

General Practice Service  
Willows Information Sheets

# Chronic kidney disease





## Chronic kidney disease

### What is chronic kidney disease?

Chronic kidney disease is a common cause of illness (chronic renal failure) in older animals, particularly in cats.

Dogs and cats have two kidneys each, and they perform a wide variety of important functions in the body. One major function is to filter blood to remove waste substances and to regulate the body's water and mineral balance. Surplus water, minerals and waste products are eliminated from the body as urine. In addition, the kidney also activates vitamin D and helps to control blood pressure as well as the acid levels in the body. It also produces a hormone called erythropoietin which stimulates the production of red blood cells in the bone marrow.

Age and/or disease can cause gradual loss of functional tissue in the kidneys. This is hardly noticeable until about two thirds to three quarters of the tissue of both kidneys is no longer functioning.

Unfortunately, damage to the kidneys usually cannot be repaired, and in most cases the disease is progressive, which means that over time more and more of the tissue will stop functioning. Eventually kidney (renal) failure will occur.

### Why do animals get chronic kidney disease?

In most cases the exact cause of the disease is unknown. Samples taken from affected kidneys usually show scar tissue replacing the normal kidney tissue and inflammation is often seen too.

In some cases an exact diagnosis can be made, for example: polycystic kidney disease (which is often seen in Persian cats), infections, malformation of the kidneys, chronic inflammation (such as glomerulonephritis) and tumours.

The chance of chronic kidney disease developing increases with age and the problem is also more commonly seen in certain breeds of dogs and cats. In general, chronic kidney disease is encountered about three times more frequently in cats than it is in dogs.

## What are the clinical signs of chronic kidney disease?

Very often increased thirst and increased urine production are the first signs of chronic kidney disease. Affected animals cannot concentrate their urine normally so the urine can look diluted, sometimes almost like water. Many owners observe that their pet seems subdued and weaker than usual. Decreased appetite, weight loss, halitosis (bad breath), vomiting and a sore mouth can be observed in more severely affected cases.

## How is the disease diagnosed?

The clinical signs shown by animals with chronic kidney disease are not specific, which means that they could be caused by other diseases, too. This makes it impossible to diagnose chronic kidney disease just by interpreting the changes observed by the owner or by clinical examination. The diagnosis is usually made by a combination of the patient's history, the findings of a physical examination and blood and urine tests. Blood tests will show that the levels of several waste products which the kidneys should filter from the blood are raised – often the values are already very high when the disease is diagnosed. Other changes can include abnormal electrolyte (salt) levels in the blood, high phosphate levels or anaemia. These types of changes in the blood can often help to indicate how far advanced the disease is by the time of diagnosis. It is also important to check the urine concentration, and it should also be analysed to look for possible signs of other diseases such as infections or crystals/stones.

Other tests may be necessary in some cases in order to obtain an exact diagnosis e.g. blood pressure measurement (kidney disease can result in high blood pressure), radiography (X-rays), ultrasound examination, biopsies or exploratory surgery.

## Can chronic kidney disease be treated?

In some cases your vet may be able to diagnose a specific cause for the kidney problems, and if this is the case, treatment for this cause may be possible.

In the majority of cases, however, a specific cause is not found and management is aimed at supporting the remaining kidney function and hopefully slowing down progression of the disease.

Some animals initially need treatment with drugs and intravenous fluids (a drip) to stabilise the condition. The most important long-term measure for animals with chronic kidney disease is dietary management. This aims to relieve the kidneys of as much work as possible, thereby reducing the build-up of waste substances which the kidneys normally deal with, whilst making sure that the patient still gets all of his/her required nutrients. The diet also has to be very tasty, as animals with kidney problems often have a reduced appetite. A specially formulated prescription diet is the best choice

and, as we have several different consistencies and flavours available, we can usually find a diet that your pet likes. Studies have shown that animals with renal disease that are fed only on prescription diets generally live longer than animals fed on normal food.

Apart from dietary management, medication may also be given. Various treatments, including ones which can improve kidney function, stabilise blood pressure, reduce phosphate or increase potassium blood levels, treat anaemia or reduce nausea and vomiting, are available. The type of drugs which are appropriate will depend very much on the individual case, and if we feel that such treatments are indicated, we will discuss with you which medications are most appropriate for your pet.

Optimal management of chronic kidney disease usually requires re-examinations by the vet at regular intervals. Repeat investigations such as blood/urine tests or blood pressure measurement are also required to assess how stable the animal is and whether the management needs to be changed.

## My pet has got chronic kidney disease – what is the outlook?

A significant proportion of the kidney tissue has usually stopped functioning before the disease is diagnosed – unfortunately this damage cannot be repaired. Treatment is aimed at improving the signs of disease and thereby the quality of life of affected pets, and at the same time hopefully slowing down the progression of the condition. Despite these measures, the kidney function will usually slowly get worse. However, the rate of progression varies considerably between individual animals and in some cases we are able to maintain a good quality of life for affected individuals for a considerable time.

Dialysis treatment and kidney transplantation – the treatments of choice in humans with advanced kidney disease – are not available for cats and dogs in the UK at the moment.

***If you have any queries or concerns regarding your pet and kidney disease, please do not hesitate to [contact us](#).***

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