

# FELINE CHRONIC KIDNEY DISEASE

Renal insufficiency (kidney failure) occurs when kidney function has deteriorated to such a degree that the kidneys can no longer perform their normal functions of excreting waste products, maintaining water and electrolyte balance, and producing hormones.

Renal insufficiency occurs in acute and chronic forms. Acute renal insufficiency is of recent onset and is potentially reversible. In contrast, chronic renal failure has been present for months to years at the time of diagnosis, and is irreversible. Cats with chronic renal failure cannot be cured, but their clinical symptoms can often be successfully managed.

Kidneys are comprised of many small functional units called *nephrons*. Nephrons purify and filter the blood; a cat has approximately 190,000 nephrons. Because cats are born with such an abundance of nephrons, signs of kidney failure generally do not become apparent until more than two thirds of the nephrons have been damaged. Renal failure occurs most often in older cats, but renal failure is not simply a result of aging.

## Common Signs of Renal Insufficiency

The earliest signs of renal failure are typically excessive thirst (polydipsia) and increased urine volume (polyuria). Also common are weight loss, high blood pressure, lethargy, poor coat condition, vomiting, and an increasingly selective appetite, or no appetite (anorexia).

Further decline in kidney function results in a progressive inability to excrete waste products in the urine, leading to retention of toxic wastes in blood and in body tissues. This is called uremia (literally, urine in the blood). Prominent clinical signs of uremia include loss of appetite, vomiting, weakness, lethargy, ulcers in the mouth, or “uremic” breath (foul and smelling of ammonia). We may also see anemia (low red blood cell count) and high blood pressure.

## Diagnosing Chronic Renal Failure

Diagnosis of chronic renal failure is confirmed by laboratory evaluation of your cat’s blood and urine. A urine test can help determine whether the kidneys can form concentrated urine, and will provide evidence of urinary tract infections. Kidneys excrete urea and creatinine, so increases in urine plus creatinine concentrations in blood also indicate decreased kidney function. The urine and blood tests are conducted simultaneously because they provide different information. Ultrasound and x-rays may be used to evaluate kidney disease. Blood pressure can also be checked.

## Treatment

Fortunately, most cats can be treated after a diagnosis of chronic renal failure, providing good quality of life for months or even years. Treatment is tailored to the unique clinical requirements of each cat and their symptoms.

Dehydration (abnormal depletion of body fluids) is a particular threat to cats with renal failure, and their condition may deteriorate if episodes of vomiting, diarrhea, or inadequate water intake are not dealt with promptly.

Treatment may include special diet (to limit protein, phosphorous, and salt intake) and/or increased amount of canned food; hydration therapy; and medications designed to control clinical symptoms such as poor appetite, nausea, vomiting, electrolyte disturbances, anemia, and hypertension. Periodic blood and urine tests will be necessary to help evaluate how well the medications are working and adding in new ones as the disease progresses.

## Additional Options

In humans, renal failure is most often managed by dialysis or renal transplantation. These options have thus far not proved to be satisfactory for cats because they are costly and fail to provide an acceptable quality of life. In some cases of acute renal failure, dialysis and/or kidney transplant may be a viable option. These are expensive procedures available at specific hospitals and universities across the United States; ask us for more information.

## The Importance of Ongoing Care

Although chronic renal failure is a progressive disease which will eventually become terminal, with good supportive care and treatment, it can be successfully managed. With your support and care, your cat should be able to have good quality of life for a period of months, or even years.



For additional information about feline chronic kidney disease, please speak with one of our doctors or visit [www.felinecrf.com](http://www.felinecrf.com).