

Chronic Kidney Disease: Living with Your Pet and the Diagnosis

What Is Chronic Kidney Disease (CKD)?

Pets with CKD experience a gradual loss of kidney function over time. It can be caused by many different conditions which affect one or more processes of the kidney. It is different from acute kidney injury which has a sudden onset and may be caused by specific events or illness which can include: urinary tract blockage, shock, congestive heart failure, bacterial infection, poisoning, Lyme disease, and leptospirosis. However, acute kidney injury may progress to CKD.

The kidneys play a vital role in the body. Healthy kidneys remove waste products from the blood; help to control pH levels as well as blood pressure, serum electrolytes, calcium and phosphorous levels, and water balance; and produce some hormones which are essential for red cell production and calcium balance. When kidney function is impaired, body systems become imbalanced. When function is significantly impaired, waste levels can become toxic quickly.

CKD has four stages based on the magnitude of decrease in kidney function. Your veterinarian will determine the stage of disease for your pet based on clinical signs and test results. Clinical signs are typically not observed in Stages I or II, but early diagnosis is sometimes made while doing imaging or urinalysis for other reasons, or monitoring trends in lab test results. Increased thirst and urination, lethargy, vomiting, diarrhea, anorexia, weight loss and dehydration are all signs that your pet's kidneys are not functioning properly.

What Animals Are Most Likely to Be Affected?

CKD can develop in animals of a wide range of ages. There are inherited defects recognized in some breeds of cats and dogs where clinical signs are evident in individuals less than three years old. However, it is more common in older animals and the prevalence increases with age (five to six years of age and older). For older animal populations at veterinary care facilities, CKD affects up to 10% of dogs and 35% of cats but that number is lower for the general pet population—some estimates claim 1% of dogs and nearly 2% of cats are diagnosed. As pet ownership and medical care trends are helping pets to live longer, this may be a factor for an increase in CKD cases.

Why Does My Pet Need All These Tests?

With appropriate therapy, animals can survive for long periods with only a fraction of functional kidney tissue, even as little as 5-8% in dogs and cats. Treatment is determined based on the stage of the disease and severity of symptoms. For your veterinarian to

accurately assess the extent of the affected tissue and loss of function, various tests are conducted. These may include some or all of the following: urinalysis and urine cultures, blood pressure measurements, blood chemical profile, complete blood count, radiographs, and ultrasounds.

Why Is Regular Evaluation Important?

Unfortunately, CKD is usually a progressive disease. However, progression is relatively slow, and pets with CKD often survive for many months to years with a good quality of life. It is important to recognize that in pets with advanced CKD, treatment will not reverse or stop the disease but will slow it down. Your veterinarian will need to monitor your pet regularly to assess whether the disease has progressed and, if so, determine a new course of therapy. In Stages I and II, animals should be evaluated every three to six months or sooner if problems develop. In later-Stage II and Stage III, evaluations should be done every two to three months. In late-Stage III and Stage IV, expect your veterinarian to recommend evaluation every one to two months.

Your veterinarian will develop a treatment plan based on your pet's history and current condition. Because individual cases vary, the treatment most appropriate for your pet may be different than that of another animal with the same disease.

How is CKD Managed?

In general, treatment of pets with CKD involves 1) treatment of the underlying cause of CKD (e.g. infection), 2) treatment of symptoms and complications associated with loss kidney functions, 3) management of other diseases that are present coincidentally, and 4) treatment designed to slow the loss of kidney function. An individualized treatment plan is developed for each patient based on their stage of CKD, existing symptoms and coincidental disorders, and the risk factors for progression of kidney disease, such as hypertension and urine protein.

Why Does My Pet's Diet Matter?

Using a diet that is specifically formulated for pets with impaired kidney function is crucial in various stages of CKD. These diets restrict phosphorus, phosphate and acid load, and in later stages protein may also need to be limited. By feeding a special diet, you will be helping to keep your pet's body systems balanced by reducing the amount of work that the kidneys need to perform.

References

Merck Sharp & Dohme Corp. Chronic Kidney Disease. The Merck Veterinary Manual, merckvetmanual.com.

This fact sheet is provided by the Veterinary Diagnostic Laboratory at the Michigan State University College of Veterinary Medicine as a public service. It is not intended to diagnose any disease. Please contact your veterinary medical service provider if you have questions regarding this or any other veterinary medical issue.