



Stanhope Park Veterinary Hospital

CHRONIC KIDNEY DISEASE HOME MANAGEMENT

WHAT IS KIDNEY DISEASE?

Chronic Kidney Disease (CKD) is the term used when kidney function is no longer able to meet the body's demands. The term "*failure*" is now used less frequently since many cats previously described as suffering from this can now be stabilised for prolonged periods with treatment.

Cats and humans are born with more kidney tissue than is needed – a functional reserve – which is why healthy adult humans can safely donate a kidney. It is normal for there to be some loss of kidney function as a cat ages. Clinical signs of kidney disease are not seen until at least two thirds of the functional kidney tissue has been lost.

Unfortunately this makes it difficult to diagnose cats in the very early stages of kidney disease.

Many patients are presented to the vet when in "*acute on chronic*" kidney disease. This is the situation that is present when a cat with CKD is brought in in an acute crisis. The cat may have been coping, more or less, with CKD for some time, but a situation such as diarrhoea or vomiting may lead to the cat becoming dehydrated, precipitating this sudden crisis. These cats often benefit from being admitted to the hospital and placed on an intravenous drip so that they can be rehydrated.

WHAT DO KIDNEYS DO?

The kidneys are used for a number of important functions in the body:

- Excretion of waste products via the urine. This includes by-products of protein break-down such as *urea and creatinine*.
- Regulation of normal body water content (*hydration balance*).
- Regulation of levels of blood salts (*e.g. sodium, potassium, calcium and phosphate*).
- Regulation of body acidity levels.
- Production and activation of a number of hormones and other substances e.g. *erythropoietin* – a hormone which stimulates production of red blood cells by the bone marrow.

IRIS STAGING OF CKD

IRIS (The International Renal Interest Society) has developed a renal scoring index to help identify the progression of CKD in order to facilitate treatment and monitoring of the patient.

Many cats are diagnosed with CKD at stage 3 or 4, when the patient has moderate or severe renal **azotaemia** (*abnormally high levels of nitrogen-containing compounds in the blood due to reduced filtration by the failing kidneys*). These high levels of waste compounds will very likely be causing clinical symptoms of kidney disease in your cat, such as increased thirst and urination, decreased appetite, nausea and vomiting, and weight loss.

INCREASING WATER INTAKE

Cats with advanced kidney disease have limited urine-concentrating ability, which means they produce large volumes of very dilute urine. This will make your cat highly susceptible to dehydration, so encouraging water intake is vital. This may be achieved by preferably feeding a wet diet (*some cats will only eat dry food*); offering flowing water such as dripping taps or water fountains; offering flavoured broths or flavoured ice cubes into the water bowl each day; providing multiple water bowls in various accessible location around the home; offering different types of water bowls (*e.g. glass; ceramic; metal*), and of different shapes (*e.g. shallow, wide brimmed*); offering different types of water (*e.g. tap water; bottled water; rain water*).

In some cases, injecting sterile fluid under the skin may be appropriate – one of our Registered Veterinary Nurses can teach you how to do this.



DIET

Prescription renal diets are the single most effective treatment for management of CKD. However, these are best introduced at an early stage, before clinical symptoms set in, such as inappetence and nausea, which can make introduction of a new diet difficult for many cats. A slow switch onto the new diet can help improve acceptance by your cat, and your veterinary nurse will be able to give you advice on how to do this. Prescription renal diets are formulated to reduce the workload on the kidneys and reduce subsequent waste products entering the blood stream. They also contain increased calories and fat to help reduce weight loss, which is common in cats with CKD. Medication to relieve nausea and help stimulate appetite may be prescribed by your vet.

It is vital to remember to never let your cat go hungry. If you are struggling to get them to eat the prescription renal diet, eating anything is better than nothing, and your cat will still benefit even if the renal diet makes up just a proportion of the diet as a whole.

MEDICATIONS

Your cat may have been prescribed one or more medications to help manage their condition and its subsequent side effects:

- **PHOSPHATE BINDERS** may be added to food to limit the amount of phosphate absorbed by the bowel if not controlled with dietary management alone.
- **POTASSIUM SUPPLEMENTS** may be needed in cases of low potassium levels (*hypokalaemia*).
- **SYSTEMIC HYPERTENSION** (*high blood pressure*) is present in around a 5th of patients with CKD. Hypertension can cause problems with other body systems such as blindness and behavioural changes, and so medication may be prescribed to manage this.
- **ANTACIDS** can be useful to soothe the lining of the stomach and reduce ulceration.
- **ACE (Angiotensin Converting Enzyme) INHIBITORS** and **ARBs (Angiotensin Receptor Blockers)** may be prescribed to help reduce protein loss into the urine.
- **LACTULOSE** may be prescribed for cats suffering with constipation (*often as a result of dehydration*).

Cats can be difficult to medicate, especially if they are not keen to take treatments in their food, which can be exacerbated by the symptoms of CKD such as nausea. Book an appointment with one of our Veterinary Nurses for practical advice on how to give medication to your cat with minimal stress. If your pet has been prescribed several medications, and you are struggling, it may be necessary to discuss with your vet, prioritising certain treatments, so that your cat is getting the treatment that will be of most benefit to their individual case.

CONCURRENT DISEASES

CKD is primarily a disease of older cats, and as such it is not uncommon for these cats to be suffering with other chronic illnesses. Common conditions include *hyperthyroidism, diabetes, arthritis and dental disease*. Assessment and management of these illnesses can be complicated by the presence of CKD, and in some cases, sub-optimal treatment of one condition might be needed to prevent another condition from deteriorating.

MONITORING WEIGHT

Monitoring your cat's weight at home on a weekly basis can be helpful in detecting small but significant amounts of weight loss which would benefit from further investigation by your vet. "Baby" scales can be purchased on many websites inexpensively. Alternatively, you can weigh your cat on your adult scales whilst contained in its carry basket, subtracting the empty basket weight from the occupied weight. Holding your cat in your arms whilst standing on your adult scales is generally very inaccurate.

REGULAR CHECK-UPS

Due to the tendency for cats to conceal illness (*they are "masters of disguise"*), regular assessment of cats with CKD is advisable. The frequency of such check-ups will be recommended on a case-by case basis, with consideration of any concurrent disease processes or complications.

Regular assessments will be made of **Bodyweight** and **Body Condition Score (BCS)**; **Blood Pressure Measurements**; **Urinalysis** for assessment of urine protein levels and **Urinary Tract Infections (UTIs)** – bacterial UTIs are common in cats with CKD and may be clinically "silent", i.e. show no outward symptoms. If left untreated, such infections may ascend to the kidneys causing further damage.

BLOOD TESTS to check organ function (*Biochemistry*), **Electrolytes** (*blood salts*) and a complete blood count (*Haematology*), will also be performed regularly to monitor progression of disease.