



CHRONIC KIDNEY DISEASE (Uremic Syndrome, Renal Failure)

What is Chronic Kidney Disease?

The job of the kidneys is to filter the blood, removing wastes and excreting them as urine. Damaged kidneys will lose this filtering ability and these wastes then build up in the bloodstream. Renal (kidney) failure results from renal disease that has persisted for months to years. Since symptoms do not appear until about three-fourths of the kidney tissue is damaged, by the time disease is apparent the kidney injury has taken considerable time to develop, so the condition is deemed "chronic." Chronic renal failure is characterized by irreversible renal dysfunction that tends to deteriorate progressively over months to years.

Greater than approximately 75% reduction in functional kidney mass results in impaired urine concentrating ability (leading to increased urine production and increased thirst) and retention in the bloodstream of urinary waste products of protein catabolism. Severe chronic renal failure results in uremia, anemia and renal secondary hyper-parathyroidism.

What Causes Kidney Disease?

It may be an inherited condition in the following breeds: Abyssinian cats, Persian cats, Bull Terrier, Cairn Terrier, German Shepherd, and Samoyed.

However, kidney disease can occur in any breed dog or cat and has been shown to follow family lines in a number of breeds. The mean age at diagnosis is approximately 7 years in dogs and 9 years in cats. Animals of any age can be affected, but prevalence increases with increasing age. There are many individual causes of renal disease including bacterial infections, toxicities, autoimmune diseases, and congenital abnormalities.

What are the Symptoms of Renal Failure?

Clinical signs are related to the severity of renal dysfunction and presence or absence of complications such as high blood pressure. Cats with mild chronic renal failure may not show any symptoms. However, an animal with stable chronic renal failure may decompensate resulting in a uremic crisis.

The kidneys provide the hormone (erythropoitin) that stimulates the bone marrow to produce red blood cells. Often in advanced cases the pet will become profoundly anemic due to insufficient red blood cell production. Some of the symptoms of chronic kidney disease may include: increase drinking and urine production, loss of appetite,

lethargy, vomiting, weight loss, constipation, diarrhea, acute blindness, and finally seizures or coma, followed by death.

How is Renal Failure Diagnosed?

Physical examination findings may include small, irregular kidneys, dehydration, loss of body mass, pale mucous membranes, oral ulceration, and uremic breath odor. Blood and urine tests confirm the diagnosis. A more precise indication of the exact form and cause of the nephritis is gotten by radiographs (x-rays), ultrasound and biopsy.

How is Renal Failure Treated?

Animals with compensated chronic renal failure may be managed as outpatients; however, animals with a uremic crisis should be managed as inpatients and hospitalized. Hospitalized patients will require intravenous fluid therapy, and a wide variety of medications depending on the many variables this disease condition may present.

Expected Course and Prognosis

- Short-term prognosis depends on severity of chronic renal failure.
- Long-term prognosis is guarded to poor because chronic renal failure tends to be progressive over months to years.

Home Care...

- Diet: Reduced dietary protein, phosphorus, and sodium with adequate buffering capacity (alkalinizing diet) (K/d or U/d).
- Free access to fresh water at all times
- This disease tends to progress to terminal chronic renal failure over months to years
- Dogs and cats with chronic renal failure should be monitored at regular intervals, depending on treatment and severity of chronic renal failure. Monitoring should initially be weekly if anemic or showing severe renal impairment. Animals with mild-to-moderate chronic renal failure should be reevaluated every 1 to 3 months.

Call Us If...

- Your pet is reluctant to eat or seems depressed.
- Your pet vomits repeatedly or has diarrhea.
- Your pet faints or acts dazed or confused.
- There is a change in your pet's water intake and/or urination.

Thank you for this opportunity to serve you!