

Kidney Disease in Dogs

Leslie Sinclair, DVM explains how this disease can strike your dog at any age.

Leslie Sinclair, DVM

Q. What caused my dogs chronic kidney failure, and how is it treated?

Leslie Sinclair, DVM says: Chronic kidney failure can occur in dogs of any age, but the likelihood increases with age. Over time, kidneys begin to lose their function and shrink in size. The kidneys compensate for decreasing function until they have very little ability to work, and then they begin to fail. Kidney transplantation is available for cats and has been explored for use in dogs, but the cost and complications associated with transplant rejection, as well as the ethical considerations associated with identifying a donor dog and extending the life of an elderly dog, make it an unrealistic option for now. The most common symptoms of kidney failure are increased urination and increased thirst, known in medical terms as polyuria and polydipsia, or PU/PD. Once the condition advances to the point that the kidneys are no longer able to filter ammonia (a by-product of the breakdown of protein in the diet) from the bloodstream, the dog develops uremia, a toxic condition characterized by nausea and vomiting. A veterinarian analyzes a blood sample to further assess the degree of kidney failure. The most widely used indicators are the blood urea nitrogen (BUN) and creatinine values. Both of these are products of digestion that build up in the bloodstream when the kidneys are functioning poorly. The degree to which the BUN and creatinine values are increased correlates with the level of kidney failure. Kidney damage cannot be reversed, but there are supportive measures that allow a dog with kidney failure to live comfortably, sometimes for years after the condition is first diagnosed. Dogs suffering from kidney failure are often dehydrated when diagnosed, and intravenous fluids are used to reverse the dehydration and reduce the amount of ammonia-like products in the dogs bloodstream. Antinausea medications can reduce vomiting and discomfort caused by uremia. Many dogs with kidney failure are anemic (lacking an adequate number of red blood cells) because they cannot produce a sufficient amount of the hormone erythropoietin, which is made by the kidneys and regulates the production of red blood cells by the bone marrow. Some dogs become so anemic that they require a blood transfusion or medication to stimulate their body to produce more red blood cells. Because the blood circulating in a dogs body must go through the kidneys, the narrowed pathways found in damaged kidneys may cause a dog to have high blood pressure. This aspect of kidney failure has not yet been well studied because blood pressure measurement is difficult in dogs. As better equipment becomes available for monitoring dogs blood pressure, improved recognition and treatment will be available. Once a dogs condition has stabilized, the veterinarian recommends a diet low in protein to prevent symptoms from reoccurring. If your dog develops chronic kidney failure, closely monitor him at all times, and work with your veterinarian to provide your dog with the best possible quality of life despite this irreversible condition.

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