

Chronic Kidney Disease - Cats



What is chronic kidney disease?

Chronic kidney disease (CKD), also known as kidney or renal failure, is a progressive deterioration in the ability of the kidneys to perform their normal functions:

- Control of fluid (water) balance
- Excretion of waste compounds (particularly the breakdown products of proteins) via urine
- Control of electrolytes (sodium and potassium levels)
- Production of hormones including those required for red blood cell production

This is one of the most common conditions of older cats, affecting around 7.7% of cats over 10 years old, rising to over 15% of cats over 15 years old. The rate of decline following diagnosis varies considerably between individual cats. Although we cannot halt this progression completely, appropriate diet and supplementary treatments can increase quality of life and double survival time.

Early signs of kidney disease are an increase in thirst and urination. As the condition progresses it will lead to weight loss, poor appetite, vomiting and weakness.

How is kidney disease diagnosed?

Diagnosis requires blood and urine testing. A combination of increases in certain compounds in the blood (SDMA, creatinine, urea and phosphate) combined with inappropriately dilute urine tells us that the kidneys are no longer functioning normally.

Kidney disease is staged from 1 to 4 on the basis of these results:

- Stage 1 is normal but at risk for kidney disease e.g. due to a genetic predisposition
- Stage 2 is early kidney disease – signs may be minimal
- Stage 3 is more advanced kidney disease - cats typically show more obvious signs
- Stage 4 is end stage kidney failure – signs may be severe and rapid decline may occur

Additional checks are also advised either straight away or at follow up depending on the severity:

- Blood pressure: around a quarter of CKD cats have high blood pressure which, if untreated, will speed up progression of the kidney disease
- Urine sediment or culture: urinary tract infections are common when urine is dilute
- Urine protein levels: increased protein loss in the urine is associated with a worse outcome and requires specific medication
- Electrolytes are measured: potassium is commonly low leading to weakness and poor appetite
- Complete blood count: looking at white blood cell counts helps determine if infection is contributing to the poor kidney function; anaemia is also common in CKD
- Ultrasonography and further testing may be advised if the kidneys are enlarged, if we suspect an unusual underlying cause, in certain breeds or in cats affected at a young age

What does my cat need from your vet clinic?

In most cases treatment is symptomatic and supportive. Some cats may require initial intravenous fluid therapy to correct dehydration and electrolyte abnormalities but once stable, treatment is aimed at supporting kidney function and minimising the complications of chronic kidney disease.

Optimal management of kidney disease requires regular monitoring of blood and urine parameters as well as blood pressure monitoring. Cats with chronic kidney disease are at risk of developing high blood pressure (hypertension) which can have a number of damaging effects, including blindness and worsening of the kidney disease.

Blood pressure should be regularly monitored in all cats with chronic kidney disease and where hypertension is found it should be treated. The frequency of check-ups will be recommended by your vet but will generally be every 3 to 6 months. This will allow us to identify treatable complications as they arise e.g. anaemia, low potassium levels, high phosphate levels, urinary tract infections, and hypertension (high blood pressure).

Dietary modification is the most important treatment in cats with chronic kidney disease; it slows progression and improves quality of life. A variety of other treatments may also be valuable depending on individual needs.

What is the right diet?

An ideal diet for a cat with kidney failure should have restricted levels of high quality protein. Many of the toxic products that accumulate in the blood in chronic kidney failure are a result of protein breakdown.

Other benefits of feeding a prescription kidney diet are:

- Reduced phosphate – controlling phosphate is critical in slowing progression
- Increased fat – to counteract the weight loss occurring in later stages
- Increased essential fatty acids and anti-oxidants – to reduce inflammation
- Increased potassium – to counteract the loss of potassium in the urine
- Supplementation of B vitamins – also lost in chronic kidney disease



There are a few different kidney diets and each comes in multiple forms (dry kibble, pouches, tins) and flavours to try to appeal to all cats, and allow us to change the diet if they stop eating it. We generally recommend Royal Canin renal or Hills k/d. Both of these diets are formulated to support kidney function and slow progression of the disease, and have been clinically proven to do so.

Water intake

Cats with chronic kidney failure are prone to becoming dehydrated due to the reduced ability of the kidneys to retain water. Maintaining a good fluid intake is therefore very important. There are a number of ways to increase water intake at home:

- Make sure a good supply of fresh water is always available.
- Cats often prefer ceramic or glass bowls to plastic or metal ones and they prefer wide shallow bowls so that their whiskers don't touch the sides when drinking.
- Many cats also prefer rain water to tap water so have a bowl outside to catch some rain.
- Many cats prefer moving water and may like to drink from running/dripping taps. A water fountain is a good option for these cats as it provides a constant source of moving water.
- Feed more wet food as part of their diet and add a bit more water to their food (if tolerated without affecting appetite).
- Use a little bit of tuna water (from tinned tuna in spring water, not brine or oil) to flavour the water. Do not use stock cubes as these tend to be very high in salt.

A product that can help to increase water intake is Pro Plan feline Hydracare. A supplement that will help increase the intake of liquid, reduce your cats specific gravity and is very palatable.



Medication

At the time of diagnosis many cats will be managed on diet alone, however as the disease progresses some individuals will need additional medication to manage some of the following complications:

- Excessive urine protein loss - medications can be used to reduce this
- High phosphate -phosphate binders
- Low potassium - potassium supplements may be needed in some patients
- High blood pressure - medication may be required to control this
- Nausea/vomiting - antacids or anti-sickness medications are needed in some cats with advanced disease
- Anorexia - appetite stimulants may be used for palliative care in patients with advanced disease
- Constipation - lactulose can be given to relieve this where fluid balance is not effective
- Urine infections - courses of antibiotics may be required if culture shows an infection

Some cats will also need additional fluids to maintain fluid balance which can be given under the skin (subcutaneous) either at the clinic or at home.

What do I need to look out for?

Dehydration

Dehydration can occur as the kidneys fail to retain water. This can lead to your cat feeling generally unwell and getting constipated. If left untreated it can get worse and eventually lead collapse.

You can test for dehydration at home by lifting the scruff of their neck, softly (see picture) and if the skin returns to the body quickly then they should be nicely hydrated, if the skin takes a long time to return to normal or stays up this is an indication they might be dehydrated.



If you think your cat may be dehydrated, please make an appointment to see your vet who will discuss the best treatment options for your cat.

These may include

- Using intermittent intravenous fluid therapy at your vet clinic
- Using intermittent subcutaneous fluid therapy which can be given at your vet clinic or sometimes in the home environment

Constipation

Becoming dehydrated can lead to constipation as the faeces become very dry. If your cat is straining to pass faeces or returning to the litter frequently but not passing anything please let us know. We may need to correct dehydration and/or do an enema. Medication such as lactulose can also be used longer term if this is a regular occurrence.

Weight loss

This is very common with chronic kidney disease cats and includes loss of muscle mass which can lead to weakness. Regular weight checks, ideally at least every 3 months, enables us to establish a normal weight range, identify weight loss as it happens and support healthy body weight. Weight loss can indicate a deterioration in kidney function and may prompt us to repeat bloods or look for other illnesses.

Nausea, vomiting or loss of appetite

These are more common in advanced chronic kidney disease and can significantly affect quality of life. Various medications can help to reduce these complications.

Signs of nausea

- Interested in food but turning away from it
- Not eating normal amount or not eating at all
- Licking of lips
- Vomiting
- Gagging when eating
- Urinating frequently or in inappropriate places

This can be a sign that kidney function is declining and the kidney disease is progressing. It could also indicate an underlying urinary tract infection so if you notice an increased frequency of urination you should make an appointment for a check-up. Increased urination will increase the risk of dehydration as they may not drink enough to compensate for the fluid loss.

Quality of life

Chronic kidney failure is a progressive disease and will eventually have a negative impact on a cat's quality of life. It is important for you to monitor quality of life at home and discuss any concerns you have with your vet.

A few questions to ask yourself:

- Is my cat following his/her usual routine and enjoying normal activities?
- Is my cat socializing with the family? Or is my cat hiding?
- Does my cat still enjoy affection? Or does my cat resent contact and attention or hiss when touched in a certain area?
- Is my cat still able to jump onto the bed or couch?
- Is my cat still eating and enjoying his/her food?

Always discuss any concerns or changes in your cat's behaviour with your vet.

Websites for further information:

<https://icatcare.org/advice/chronic-kidney-disease/>

<https://healthykidneysforcats.com.au/understanding-ckd-in-cats/>

There is also a book written for owners of cats with CKD with further detail that can be purchased online:

[https://www.vetprofessionals.com/store/products_detail?ProductName=Caring-for-a-cat-with-chronic-kidney-disease-\(4th-edition\)](https://www.vetprofessionals.com/store/products_detail?ProductName=Caring-for-a-cat-with-chronic-kidney-disease-(4th-edition))