



## Managing Kidney (Renal) Failure

Chronic kidney (renal) disease commonly affects older animals, but it also occurs in younger animals with congenital abnormalities. The kidneys are two important organs that filter the blood and remove waste products from the body as urine, maintain the body's water and electrolyte balance, regulate blood pressure, and produce a hormone that stimulates red blood cell production. When the kidneys fail, these substances build up and cause your pet to feel ill. Here are some ways you can help your pet.

### Feed kidney-friendly food

A low-protein diet is one of the mainstays of treating chronic renal failure. That's because the protein in food must be broken down by the body to be used for energy, and one of the byproducts is blood urea nitrogen (BUN). If your pet's kidneys can't remove that BUN, the animal starts to feel worse. A high-quality, low-protein diet, however, makes it easier for the kidneys. In fact, sometimes a diet change alone will help your pet feel better. Several low-protein diets are available through veterinarians, and these diets are the most effective method of slowing progression of the disease. We recommend the Hills® prescription diet for kidney failure.

### Keep your pet hydrated

Make sure your pet always has access to fresh water. In addition, giving fluids under the skin (subcutaneous fluid) can help flush out toxins and prevent dehydration. Some pets may need subcutaneous fluids twice a week, and others need them twice a day. Your veterinarian can teach you how to give fluid therapy at home.

### Restrict dietary phosphorus

Because the kidneys are responsible for getting rid of excess phosphorus in the food your pet eats, phosphorus levels in the blood climb with kidney failure. This can reduce your pet's appetite and also cause mineral deposits in the kidneys and other places in the body. Two ways to keep your pet's phosphorus level at an appropriate level include feeding less of the mineral and preventing its absorption from food. Low-protein diets are low in phosphorus. You can give your pet a phosphate binder medication—in liquid, powder, or tablet form—that binds to phosphorus in food and prevents it from being absorbed into your pet's bloodstream.

Phosphate binders must be given with meals, because the medication can't do its job without food. If you change the frequency of feeding, talk to your veterinarian about changing the phosphate binder dose so you can give it with each meal.

### Additional therapies for anemic pets

Anemia (low red blood cell count) is common in pets with chronic kidney failure. The kidneys make a hormone called erythropoietin that tells the bone marrow to make new red blood cells to replace older cells as the older cells are removed. When kidneys fail, they stop making adequate amounts of this hormone. The anemia develops slowly, giving the pet time to adapt. When the anemia is moderate to severe, your pet may appear tired or unwilling to eat. Blood transfusions can help for a short while, but transfused cells don't last long, and the transfusions need to be repeated every few weeks. Hormone replacement shots are also available to treat anemia.

### Soothe and protect the stomach

Stomach ulcers are a common problem in pets with kidney failure because of the toxins that build up in the blood. These ulcers can cause nausea and vomiting (occasionally with blood) as well as decrease your pet's appetite, so an anti-ulcer medication to reduce stomach acid may be prescribed. Other drugs that coat the stomach to protect ulcers that have already formed may be used during flareups. However, these stomach-coating drugs can interfere with the absorption of other drugs and aren't typically used long-term. Your veterinarian can answer questions about the best medications and dosing schedules for your pet.

Adapted from Dr. Cathy Langston, DACVIM, at Animal Medical Center in New York