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## **CHRONIC KIDNEY DISEASE: *Helping Your Pet Live to Thrive***

The main function of the kidney is to remove metabolic waste products from the body's blood supply. The kidneys act as in-line filters for the blood stream.

All of the body's blood circulates through the kidneys eventually. There it is cleansed of all chemicals not needed by the body. The kidneys filter the blood in two steps. In the first step, nearly all of the dissolved chemicals are removed from the blood. In the second step, some of the desirable items such as blood sugar, most of the water, and certain other essential substances are returned to the blood stream. All of the chemicals that were filtered out of the blood in the first step and not returned to the blood in the second step are excreted as urine.

That's the way it is supposed to work. But kidney disease changes things. If the kidneys are not functioning normally, they will not be able to perform properly, so waste materials accumulate in the blood, poisoning the body. In general, 3/4 of the functional kidney mass must be lost before symptoms of kidney disease become apparent. Once a kidney is damaged, regeneration does not occur.

### **Signs of Kidney Disease**

Signs of kidney disease can appear suddenly or develop slowly over time. Initial signs of kidney disease include: loss of energy, loss of appetite, weight loss, poor or unkempt haircoat, increased water consumption (often overlooked in cats), and increased urination.

Later signs include vomiting, diarrhea, depression, and dehydration. This latter development is often surprising to pet owners. It results from an inadequate amount of water in the body caused by increased urine output. Once severe kidney damage has occurred, excessive urine is allowed to pass through the kidneys. The dehydration, in turn, causes the pet to drink more and more, leading to a continually increasing volume of urine. The cycle gets worse and worse.

**Treatment:** Treatment of kidney diseases is focused on the following general concepts:

- \* Maintenance of proper hydration and water intake.
- \* Dietary optimization.
- \* Elimination or minimization of other treatable concurrent problems that may be interfering with kidney function.

### **GENERAL MANAGEMENT STRATEGIES FOR PETS WITH KIDNEY DISEASE**

1. Maintain access to fresh, clean, water at all times. Change the water daily.
2. Diet optimization is one of the cornerstones of kidney disease management.

Feed diets that are specifically for pets with kidney problems. These diets are specially formulated to reduce the demands on the kidney. The highest quality protein available must be utilized to decrease the continuing damage occurring within the kidneys. High quality protein includes egg and organ meat, such as liver. Minimize skeletal muscle meat sources. Fish is okay.

If your pet is a nibbler (most cats are), leave food available at all times. Otherwise, feed 3-4 small meals daily, rather than one large meal. Allow your pet to eat all that it wants, unless free-choice feeding causes obesity. If weight loss occurs in spite of good appetite, increase the amounts of dietary fats for cats or increase the amounts of dietary carbohydrates for dogs. Maintain your pet's body weight at an optimal level. Your pet should be trim and have a marked waistline.

3. Additional medications may be required depending on the severity and type of kidney disease present.
4. Repeat blood tests for the kidneys as directed by your veterinarian.