

# Chronic Kidney Disease in Dogs

A Brief Guide • Part of the Educational Pet Disease Series from Lap of Love

## Signs & Symptoms

### Initial Symptoms

- Tires easily and sleeps more
- Mild to severe weight loss
- Strong, unusually bad breath
- Inappetence and nausea

### Intermediate Symptoms

- Excessive urinating
- Excessive drinking
- Reclusive quiet behavior
- Panting/trouble breathing
- Salivating/drooling
- Unthrifty coat
- Vomiting and diarrhea

### Advanced Symptoms

- Sunken eyes
- Dehydration
- Oral ulcers
- Drunken gait
- Needy behavior
- Increased vocalization
- Stiff gait and muscle loss

### Crisis Situations Requiring Immediate Medical Intervention

- Difficulty breathing/panting
- Unable to walk
- Seizures
- Blue gums and/or tongue
- Sudden collapse
- Uncontrollable vomiting/diarrhea
- Whining, crying in pain

## What Is It?

Chronic Kidney Disease (CKD) is a condition with numerous causes that has a gradual progression and mainly afflicts middle-aged and older dogs. The kidneys are responsible for important processes such as filtering waste products, controlling blood pressure, and stimulating red blood cell production. A healthy kidney contains fully functioning nephrons (filtering channels) that filter waste products from the blood, such as BUN and creatinine which come from protein breakdown. As the blood passes through, the kidneys return 95% of the blood, toxin free, and excrete the 5% toxic waste out through the urinary system. As the kidneys fail, impaired filtration leads to waste accumulation within the bloodstream, termed azotemia, which results in some of the main symptoms of CKD. Kidney disease can be acute or chronic; Acute Kidney Disease (AKD) is characterized by a sudden severe onset that may or may not be reversible, such as anti-freeze toxicity, while Chronic Kidney Disease has developed over a long period of time. By the time CKD is diagnosed, the original cause is often no longer detectable and treatable, making the cause of CKD unknown. Possible causes include congenital defects (present from birth), infections, kidney stones, infectious diseases (Lyme), acute injury leading to CKD, and immune-mediated disease.

## Diagnosis

Basic bloodwork and evaluation of urine samples provides adequate information to diagnose kidney disease. Azotemia (elevated toxins BUN/creatinine) in conjunction with an inappropriately dilute urine sample are the classic findings. However, 65-75% of healthy kidney function must be lost before toxic levels on bloodwork are detectable. Recently, a blood test measuring a different waste product (SDMA) has shown promise for earlier detection. Bloodwork may show azotemia, elevated phosphorus and calcium, and decreased red blood cells, potassium and protein levels. Other tests may include x-rays, abdominal ultrasound, urine culture, and kidney biopsy. These tests help to determine a cause, the severity of disease, and dictate prognosis and treatment. CKD is generally attributed to aging, though many illnesses can affect the kidneys. Dogs may show few signs, but as the disease progresses owners notice increased thirst and urination, weight loss, decreased appetite, lethargy, vomiting, weakness, and dehydration.

## Treatment and Management

The goals of treatment aim to support kidney health, slow progression of the disease, decrease kidney stress, and control CKD symptoms. If known, the underlying cause should be addressed, though CKD is considered a manageable, not curable, disease. Prescription kidney diets, which limit protein to decrease kidney stress and reduce circulating toxins, help to extend quality and length of survival time. Moist (canned) food over dry (kibble), prescription or commercial, is preferable as hydration supports the remaining kidney function. Trials with appetite stimulants, nausea medications, and antacids can help to spur on a healthy appetite. Many people successfully administer fluids under the skin at home with the direction of their veterinarian. High blood pressure, anemia, elevated phosphorus, infections, and other concurrent ailments may require treatment and management, if detected. Consistent veterinary visits with bloodwork and urine testing are necessary to make informed medication changes and to dictate prognosis.



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## Prognosis

The prognosis for canine CKD depends heavily on the cause, if known, and the severity of the disease at the time of diagnosis. Dogs with the lowest stage of CKD, showing minimal symptoms and bloodwork changes, can live over a year. Dogs with moderate to advanced CKD have a poor prognosis and an average survival time of half a year or less. Prescription kidney diets have been documented to double this survival time for some dogs. A personalized treatment plan is important to slow the progression of kidney disease. Consult your veterinarian, and consider consultation with an internal medicine specialist, regarding the best treatment protocol for your pet.

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## Management Tips

### Consider providing:

- Easily accessible food and water
- Filtered water
- Fluids under the skin at home with direction from your veterinarian
- Ramps/stairs to common areas
- Access to "safe" quiet areas
- Warm, soft sleeping areas
- Rugs or booties to aid in traction and walking
- Creative, low stress stimulation
- Compounded medications in easy to deliver and/or tasty form
- Wet food to increase water intake

### Try to:

- Be consistent with medicating
- Track appetite, bowel movements, breathing, weight etc.
- Limit stress (kids, noise)
- Keep your pet inside
- Avoid unhealthy treats
- Keep up with preventative care
- Feed only a moist diet if possible
- Feed a kidney specific diet
- Use low to no sodium broth

Before your pet's condition becomes unmanageable or they are losing quality of life, it is important to begin end-of-life care discussions. Learn about pet hospice care and/or euthanasia services in your area so you are prepared.