



Chronic Kidney Disease in Dogs

About 1 in 10 geriatric dogs develop kidney disease.

What does the kidney do?

- Maintains fluid balance in the body.
- Excretes waste products (via urine).
- Produces certain hormones.
- Regulates any electrolytes.

Causes

There are many causes of kidney disease including but not limited to cancer, infection, toxic injury, kidney stones and congenital problems. The list goes on. However, the most common cause of kidney disease in geriatric dogs is 'idiopathic chronic interstitial nephritis'. This is where the kidney undergoes a long-term path of injury so that the remaining functional part of the kidney is gradually reduced. The kidney has a huge reserve; 75% of the kidney's function is usually lost before the dog will experience signs of disease. This is an age-related disease and unfortunately it is largely unknown why they are predisposed to it.

Clinical Signs

- Dull and lethargic.
- Blindness.
- Increased thirst.
- Smelly breath.
- Sickness/diarrhoea/constipation.
- Loss of coat condition.
- Dehydration.
- Pale nose/gums/eyes (Anaemia).
- Increased urination.
- Loss of appetite.
- Weight loss.

Diagnosis

A basic diagnosis of kidney disease is readily made from the symptoms, a blood test and a urine test. There are further tests that allow a more thorough investigation and your vet will guide you through the need for these, an example would be an ultrasound of the kidney.

Treatment

Treatment depends on the stage of kidney disease. There are four stages of kidney disease between 1 (mild) and 4 (severe).

- Treat any underlying causes, for example, an infection.
- Kidney diet: The most important component of treatment. A kidney diet is vital to improve quality of life and life expectancy. It aims to balance electrolyte disturbances, contains added vitamins and antioxidants and has an increase calorific density as kidney patients are often in poor body condition.
- Correct dehydration: Increase water intake at home, inject fluids under the skin and by using intravenous fluids at the vets. The method employed will vary with the severity of the dehydration.
- Blood pressure medication: Some dogs will also require medication to reduce their blood pressure.
- Phosphate binder/additional correction of electrolyte abnormalities.
- ACE inhibitors/blockers: This medication is in the form of a tablet/liquid and aims to reduce the blood pressure within the kidney and therefore the protein that is abnormally lost into the urine.
- Appetite stimulants/stomach protectants if the dog suffers from a reduced appetite and nausea.
- Hormone therapy for anaemia: controversial and not widely available.
- Kidney transplant, although it is not currently legal in the UK as the British Veterinary Association questions the ethical and welfare implications.



Remember, each dog must be treated as an individual. The treatments above must be discussed with your vet to devise an appropriate treatment plan. Often, only a kidney diet and maintaining a healthy fluid intake is required.

Managing the change to a new diet

This is one of the most important things you do when treating a dog with kidney disease. The food is relatively unpalatable when compared to a normal diet and they may reject the food making management of the disease very difficult. Please follow the steps below to increase your chances of success.

1. Change gradually (days to weeks).
2. Start by mixing a very small amount of the new food with your dog's old food, and mix well!
3. Only increase the amount once your dog is happy.
4. Warm to body temperature to increase palatability by increasing the odour.
5. If necessary, talk to your vet about using appetite stimulants and anti-sickness medication to increase their appetite in order to make the transition easier.

Increasing water intake

1. Place numerous water bowls in quiet, secluded locations.
2. Make it easy for the arthritic animal to reach in distance but also height – lift the bowl on a platform, for any sore necks.
3. Move the water bowl away from the food bowl. Some may prefer water placed away from their food.
4. It is also known that dogs prefer glass or ceramic bowls in comparison to plastic or metal. This could be that plastic taints the taste of the water.
5. Water fountains are inexpensive to purchase and will provide running water. These are a very popular water source to increase drinking.
6. Sometimes the water can be flavoured slightly by making a homemade chicken stock. This can be achieved after a family roast. Simply place the chicken carcass into a large pan of boiling water for an hour or so. The remaining water will be chicken flavoured and can be added to their water that week or frozen into ice cubes and kept long term. Some dogs will play with the flavoured ice cube or eat it whole!

Blood pressure

Dogs with chronic kidney disease can have high blood pressure. Ideally, all patients should have their blood pressure monitored. This generally occurs in a consultation where several measurements are taken to provide an average blood pressure reading. If they have hypertension it should be treated because it can cause; blindness, seizures, heart problems, neurological signs, poor quality of life and cause the kidney disease to worsen.

Monitoring

Ongoing monitoring is extremely important. The frequency with which it will be necessary will vary according to the individual.

- Blood values.
- Urine protein quantity (urine sent to laboratory).
- Urinary tract infections are more likely in those with kidney disease (urine to laboratory).
- Blood pressure (20% or 1 in 5 suffer from hypertension).
- Other diseases must be monitored for as this is a disease seen in older dogs and therefore comorbidity is common.

Prognosis

This can vary from a few weeks post diagnosis to many years of life depending on the stage and the individual circumstances.