

# Chronic kidney disease



## Managing the cat with chronic kidney disease: a guide for caregivers

Chronic kidney disease (CKD) is a common problem, particularly in older cats. Signs of the condition include losing weight, drinking and urinating more, loss of appetite and vomiting. Caring for a cat with CKD often involves a change of diet and use of medications, with regular monitoring by the veterinary team. If managed appropriately, cats with CKD can live many years of good quality life.



# Introduction: The kidneys in health and disease

Chronic kidney disease (CKD) can affect cats at any age but is more common in cats over 7 years old. The condition generally progresses over time but can be managed with diet and various medical treatments to address the cat's clinical signs and extend their life.

## Functions of the kidney

The cat's two kidneys (Figure 1) play a vital role in many normal processes in the body. Each is made up of hundreds of thousands of functional units called nephrons. In simple terms, a nephron consists of a glomerulus (sieve) and tubule, and together they filter the blood to make urine. Having arrived in the collecting ducts of the nephron, urine then flows into the bladder via the renal pelvis (a funnel-shaped collecting basin) and ureter (a muscular tube connecting the kidney to the bladder).

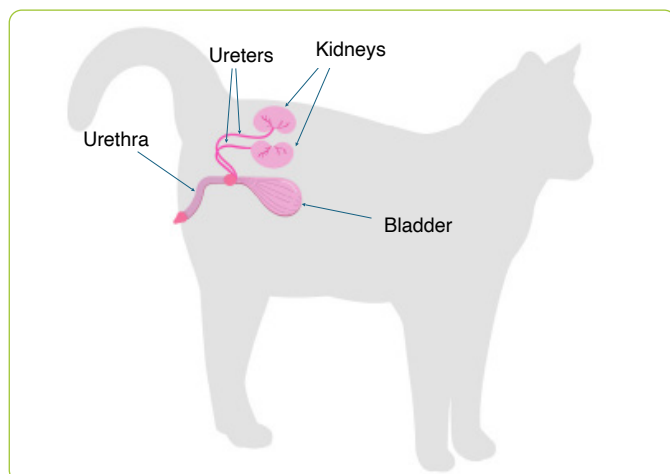


Figure 1: The kidneys, together with the ureters, bladder and urethra, make up the cat's urinary tract.  
Source: iCatCare

As well as producing urine, the kidneys also perform many other roles, including:

- Filtering the blood of toxins;
- Maintaining the body's fluid balance and preventing dehydration;
- Maintaining a normal blood pressure;
- Assisting in calcium balance;
- Maintaining a normal red blood cell count;
- Producing hormones;
- Maintaining a normal electrolyte balance.

When the function of the kidney is reduced, it can affect these processes and result in signs of illness. Thankfully, the kidneys are very good at their job, even when they have lost some function. This does, however, mean that cats may not show signs of a problem until kidney disease has progressed.

## Causes of CKD

In most cases, the cause of CKD is not known. However, some underlying conditions are recognised, such as inherited diseases (polycystic kidney disease in Persian and related cats), stones (uroliths), infections, toxins and cancers. The kidney may also be affected by factors originating outside of the kidney, including high blood calcium concentrations and high blood pressure (hypertension).

## Signs a cat has CKD

Cats with CKD may show few signs of illness, particularly in the early stages of the disease when weight loss may be the only indication. As CKD progresses, other common signs include:

- Increased thirst/drinking more;
- Urinating more (caregivers may notice a wetter and heavier litter tray);
- A reduced appetite (the cat may refuse food altogether or be more fussy/choosy with regard to their food);
- Lethargy/tiredness;
- Vomiting;
- Poor coat condition (Figure 2);
- Constipation (faeces are passed infrequently, consisting of a firm, dry stool).

High blood pressure (see box, 'High blood pressure in cats with CKD') can be a complication of CKD and can occasionally lead to sudden changes in the appearance of the cat's eyes (Figure 3) and, in some cases, blindness; affected cats appear disoriented and may, for example, bump into furniture.

As cats with CKD are often older individuals, they may have other conditions that are common in more senior patients, such as arthritis, dental problems and an overactive thyroid, which may also lead to further signs of illness.



Figure 2: An older cat with CKD and dandruff (scurf) on its fur. Source: Sam Taylor



Figure 3: In cats who develop hypertension as a complication of their CKD, bleeding may be observed within the eye. Source: Sarah Caney



Figure 4: Blood pressure should be measured in all cats with CKD. Source: Sam Taylor

## High blood pressure in cats with CKD

Just like people, cats can develop high blood pressure (hypertension). CKD is a particular risk factor for hypertension; hence, all cats with CKD should have their blood pressure measured at diagnosis and monitored on a regular basis.

The process is similar to that performed in people, involving inflating a cuff – which, in cats, is placed around the leg or tail (Figure 4). If hypertension is not treated, cats can sustain damage to their eyes, brain, heart and kidneys.

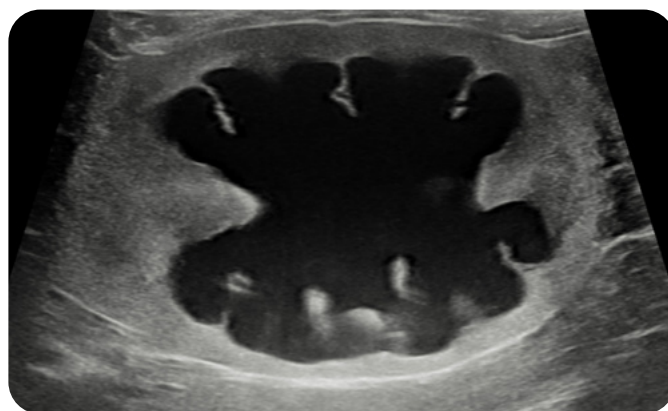
Fortunately, treatment with daily medication is very effective at controlling hypertension and preventing complications.

## How CKD is diagnosed

A diagnosis of CKD is made by testing blood and urine samples. Substances in the blood (including urea and creatinine) will be increased due to the kidneys' problems in filtering waste products from the blood. Other abnormalities that may be detected on testing the blood of cats with CKD include low potassium, a low red blood cell count (ie, anaemia), and high calcium and phosphate levels.

It is important that results of blood tests are interpreted in conjunction with analysis of a urine sample. Cats with CKD produce dilute (pale, watery) urine. Urine samples can also be checked for protein, bacteria and crystals, among other components. Some cats will also need imaging tests (x-rays or ultrasound) to look more closely at their kidneys, as well as to help identify potential causes of the CKD (Figure 5).

Once a diagnosis of CKD is made, the veterinarian will 'stage' the disease (see box, "Staging" of CKD: why is it important?), allowing a management plan to be formulated.



*Figure 5: Ultrasound image of an enlarged and fluid-filled kidney in a cat with CKD. These kidney changes were caused by a stone obstructing the ureter.*  
Source: Sam Taylor

## 'Staging' of CKD: why is it important?

The International Renal Interest Society (IRIS), a panel of expert veterinarians, has produced guidance to assist veterinary practitioners in diagnosing and treating kidney diseases in dogs and cats. Central to this is an established method of 'staging' CKD based on blood and urine tests. By assigning a 'stage' – from 1 (early/mild disease) to 4 (severe disease) – appropriate treatment and monitoring can be facilitated in cats with CKD. A further process of 'substaging' is then recommended, based both on the amount of protein in the urine and the cat's blood pressure.

A cat's CKD stage will progressively increase over time, and so regular reassessment is important. Cats at higher stages of disease will likely require more treatments to keep them feeling well.

## Management of CKD

In some cases, a specific treatment for CKD can be given; for example, antibiotics where there is an underlying kidney infection. More generally, cats who are unwell may need to be admitted to the veterinary clinic and placed on a drip to provide fluids and electrolytes intravenously.

Once a cat with CKD is stable and well enough, they can return home to be cared for. Ongoing care may involve changing their diet (see box 'Feeding the cat with CKD') and/or administering specific medications. Additionally, there are various ways of optimising the home environment to increase the comfort levels and wellbeing of affected cats.

## Feeding the cat with CKD

Cats with CKD can benefit from being fed a specific veterinary therapeutic diet designed for feline kidney problems. Such 'kidney diets' have a reduced phosphate content and moderately reduced protein levels, and are also supplemented with potassium, antioxidants and omega-3 fatty acids. Available in both dry (kibble) and wet (pouch or tray) formulations, these diets are usually well accepted by cats and have been shown to prolong life and prevent worsening of signs of CKD.

Cats should be transitioned on to a kidney diet slowly by offering small amounts of the new food alongside the existing food, gradually increasing the relative proportion of the veterinary diet over at least 1–2 weeks. Some practical tips for encouraging food intake include:

- Trialling different flavours and brands of kidney diets, where required, to see which the cat prefers;
- Warming the food to increase its aroma;
- Providing a quiet place for the cat to eat, away from other pets;
- Where required, discussing with the veterinary team the use of appetite stimulants and anti-sickness drugs to encourage eating.

At the same time, the caregiver should avoid:

- Adding medications to the cat's main meals; these treatments should be given at other times so as not to deter the cat from eating;
- Introducing a new diet when a cat is unwell (this extends to when the cat is hospitalised in the veterinary clinic); in such circumstances, the introduction should be postponed for when the cat feels better and is eating consistently.

Caregivers should consider keeping a food diary to record how much their cat is eating (weighing the food before offering it and then weighing any leftovers). If the cat is refusing food or eating less than recommended, it is important to contact the veterinary team. Cats with CKD need to eat enough, as they are prone to weight loss. If a cat refuses a kidney diet, there are other ways to help them; for example, the veterinarian may prescribe a phosphate binder medication. Some cats will tolerate eating a proportion of their daily food as a kidney diet and the rest as another food, and this can likewise be beneficial.

## Medical treatments

A range of medications is used to treat cats with CKD, dependent on their clinical signs and any complications of the disease. These include:

- Potassium supplements (powders, tablets or liquids);
- Medications to manage nausea and vomiting (eg, maropitant);
- Antihypertensive medications (eg, amlodipine or telmisartan);
- Laxative medications (eg, polyethylene glycol [PEG] 3350) or added fibre to manage constipation;
- Appetite stimulants and medications to maintain or improve body weight and conditions (eg, mirtazapine or capromorelin);
- Medications to reduce protein in the urine (eg, telmisartan or benazepril);

- Medications to treat anaemia of CKD (eg, molidustat or darbepoetin);
- Antibiotics in the event of a kidney infection;
- Phosphate binders given in food to reduce phosphate in the blood.

Giving medication to cats can be challenging, but some practical advice is provided in the box 'Tips for giving oral medications to cats with CKD'. Cats may require more medications as their CKD progresses to higher stages, and caregivers are recommended to reach out to their veterinary team for help and advice. Reducing the burden of caring for a cat with CKD requires a focus on the individual cat and caregiver, and veterinary nurses/technicians are likely to play an active part in supporting long-term disease management.

## Tips for giving oral medications to cats with CKD

- Trial various formulations – some cats may be easier to medicate with liquids and others with tablets;
- Give medications with a preferred treat (unless the medication should be given on an empty stomach). Liquid treats are popular with many cats or pill ‘putty’ products can be used;
- Avoid putting medication in the cat’s main meal. As mentioned, this can deter cats from eating.

Further advice is provided in International Cat Care’s resource ‘How to give a cat medication’, available at [icatcare.org/articles/how-to-give-a-cat-medication](https://icatcare.org/articles/how-to-give-a-cat-medication).

Caregivers experiencing any problems giving medications should contact the veterinary team, as alternatives can usually be found and support given.

## Ways of maintaining hydration

The fact that cats with CKD produce dilute urine means that they can lose more fluid than they take in, leading to dehydration. This, in turn, may contribute to constipation and cause the cat to feel unwell. Methods to improve water intake are discussed in International Cat Care’s Cat Carer Guide ‘Increasing water intake – encouraging your cat to drink: a guide for caregivers’, available at [icatcare.org/cat-advice/cat-carer-guides](https://icatcare.org/cat-advice/cat-carer-guides). These include installing a water fountain (Figure 6), providing multiple water bowls, adding water to food (if accepted by the cat) or trialling flavoured water products.

For some cats, fluids can be given under the skin to keep them hydrated. For more information, see the box ‘Subcutaneous fluids: guidance for caregivers’ and the

International Cat Care resource and accompanying video available at [icatcare.org/articles/how-to-give-subcutaneous-fluids-to-your-cat](https://icatcare.org/articles/how-to-give-subcutaneous-fluids-to-your-cat).



Figure 6: Water fountains can encourage water intake and help to prevent dehydration. Source: Sam Taylor

## Subcutaneous fluids: guidance for caregivers

Cats with CKD, particularly those with higher stage disease, may struggle to avoid dehydration due to their kidneys' inability to reabsorb fluid. In some cases, cats may benefit from extra fluid to avoid the development of constipation and other signs of illness. Subcutaneous (sometimes abbreviated to 'SQ' or 'SC') fluid administration involves giving fluids into the space under the cat's skin. From here, the fluid is absorbed into the bloodstream and body, helping to both treat and prevent dehydration.

The volume of fluid administered and frequency of subcutaneous fluid administration depends on the individual cat's needs but typically involves giving fluids every 1–3 days (Figure 7). With appropriate support from the veterinary team, the procedure can be performed by caregivers at home. Initially, the team will demonstrate the technique and observe the caregiver giving fluids, to ensure they feel confident with the procedure. They may also clip a patch of fur where the fluid is to be administered.



Figure 7: A cat receiving subcutaneous fluids.  
Source: Sarah Caney

Equipment for subcutaneous fluid therapy, which must be provided by the veterinary clinic (sealed in wrappers for sterility), includes:

- A bag of fluids;
- A connecting tube (giving set);
- Needles.

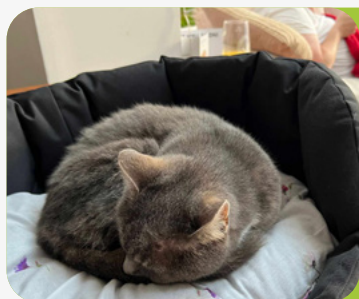
Handwashing is essential before handling equipment, and it is always helpful to have everything ready in advance before starting the procedure.

## Changes in the home environment for cats with CKD

An appropriate diet and provision of medications are the cornerstones of management for cats with CKD, but there are also various ways in which the home environment can

be optimised to benefit affected cats. These modifications cover five key areas, which are referred to as the 'five pillars' of a healthy feline environment (Figure 8).

## Ways of optimising the home environment for a cat with CKD using the 'five pillars' model for guidance



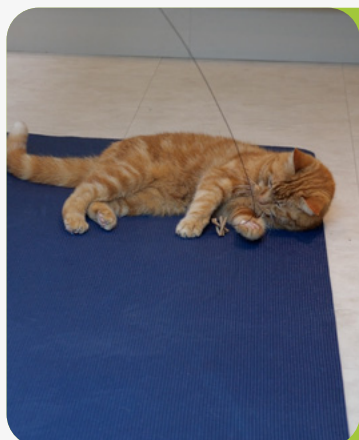
### Pillar 1: Provide a safe space

Provide predictable, secure and readily accessible resting areas in multiple locations. They should be within easy reach for a cat with mobility issues or pain from degenerative joint disease (DJD), with the use of ramps or steps, as necessary, and located away from busy areas of the home. Quiet, warm, sunny resting spots with deep bedding encourage use.



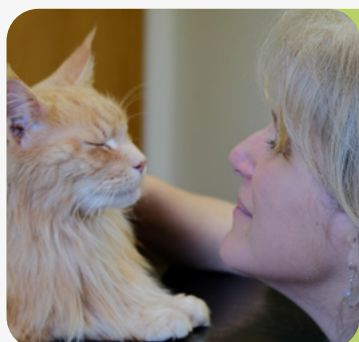
### Pillar 2: Provide multiple and separated resources

Cats with CKD may need to urinate and drink more frequently, so should have easy access to litter trays and multiple water sources. Resources should be distributed across all levels of the home and in sufficient number (at least two of each resource per cat). Food and water can be offered in raised bowls, and horizontal scratching opportunities provided for cats with DJD. Litter trays should be low sided with a soft substrate and regularly cleaned.



### Pillar 3: Provide opportunity to play and perform predatory behaviour

Even older cats with chronic illness will benefit from activity. Analgesia (pain medication) may help cats with DJD engage with light activity and low-impact play, which can also help trigger engaging emotions and prevent constipation. Cats could be encouraged to walk around a garden or engage with a fishing toy for short periods. Incorporating toys with auditory or olfactory stimuli (eg, crinkle material, catnip, valerian, silvamine), playing at predictable times and locations, using short, consistent sessions, and offering cardboard boxes placed on their sides supports safe, comfortable engagement.



### Pillar 4: Provide positive, consistent and predictable human-cat social interaction

Allow cats to choose the type and duration of interaction and never force handling. Some cats with chronic illness may groom less and enjoy being brushed; others may still have the appetite for occasional treats from their caregivers. Family members should not pick up the cat, but instead approach slowly with a soft voice to prevent startling. The cat should be allowed to disengage from interactions with people at their choosing.



### Pillar 5: Provide an environment that respects the importance of the cat's senses

Strong scents should be avoided (perfumes, air fresheners) and use of feline pheromone products considered. Food could be warmed to increase aromas and encourage eating. Sudden loud noises should be avoided to prevent startling the cat.

Figure 8: Ways of optimising the home environment for a cat with CKD using the 'five pillars' model for guidance. Modified from 2026 iCatCare consensus guidelines on the diagnosis and management of chronic kidney disease in cats. J Feline Med Surg. Available at: <https://journals.sagepub.com/doi/full/10.1177/1098612X261466553>. Copyright The Authors 2026. Source of images: Sam Taylor (Pillars 1, 2 and 5), International Cat Care (Pillar 3) and Sarah Caney (Pillar 4)

# Monitoring the cat with CKD

CKD will progress over time, although slowly in most cases. Additionally, older cats can develop other conditions alongside CKD that will benefit from treatment. Hence, regular monitoring by the veterinary team is vital and can help determine any treatment adjustments that may be required as well as detect complications (eg, hypertension). Monitoring also helps to ensure that caregivers are receiving the support they require. Repeat consultations may be conducted with a veterinarian or veterinary nurse/technician, and the frequency will be dictated by the cat's condition and stage of CKD.

It can be beneficial for caregivers to record certain aspects of their cat's habits and condition to report to the veterinary team. A monitoring form for caregivers of cats with CKD to assist with this process is available at [go.jfms.com/CKDGLs2026\\_supplementarymaterial](https://go.jfms.com/CKDGLs2026_supplementarymaterial). Importantly, this includes monitoring of body weight, and caregivers can use a pet or baby scale for this purpose (Figure 9). By documenting

changes and informing the veterinary team, appropriate interventions can be put in place if weight loss is occurring. Collecting a urine sample at home to bring to monitoring consultations can also be useful (see box, 'Collecting a urine sample from your cat').



Figure 9: Weighing the cat at home allows early detection of changes in body condition associated with CKD. Source: Sam Taylor

## Collecting a urine sample from your cat

The veterinary team monitoring a cat with CKD may want to check for protein and other abnormalities in the urine. By collecting a urine sample at home and dropping it off at the veterinary clinic, the need for the cat to visit the practice can be reduced.

A video from International Cat Care entitled 'How to collect your cat's urine' is available at [go.jfms.com/collecting\\_cat\\_urine](https://go.jfms.com/collecting_cat_urine). To collect a sample, the following items are required:

- A clean litter tray;
- Non-absorbent litter (Figure 10), which may be provided by the veterinary clinic or purchased online;
- A sample pot (usually provided with the litter or available from the veterinary clinic);
- A pipette or syringe to collect the sample, as illustrated in Figure 10.



Figure 10: Urine can be collected at home using special non-absorbent litter. Source: Sam Taylor

In multi-cat homes, collecting a sample from the affected cat may necessitate separation of the cats for a short period of time.

## Veterinary and home care combined

Cats with CKD can a live long and comfortable life with the right combination of veterinary and home care provided by the veterinary team and caregiver working together. Dietary and medical management can address the complications of CKD and slow progression of the disease.

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