder.

Diagnostic tests usually include blood work, such as a chemistry panel and a complete blood count (CBC), as well as a urinalysis. Depending on the suspected disease, your veterinarian may also recommend more specific blood or urine tests, such as a bacterial culture and sensitivity test, which helps identify the specific bacteria that might be involved in a urinary tract infection and the most effective antibiotic to treat the infection. Other tests may include abdominal radiographs (x-rays), an abdominal ultrasound, or cystoscopy, which involves inserting a tiny tube with a camera up the urethra and into the urinary bladder to look for abnormalities in these areas.

How Is Urinary Tract Disease Treated?

Treatment of urinary tract disease depends on the underlying cause and the patient's overall condition. For example, if a pet has bladder stones, a special diet or surgery may be recommended. Pets that are severely ill from kidney disease or kidney failure may need hospitalization and intensive care to recover. In other cases, antibiotics, fluids, and other medications given on an outpatient basis are effective. There are even special diets and dietary supplements that can help some pets with urinary tract disease.

Chronic kidney failure is a progressive, irreversible condition. Treatment generally focuses on slowing the progression of disease and improving quality of life for the patient. Pets can sometimes have a good quality of life for many years after being diagnosed with kidney failure. Your veterinarian will evaluate your pet and discuss the best methods of treatment with you.

Since many pets may not show outward signs of urinary tract disease, regular physical examinations and wellness screening tests can increase the chances of early diagnosis and more effective treatment.