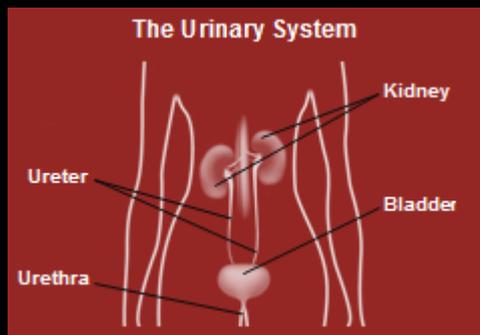


# Acute kidney injury (AKI)



Acute kidney injury (AKI) has replaced the term “acute renal failure”. AKI is characterised by a rapid reduction in kidney function and the medical problems that arises from this. Kidney failure occurs when the kidneys partly or completely lose their ability to filter water and waste from the blood, to excrete out of the body through urination.

The urinary system consists of two kidneys located one on each side/flank just beside the spine in the abdomen. The urine produced by the kidneys passes through long tube (the ureter) to the bladder where it is collected. Urine then passes through another tube, the urethra, to the outside during urination.



## Causes:

- Reduced blood supply to kidney
- Direct damage to kidney
- Blockage or restriction of urine flow from kidney
- Autoimmune (dysfunction of bodies defense mechanism) kidney disease
- Tumors

## Symptoms:

Many people with acute kidney injury may be asymptomatic (no noticeable symptoms). Others may have generalized nonspecific (not specific to kidneys) symptoms, such as

- Nausea, vomiting
- Weakness, dizziness
- Pain on lower back
- Swollen legs and feet
- Decreased urine quantity

## Treatment:

- **Medication:** Treat the underlying disease; for example, if kidney failure is due to an infections or dehydration, specific treatment will be required depending on the disease cause, e.g. antibiotics
- **Fluid and electrolyte maintenance:** Imbalance of fluids and electrolytes can lead to medical problems, some of these can be life threatening. It is very important to monitor and treat imbalances
- **Procedures:**
  - **Urinary catheter (catheterization):** If the patient is retaining too much urine due kidney dysfunction, a thin tube may be inserted into the bladder via the urethra to aid drainage of urine from the bladder
  - **Renal replacement therapy (RRT):** Term used for life supporting treatment in renal failure e.g. hemodialysis, peritoneal dialysis, and renal transplants etc.

Dialysis is a process for toxin/waste removal from the body. They are of 2 types:

- **Hemodialysis (blood filtration):** The patient is connected to a device by a pair of needles typically inserted at the forearm. The patient's blood flows through the machine where it is filtered for removal of toxins before it flows back to the body. The procedure can take up to 4 hours and may need to be repeated depending on the extent of kidney damage. Treatment is normally performed at a medical facility
- **Peritoneal dialysis:** A dialysis solution is pumped into the body via a tube in the abdominal cavity. The toxins and waste from the blood are absorbed by the solution and can then be pumped back out of the body. Treatment can normally take up to 5 hours. Treatment can be performed at home
- **Renal transplant:** A surgical procedure where the kidney is removed and replaced by another human kidney after extensive matching procedure between the recipient and donors

## Outcome:

- Acute kidney failure/injury can be fatal
- If underlying cause is treated, in most cases kidneys fully recover within a few months
- If underlying cause isn't found and/or treated, patients may develop chronic kidney failure

For more information on AKI and other diseases:  
visit at [www.educateyourhealth.com](http://www.educateyourhealth.com)