

Feline Chronic Renal Failure

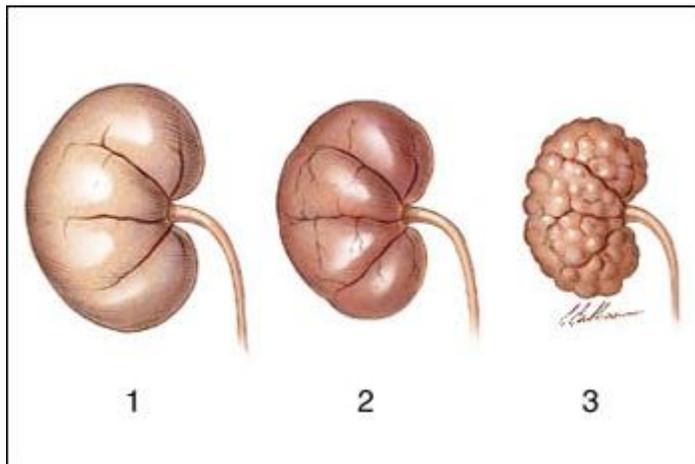
Kidney failure, renal insufficiency, renal disease

Affected Animals:

Cats of any breed, sex and age can be affected; however, older cats most frequently develop the illness. The mean age of chronic renal failure in the cat is nine years. Some types of kidney disease can be passed genetically among Abyssinian and Persian breeds. All animals and people can develop chronic renal failure.

Overview:

Because the kidneys are vital, life-sustaining organs, chronic kidney failure can compromise a cat's health greatly. When working properly, the kidneys filter waste products from the blood stream into the urine. A cat with poorly functioning kidneys may drink increased amounts of water and urinate more often -- in an attempt to flush out those waste products in its blood stream that the kidneys are no longer capable of eliminating into the urine.



1. Acute renal failure
2. Normal kidney
3. Chronic renal failure

Eventually the cat's attempts to compensate for the failure of its kidneys will become insufficient. As the disease gets more severe, many serious complications may result. Ulcers in the mouth and stomach, anemia, and urinary tract infections are common occurrences among cats with chronic kidney failure. High blood pressure -- which can lead to blindness -- is one of the more serious complications.

Generally, older cats get chronic kidney failure, and the disease tends to worsen with age.

Clinical Signs:

Although polyuria and polydipsia are often the first signs observed in dogs with chronic renal failure, only a small portion of cats present with these signs. More often owners report lethargy, anorexia, and weight loss. Vomiting, diarrhea, gastrointestinal ulcerations, weakness and exercise intolerance can also occur. If present, hypertension can lead to acute blindness. Common physical exam findings include dehydration, small or irregular kidneys, cachexia, pale mucous membranes, oral ulcers, and uremic breath odor.

Symptoms:

If a cat has chronic kidney failure, typical symptoms an owner might notice include tiredness, loss of appetite, and weight loss. Vomiting, diarrhea, drinking water from strange sources, increased amounts of urine in the litter box, sores in the mouth, bad breath, weakness, and inability to do normal activities without tiring. If a cat has high blood pressure, it may experience loss of vision.

Description:

The kidneys have several life-sustaining functions, making them vital to the overall health of the cat. They filter waste products out of the bloodstream and excrete them into the urine. The kidneys also control the cat's electrolyte levels, pH level, and hydration status. In addition, the kidneys produce essential hormones such as erythropoietin, which stimulates the bone marrow to produce new red blood cells.

When the kidneys first begin to fail, the cat's body systems will make adjustments to compensate. For example, the cat may consume more water and urinate frequently in an attempt to "flush out" the waste materials accumulating in the blood stream that should have been eliminated by the kidneys. At some point, however, the amount of dysfunction will overwhelm the cat and the more serious symptoms of chronic kidney failure will result. By the time blood tests show significant changes that alert the veterinarian that renal failure is present, 75 percent of the total kidney mass will have stopped functioning properly.

The most common cause of chronic renal failure is the normal aging process. The disease is progressive and irreversible -- meaning that the cat's prognosis, or prospect of recovering from the illness, is poor. However, treatment can result in short-term improvements of the cat's symptoms and make its life more enjoyable for some time. A cat with chronic kidney failure can live for several weeks to several years with the illness, depending on the severity and advancement of the disease.

Diagnosis:

A veterinarian will diagnose chronic kidney failure after a thorough examination and an analysis of laboratory tests such as a complete blood count, or CBC, a blood chemistry test, and a urinalysis. Other tests the veterinarian might conduct include a urine culture, x-rays, an ultrasound, and measurement of the cat's blood pressure. Biopsies of the

kidney, performed using ultrasound or surgery, may provide more information about the cause of renal failure. Some of these tests may require referral to a specialist of veterinary internal medicine.

Prognosis:

The long-term prognosis for chronic kidney failure is poor since the disease is progressive and irreversible. The cat may live only several months to years. Some cats may have severe complications that cannot be reversed even with aggressive treatment. Euthanasia is an option offered for those animals that appear to be suffering.

Transmission or Cause:

Most cases of chronic kidney failure are idiopathic -- meaning that they have no specific cause. Older cats tend to develop the disease because there is a normal decline in kidney function with aging. There are certain medical conditions that do tend to lead to chronic kidney failure, which include: inherited and congenital kidney disease, toxins of the kidneys, high blood calcium, and a condition called glomerulonephritis, in which the internal structures of the kidney become inflamed. Other diseases associated with kidney failure include kidney infection, polycystic kidney disease, kidney stones, feline infectious peritonitis, chronic urinary obstruction, and cancer. In addition, a condition called renal amyloidosis, in which proteins are distributed within the kidney, may lead to the illness.

Treatment:

Cats with severe chronic kidney failure will require hospitalization so that they may be treated with intravenous fluids, nutritional support, and medications. Less severe manifestations of the disease may be managed at home with medications and dietary changes.

The veterinarian may recommend certain commercial cat foods, available only through prescription, that are reduced in protein, phosphorus and sodium -- and should therefore reduce the work load for the kidneys. Other medications are prescribed to control symptoms of kidney failure such as nausea, inappetence, mineral and electrolyte imbalances, hormone deficiencies, and high blood pressure. It is important that fresh water be available at all times to cats with the disease.

The veterinarian may instruct the owner how to administer supplemental fluids under the skin, called subcutaneous fluid therapy. This method usually is recommended for cats with moderate to severe forms of chronic kidney failure. Re-examinations to monitor the disease are recommended on a regular basis. The number of visits will depend on the severity of the cat's disease and its response to treatment.

Prevention:

Cats believed to have a genetic predisposition to developing kidney disease should not be bred. Aging cats should be monitored for abnormal symptoms and receive veterinary attention if clinical signs appear.