

CHRONIC KIDNEY DISEASE IN THE CAT

Chronic Kidney disease is a condition commonly seen in cats and there is an increasing prevalence with increasing age. Initially symptoms can be very non-specific, decreased or picky appetite, reduced activity plus some weight loss. Owners may observe that their cats are drinking more or wanting water from strange places like taps and toilets but often cats drink outside from puddles so this can be missed.

Kidneys have a number of important functions, the obvious one is the removal of waste and water from the body. Millions of tiny filters called glomeruli, separate toxins, excess salts and urea, a nitrogen based waste created by cell metabolism from the blood. Urea is synthesized in the liver and transported to the kidneys via the blood for removal. Kidneys are key in the production of urine and they react to changes in the body's water level. When water intake is high then in order to maintain a constant level of water in the body, a large volume of urine is created to remove the excess and vice versa.

Kidneys also have a number of less obvious functions. They are involved in blood pressure regulation, the kidneys need constant blood pressure to filter the blood so when blood pressure drops they release hormones called angiotensin and renin. These increase the blood pressure stimulating blood vessel constriction and signalling the body to retain sodium and water. If kidneys do not receive enough oxygen they send another hormone, erythropoietin, to the bone marrow to produce more oxygen carrying red blood cells. Finally the kidneys help keep a healthy acid/base balance and help produce Vitamin D to keep bones strong and healthy.

Hence when kidney function deteriorates, a number of things start to go wrong and gradually the cat will deteriorate. Initially the cat will start to produce larger quantities of urine and drinks more to compensate for this. Ultimately it is not possible for the cat to drink sufficient so it will become dehydrated and secondarily to this it is likely to become constipated. A build up of waste products in the blood will lead to nausea so a reduced appetite and eventually inappetance and vomiting. A high level of phosphorus in the blood can contribute to ongoing kidney damage and low levels of blood potassium can further complicate issues leading to weakness. In failing kidneys, production of renin is increased, leading to increased blood pressure necessitating the heart to work harder, increased risk of stroke like symptoms and retinal problems leading to blindness. The mini filters (glomeruli) which are still functioning are also affected by the increased blood pressure and causes them to lose protein into the urine. Persistent loss of protein in the urine will lead to loss of muscle mass hence loss of weight but more importantly is associated with more rapidly progressive kidney disease and decreased survival time.

Although it is not possible to 'mend' kidneys, it is possible to address and improve a lot of the things that go wrong e.g. blood pressure, high phosphorus levels, loss of protein in the urine and secondary urinary tract infections. The earlier that the condition is found, the sooner management and treatment can be initiated to improve wellbeing, appetite and activity and so lead to a prolonged good quality lifespan.

If you think that your cat might be showing symptoms suggestive of chronic kidney failure, then please do make an appointment for a check up. Below is the gold standard protocol for checking cats for Chronic Kidney Failure suggested by experts. Tests and timing can be adjusted to suit individuals and financial constraints so do not be put off. Please come and talk to a Veterinary Surgeon about your concerns as soon as possible

Suggested Health Check Protocol for Cats

<7yrs	Annual Health Check including weight (Health Check included at vaccination time)
7-11yrs	Annual Health Check Blood Pressure Check Urine Test
11-15yrs	Health Check every 6-12mths Blood Pressure Check every 6-12mths Urine Test every 12mths Blood Tests including Thyroid Level every 12mths
15yrs+	Health Check every 3-6mths Blood Pressure every 6mths Urine Test every 6mths

Blood Tests every 12mths