

Feline Kidney Disease

Older cats more than likely will have kidney failure develop as they age and is the most common cause of death. In most cases, by the time blood levels of protein waste products become elevated, less than 25% of the nephrons are functional. Cats show signs of kidney disease in many ways, but usually by drinking lots of water and urinating more. Management of this disease is done by taking into consideration the instructions discussed below

Things you can do at home with minimal veterinary monitoring

1. Reduce the amount of protein waste products and increase the carbohydrate/fat intake. Switch cat food to a high-quality, limited quantity (28 to 35% of 100% dry food) protein diet. There are several feline diets made for cats with kidney problems. The best way to change the diet is to gradually switch from regular food to limited-protein diets. There are several alternatives to these diets. You can continue to feed your cat as before but increase the amount of water to flush out the protein waste products. Home made diets can be formulated but the meals should contain 3 to 4 times more carbohydrates and fats than protein. High- protein egg white and meats including tuna, chicken, turkey, and meat baby food can be mixed with any pasta (Spaghetti O's, pizza), potatoes (mashed or instant kind), rice baby food, bread, and sweet potatoes. Fats such as gravy, butter, cheese, and sour cream are great and can be used to make the meals tastier. Appetite stimulation using diazepam (Valium) or cyproheptadine (Periactin) can help in this dietary transition. Low-protein diets are available from specialty pet stores or veterinarians and include Purina NF (dry and canned) - vet only
Walthams low protein (canned and dry) - vet only
Walthams senior feline (dry) - pet store
hi-Tor low-protein (canned) - pet store
Hill's k/d (dry and canned) - vet only

To calculate the amount of protein in commercial cat food, subtract the per cent moisture from 100% to obtain the percent dry food. Divide that into the percent protein on the label times 100 to get the actual protein in the cat food. The most important rule regarding diet is that any food is better than no food so stubborn cats that refuse these new diets must eat something.

2. Fluids - Increase fluid intake and urinary output by giving broth and other liquids orally. Subcutaneous injection of balanced electrolyte solution on a daily, every other day, or even less frequent basis is helpful in eliminating waste products. Usually 100 to 150 ml of solution are given under the skin behind the shoulders. This will be absorbed as needed. We will show you how to do this procedure so it can be done at home. Most cats readily accept it.

3. Constipation - Often cats with kidney disease need extra water to keep the kidneys flushed out. As a result, they will become constipated because they are absorbing all of the available water from the stool in the colon. Stool softeners such as Metamucil or a hypertonic sugar (lactulose) may be used to keep stools soft enough for easy defecation.

Treatments that need good veterinary Monitoring

1. Histamine-blockers such as Pepcid AC (5 mg for a cat) are given daily to prevent gastric ulcers and reflux esophagitis.

2. High blood pressure is frequently a sequel of renal disease and may have to be controlled with vasodilators such as diltiazem or enalapril. It is preferable to restrict sodium-n intake when high blood pressure is present

3. Calcium and phosphorus are two minerals that frequently need to be regulated. Hi levels of phosphorus in the blood stimulate lowering of calcium blood levels. As a result, nephrotoxic levels of parathyroid hormone are released. Often we recommend adding a special form of vitamin D to

the food (1 drop from a small needle) -- this increases intestinal absorption of calcium. Phosphate binders such as Amphigel are often indicated as well.

4. Anemia - A function unique to the kidneys besides filtration is the production of a hormone, erythropoetin, to stimulate bone marrow production of red blood cells. The percentage of red blood cells in the peripheral blood (PCV) should be approximately 35%. If anemia (less than 30%) develops, synthetic erythropoetin injections are given once twice weekly to provide this necessary stimulus to the bone marrow. This treatment can be done at home.

5. Potassium supplementation may be necessary if water excretion is excessive or if the appetite is poor. Tablets, paste or liquid can be given. Careful monitoring of potassium levels must be done to detect if blood levels of potassium become too high.

6 Urinary tract infections develop more readily in cats with kidney disease. Urine cultures should be done every 6 months to insure that the urine is sterile.

It is helpful for you, the pet owner, to keep track of these clinical values over time so you will be aware of various needs of your cat. The list should include date, weight, blood pressure, thyroid level (T4), urine specific gravity, serum calcium, phosphorus, and potassium, and packed cell volume.

This information was developed in conjunction with a veterinary kidney center that the Veterinary Oncology Specialist consult with on a regular basis