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Acute Kidney Failure in Cats

What is acute renal failure?

Acute renal failure (ARF) or acute kidney failure (AKF) refers to the sudden failure of the kidneys to perform normal filtration duties. This is not the same as the much more common form of kidney failure called chronic kidney disease (CKD). ARF leads to accumulation of toxins and other metabolic wastes in the bloodstream, dehydration, electrolyte imbalances, and disturbances in the acid–base balance of the blood. ARF is potentially reversible if diagnosed early and treated aggressively. Older cats are at higher risk for developing ARF.

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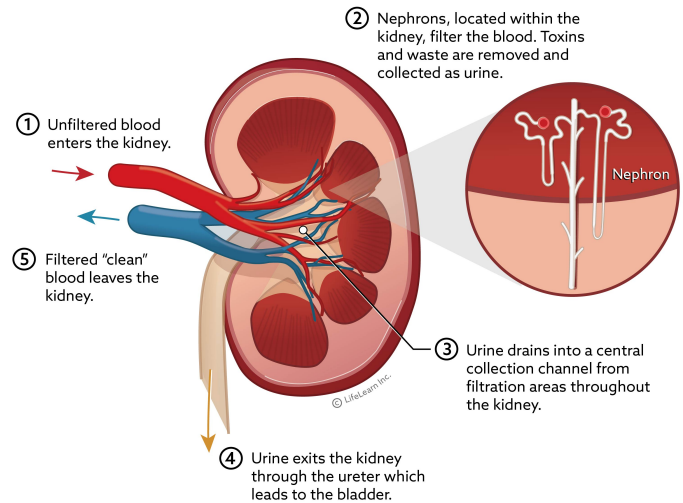
What are the clinical signs of acute renal failure?

The clinical signs of ARF may include sudden anorexia (not eating), listlessness, vomiting (the vomited material may have blood in it), diarrhea that also may contain blood, a strange breath odor, and/or seizures. Some cats will urinate more frequently while others may not be producing any urine at all. There may be a recent history of ingestion of a toxin (especially antifreeze) or of recent trauma, surgery, or illness. Many cats are in shock by the time they reach the veterinary hospital. The veterinarian will frequently find enlarged and painful kidneys during the physical examination.

What causes acute renal failure?

There are numerous causes of ARF. Some of the more common causes include:

- ureteral or urethral obstruction (i.e., the cat cannot urinate)
- antifreeze poisoning (ethylene glycol toxicity)
- systemic shock
- heart failure
- hypotension or low blood pressure
- clotting disorders
- ingestion of drugs such as NSAIDs (nonsteroidal anti-inflammatory analgesics) or certain antibiotics
- insect or snake bites



A healthy kidney and the blood filtration process

- ingestion of heavy metals such as lead, mercury, arsenic, or thallium
- ingestion of toxic plants, especially lilies
- ingestion of rodenticides (rat poison)
- pyelonephritis (a bacterial infection of the kidney)
- feline infectious peritonitis

How is acute renal failure diagnosed?

Diagnosis is based on medical history, clinical signs, and the results of blood and urine tests. Other diagnostic tests may include abdominal radiographs (X-rays), sometimes using a radiographic contrast or dye, abdominal ultrasound, fine-needle aspiration (sampling the kidney using a long needle) or surgical biopsy of the kidneys.



What is the treatment for acute renal failure?

Treatment is focused on removing the circulating toxins as quickly as possible and restoring electrolyte balance. This is usually accomplished by administering intravenous fluids for twenty-four to ninety-six hours (1 to 4 days). Peritoneal dialysis and hemodialysis (purifying the blood of toxins, like a person waiting for a kidney transplant might receive) are rarely performed, but may be available in your area. If toxin exposure or a drug reaction is suspected, it is recommended that the stomach be emptied of its contents immediately, followed by the administration of activated charcoal to prevent further absorption of toxins.

Nutritional support may be required in cats with persistent or uncontrollable vomiting. Your veterinarian will recommend an aggressive treatment plan to give your cat the best chance of recovering from ARF.

What is the prognosis for a cat diagnosed with acute renal failure?

The initial prognosis is guarded for all cases of ARF. If the cause is an infection, there is a better prognosis than if the cause is a toxic substance. The long-term prognosis for recovery depends on the amount of kidney damage that has occurred. The kidney has very little capacity to regenerate or heal itself, justifying the guarded prognosis. Your veterinarian will provide you with a more accurate prognosis based on your cat's clinical signs, results of laboratory tests, and individual condition.

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