

What organ system quietly goes about its business with little fanfare; diligently doing its thankless job of removing metabolic wastes, regulating the body's level of water, calcium, phosphorous, sodium and potassium, assuring adequate red blood cell numbers and helping maintain normal blood pressure? The answer: The kidney (renal) system. In my work the kidneys get a lot of attention-especially when we talk about cats.

For reasons that are unclear cats seem to develop renal disease much more commonly than dogs. If you have a cat, or know someone with a cat, odds are you have heard about this concern. The treatment, and more importantly the prevention, of renal disease is something every cat lover should understand.

As a sort of "filter" system for the blood, the kidneys are exposed to the many possible insults. Poisons play a role in a small percentage of kidney problems in cats and the result is usually disastrous (we all remember the tainted pet food crisis last year). Common automotive coolant/antifreeze is the most common kidney toxin ingested by cats. Typically once a cat shows symptoms of the antifreeze ingestion (weakness, collapse, vomiting, diarrhea) the kidneys are irreparably damaged. Bacterial infection is another possible insult to the kidney system. We've all heard of urinary bladder infections. For the most part these are easy to treat with appropriate antibiotic therapy. Infection of the kidneys themselves is another story. Infection of the kidneys usually results in more serious illness when compared to a bladder infection and often requires weeks if not months of antibiotic treatment. Even with this aggressive treatment, the infection may not be completely eliminated. This infection of the delicate renal tissue, even if controlled, can ultimately result in permanent organ dysfunction.

Far more common in cats is the slowly progressive loss of kidney function secondary to diffuse inflammation of the kidney. No one entirely understands why this occurs but one possible trigger may be low-grade inflammation at other sites in the body. This might include chronic infections, dental disease or other immune stimulators. This type of kidney failure can take months or years to develop and often without symptoms until over 60-70 percent of the kidney tissue is lost.

Early symptoms of kidney failure include increased thirst and urination. Ultimately as renal function diminishes these patients may develop more serious symptoms of weight loss, poor appetite, vomiting, and diarrhea. Sadly, it is at this late stage that the veterinarian usually first sees these patients. I say sadly because by the time these cats hit the veterinary exam room they are running on only 10-20 percent of their normal kidney function.

The diagnosis of renal failure is usually straightforward with standard blood and urine tests. Many times we will initiate supportive care of intravenous fluids well before the lab tests are back so as to not lose anymore time. Once the test results are in we can refine the treatment effort.

Aggressive IV fluid treatment, or diuresis, and other treatment efforts will not return kidney function to normal. Rather our goal is to regain enough kidney function to support an acceptable quality of life for the ensuing months or years.

Can feline kidney disease be prevented? In the case of antifreeze/coolant induced problems the answer is an obvious yes. Carefully monitor your garage and driveway for any leakage of coolant from your car and clean it up immediately. If you do your own auto repairs never leave open containers of antifreeze around where your cat could lick

some up. Only a small amount of antifreeze can be lethal to a cat. Finally, consider some of the newer less toxic antifreeze products now on the market.

The debate rages among researchers, as it has for decades in veterinary medicine, whether or not one can prevent non-toxin induced forms of kidney disease. Nonetheless everyone agrees that simple steps can be taken to reduce your cat's odds of developing advanced forms of renal failure. Keep close tabs on your cat's thirst level and litter box patterns. Have your cat evaluated by your veterinarian if you notice any increased thirst and urination. Yearly (every 6 months for older cats) physical examinations and blood/urine screening, even for "healthy" appearing cats, can identify kidney problems earlier. If started early, some medications as well as changes in lifestyle, dental care, and even diet may delay or arrest the progression of kidney failure.

If you live with cats, chances are good that eventually one of your feline friends will be diagnosed with kidney disease. Working regularly with your veterinarian, and taking some simple steps at home may spare your cat from this common feline malady.

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