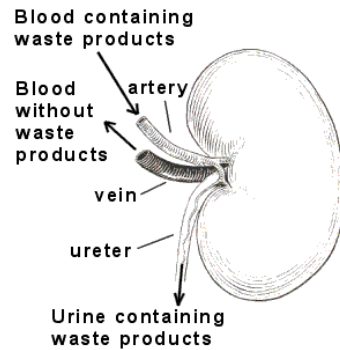


Kidney Failure in Cats

Kidney failure (or renal failure) is very common in older cats. It is the second biggest killer of cats worldwide, responsible for the premature death of 1 in 3 cats!

What is Kidney Failure?

Your cat has two kidneys. Their main function is to remove waste products from the blood, and eliminate them in the urine. When the kidneys are damaged and start to fail, these waste products can build up in the body, poisoning your cat.



The kidneys are also responsible for:

- preserving body water (by concentrating the urine);
- regulating the body's electrolyte (salt) balance;
- hormones that control red blood cell production.

Knowing how the kidneys normally function helps in understanding the symptoms of kidney failure and how it can be treated.

The kidneys have a lot of reserve capacity. We can survive with only one-third of our kidney cells working. That's why we can donate one kidney to someone else. This also means that a lot of our kidney cells can be lost, before we see any signs of disease.

When two-thirds of a cat's kidney cells are lost, the kidneys lose the ability to concentrate the urine, but the remaining cells are able to excrete the waste products from the body by producing a larger volume of dilute urine. This is called *compensated kidney failure*.

When three-quarters of the cells are lost, the body can no longer compensate. Your cat may dehydrate, toxins build up, electrolyte balances are upset and blood cell numbers may start to drop.

The signs may appear to come on suddenly, but it is likely that the damage to the kidneys has actually been occurring for months or even years.

What are the causes of kidney failure?

There are many different causes of kidney failure. Congenital (birth) defects, bacterial and viral infections, tumours (cancer), toxins and nutritional factors may be involved. In many cases the original cause cannot be determined – we just see the damage left behind.

Unfortunately, once kidney failure starts to occur, the damage is usually progressive. Damaged kidney cells can't regenerate.

However, early diagnosis and treatment can often slow the progression of this disease, leading to a longer, healthier life for your cat.

What are the signs of kidney failure?

Kidney failure usually occurs in middle-aged and older cats. Early signs of disease are often confused with normal ageing. Clinical signs can include:

- reduced appetite and weight loss;
- increased thirst and urination (usually not evident to the owner because of the cat's secretive habits!);
- dull coat, dehydration and reduced skin elasticity;
- lethargy/depression, weakness and/or vomiting;
- bad breath, dental problems and mouth ulcers;
- anaemia and pale gums.

How is kidney failure diagnosed?

We may suspect kidney failure based on your cat's history and our physical examination findings. But by then the disease is probably already quite advanced. Early diagnosis is vital! Simple screening tests are available to detect kidney disease.

We recommend annual screening tests for all cats over 7 years of age.

A drop of blood and a few drops of urine are all that's required. A convenient time to perform these tests may be at your cat's annual vaccination. But if your cat is showing any of the symptoms of kidney failure, it is important to consult us without delay. We can perform these screening tests and usually provide results in a few minutes. If we detect a problem, we will advise more comprehensive tests to determine how severe the kidney damage is. We will then be able to recommend the most appropriate treatment for your cat's individual needs.

Prognosis and Treatment

Unfortunately there is no cure for chronic kidney failure. Kidney transplants are available, but they are very expensive and suitable for only a small number of cases.

In the past, a diagnosis of kidney failure was a virtual death sentence for a cat. Over the last few years however, there have been a lot of developments in the understanding and treatment of kidney failure. There is now a lot we can do to assist the remaining functional parts of the kidney, slow the progression of the disease and help your cat to lead a longer and healthier life.

The key is early diagnosis, and tailoring a treatment program to your cat's individual needs.

Regular monitoring is also very important. Overleaf you will find details on some of the treatments available.

Treatment of Kidney Failure

There are many different treatments available for kidney failure. The ones we recommend will depend on your cat's individual needs. This is determined by their clinical signs, test results and personality! ("My cat just won't take tablets" or "My cat only eats raw mince"). Don't be put off by the length of this list – in most cases only a few of these treatments will be required.

Unfortunately there is no complete cure for chronic kidney failure. However, we can do a lot to assist the remaining functional parts of the kidney, slow the progression of the disease and help your cat to lead a longer and healthier life. In many cases, cats can now live for years after a diagnosis of kidney failure. Sadly, there are still situations where the kidney disease is too advanced for any treatment to work. In these cases we will discuss your cat's prognosis and advise when it is time to consider euthanasia.

Remember – **early diagnosis and treatment is vital**. And new treatments are being developed all the time.

Regular monitoring is also extremely important. Initially after diagnosis, we will probably want to check your cat every 2 weeks. Once they are stabilised, visits every 3 months are all that's required.

- **Fluids.** If your cat is ill when first diagnosed with kidney failure they will often be dehydrated. A short stay in hospital on an **intravenous “drip”** may be necessary to correct this. We can often stabilise electrolyte disorders at the same time and help to flush a lot of the toxins out of the system. It's extremely important to **keep them drinking**. **Always have multiple water sources available**. Offer moist foods or flavour the water (eg. with broths or tuna juice) to increase water intake. In some cases **subcutaneous fluids** (given under the skin) can be administered at home.
- **Diet.** We will often start your cat on a **special kidney diet** (low in phosphorus and protein-restricted). These diets produce fewer waste products, and therefore give the kidney less work to do. There are several commercial forms of these diets available in both canned and dry (biscuit) forms. These include *Eukanuba Renal Cat Food*, *Waltham's Feline Renal Support Diet* and *Hill's Prescription Diet Feline K/D*. Alternatively, recipes are available for homemade diets, but the commercial diets are usually preferable. The most important thing though is to **keep your cat eating**. Kidney diets are not always immediately acceptable to all cats. There are lots of tricks you can try to get your cat to eat the prescribed diet.
 - Gradually introduce the new diet over 7 – 10 days. Initially mix a small amount of the prescription food with something the cat normally likes to eat. Then every few days increase the proportion of kidney diet. Once your cat is willing to accept the kidney diet, they should not be fed anything else.
 - Offer smaller and more frequent meals.
 - Add a small amount of water to the food - if your cat is used to eating soft canned foods.
 - Gently warm canned foods (no higher than body temperature) to increase their palatability.
 - Flavour the food with fats or fish oils (but not salt).
 - Hand feeding may be necessary initially.
 - Seek veterinary advice. Nausea or dental problems may be contributing to the cat's reluctance to eat.If all else fails, remember **it's better that your cat eats normal food than nothing at all**. More than a few days without food will lead to worsening of their kidney disease.
- **Control Blood Pressure.** Kidney failure will commonly lead to high blood pressure. This in turn can damage the filtration membrane in the kidneys, worsening the kidney disease. It can also damage the eyes leading to blindness. **Hypotensive tablets** (eg. *Fortekor*) are often given daily to lessen this problem. Salty foods should be avoided. We are equipped to measure blood pressure - in cooperative cats!
- **Dental treatment.** Rotten teeth and mouth ulcers are very common in cats with kidney disease. These can often make it painful for a cat to eat and lead to inappetence, anorexia or reluctance to accept the prescribed diet. Dental treatment under anaesthetic and **antibiotics** may be needed to correct this.
- **Anabolic steroids** can be given by injection every 4-8 weeks to stimulate appetite, maintain muscle mass, and promote red blood cell production.
- **Vitamin supplements** (B and C) can be given daily in the food to prevent anorexia.
- **Potassium supplements** (usually in gel form) help to prevent muscle weakness, stiffness and poor hair coat. Potassium is lost in the urine during kidney failure and low potassium has in turn been shown to contribute to the progression of the kidney disease.
- **Oral phosphate binders** - if blood phosphate levels are high despite a low phosphate diet.
- **Anti-vomiting drugs** (to treat nausea caused by toxin build up) and gastrointestinal protectants.
- **Erythropoietin** injections may be given regularly if red blood cell numbers become very low.
- **Oral bicarbonate** to correct acidosis if the kidney fails to excrete the body's normal acid load.
- **Kidney Transplants** are available but are not suitable for most cases and cost over \$3000.
- **New treatments** are also being developed all the time. Ask us for advice.