



**Good Friends
Animal
Hospital**

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Chronic Kidney Failure

Kidney failure is the inability of the kidneys to effectively remove waste products from the blood. The term “chronic kidney failure” suggests that the kidneys have not been functioning well for an extended period of time. Eventually the kidneys will stop completely and no urine will be made, but before this happens the kidneys actually produce more urine.

Influence of Age

Typically, chronic kidney failure is the result of aging. The kidneys simply “wear out.” For most dogs and cats symptoms of chronic kidney failure may occur between 10 to 15 years of age.

How It Affects Dogs and Cats

The kidneys filter the blood and remove many of the toxins produced by the body. As we age the filtration process becomes inefficient and ineffective. The body tries to rectify this and pumps more blood to the kidneys in an attempt to increase the filtration. This in turn produces more urine. Because the kidneys also cannot concentrate urine like they once did, more urine is produced and mineral loss increases. To keep from becoming dehydrated your pet will drink more water. Early signs of kidney failure are increased thirst and increased urination. Advanced stages of kidney failure include loss of appetite, weight loss, vomiting, diarrhea, anemia and very bad breath.

Diagnosis

High levels of two waste products in the blood, blood urea nitrogen (BUN) and blood creatinine, diagnose kidney failure. A urinalysis will indicate kidney problems at an earlier stage, when the blood may still look normal.

Although BUN and blood creatinine levels reflect kidney failure, they do not predict the progression of the disease. Marginal kidney function may show normal blood tests. Conversely, kidney failure may escalate for no obvious reason. At least 70% of the kidney tissue is damaged before abnormalities are seen in the blood.

Treatment

The goal of treatment is to improve kidney function. However, your pet’s kidneys have reached this point due to long standing disease or aging. They will never be normal again. Many times there is enough functional kidney tissue so that treatment will be very rewarding.

The following list includes therapies that can slow down the deterioration of the kidneys and prolong a good quality of life.

A kidney failure diet. These prescription diets have lower (restricted) amounts of protein to prevent a buildup of protein waste products in the blood. They are lower in phosphates to help control the phosphorus level in the blood, and they are lower in salt to help decrease blood pressure.

Potassium supplementation. Low potassium levels have been shown to further reduce kidney function. Potassium is lost in the urine when urine production becomes excessive. A potassium supplement replaces that loss. Blood tests tell us whether a potassium supplement is needed.

Fluids given at home. Subcutaneous (under the skin) fluids may be given at home as needed to prevent dehydration. Fluids are given once daily to once weekly depending on the degree of kidney failure. Most pet owners can easily administer these fluids.



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Chronic Kidney Failure, continued

Antacid drugs. Loss of appetite caused by kidney failure results in excess stomach acid. Evidence indicates that excess stomach acid causes nausea and furthers the appetite loss. Antacids are given only if the appetite is improved when they are administered.

A phosphate binder. In kidney failure levels of phosphorus increase in the blood due to the kidneys' inability to remove it. This increases lethargy and poor appetite. Certain drugs can be used to "tie up" the phosphorus in the intestinal tract before they are absorbed, resulting in lower phosphorus levels in the blood. If the low protein diet does not successfully maintain normal phosphate levels, a phosphate binder is used.

A drug for high blood pressure. Based on clinical evidence and examination the veterinarian may prescribe a drug for high blood pressure.

Vitamin supplements. These help replace vitamins lost through excessive urination and provide additional nutrients.

Fish oil. This has been shown to improve kidney function and improves the immune system.

Herbs, nutritional supplements or acupuncture. These therapies may improve the remaining kidney function and slow down disease progression.

Monitoring

Kidney function should be monitored regularly through blood and urine tests. Changes in the treatment protocol are made according to the test results. Initially, the tests are repeated every 2-4 weeks and if test values stabilize, then every 3-4 months.

Life Expectancy

Prognosis is quite variable and depends on the response to initial treatment and to your ability to perform the follow-up care. We encourage treatment, because many pets will respond and have a good quality of life for several years.