

Fact sheet

Acute Kidney Injury



What is acute kidney injury?

Sudden damage to your kidneys is called 'acute kidney injury'. Acute kidney injury usually occurs quite quickly, over a matter of days. In contrast, chronic kidney disease takes months or years to develop. Acute kidney injury is usually a temporary (short-term) condition. However, acute kidney injury can increase your risk of having long-term chronic kidney disease.

What causes acute kidney injury?

The causes of acute kidney injury include:

- Reduced blood supply to your kidneys from surgery, severe burns, dehydration (such as from diarrhoea or vomiting) or a heart attack
- Damage to your kidneys caused by drugs, poisons, severe infection, radiocontrast dyes used for CT scans and angiographies, and occasionally physical injury (such as from high-contact sport or a car accident)
- Blockage of urine leaving your kidneys (such as from kidney stones or from an enlarged prostate)

You have a higher risk of acute kidney injury if you:

- have kidney, heart, or liver disease, diabetes, high blood pressure, or cancer
- are of older age
- have previously had an acute kidney injury

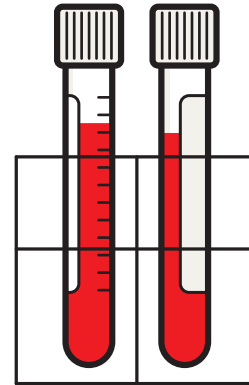
How do I know I have an acute kidney injury?

Symptoms of acute kidney injury may include:

- water retention which may cause your ankles, face or hands to become swollen or puffy
- passing less urine compared to normal
- your urine may become a red/brownish colour
- tiredness, lack of concentration, lack of appetite, vomiting, itchiness

Sometimes there are no symptoms and acute kidney injury is detected when other tests are being done.

Acute kidney injury is diagnosed by a blood test that checks your levels of urea and creatinine.



How is acute kidney injury treated?

The goals of treatment are to:

- find and treat the cause of your acute kidney injury
- use medications to maintain your body's normal functioning
- assess your kidney function by closely monitoring your urine output and blood levels of urea and creatinine
- avoid medications that are **toxic** to your kidneys

While your kidneys recover you may need a **catheter** in your bladder to relieve the obstruction or to monitor how much urine you are producing. Occasionally **dialysis** treatment is needed until your kidneys recover.

What happens to my kidneys after an acute kidney injury?

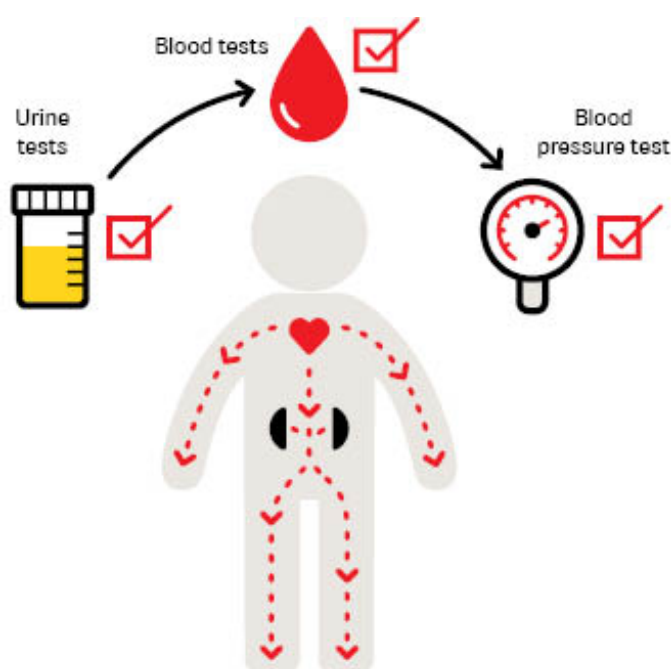
After acute kidney injury, long-term outcomes can vary:

- full recovery and normal kidney function in most people
- partial recovery with lower levels of kidney function in some people
- permanent kidney damage that requires ongoing dialysis on rare occasions

After an acute kidney injury, your kidney function can continue to recover over time.

Speak to your doctor about having a Kidney Health Check every year for the first three years after an acute kidney injury.

The test should include a blood test, urine test and blood pressure measurement.



How can you prevent acute kidney injury?

It is important to be aware if you are at increased risk of an acute kidney injury.

Here are some tips on how to reduce the risk of acute kidney injury:



DO:

- Drink plenty of water every day to make sure that you avoid being dehydrated



USE WITH CAUTION:

- Multivitamins or food supplements, as they may contain ingredients that are harmful for your kidneys
- Herbal or complementary medicines, as they may have unknown side effects, can interact with other medications, or may be unsuitable if you have kidney disease



AVOID:

- **Nonsteroidal anti-inflammatory drugs** (NSAIDs), such as ibuprofen, naproxen, diclofenac, celecoxib, meloxicam and indomethacin
- Excessive use of **enemas** and **laxatives** unless suggested by your doctor
- Antacids containing calcium
- High doses of Vitamin C

Medications

If you are currently taking a medication to control your blood pressure, it is important that you discuss suitable pain relief medication with your doctor or pharmacist. Some pain medications do not mix well with blood pressure medications and can damage your kidneys.

If you are sick or dehydrated, some medicines that you take may increase your risk of developing an acute kidney injury. Please see the Kidney Health Australia *Sick Day Plan* for more information.



IMPORTANT

- Ask your doctor or pharmacist if you are unsure whether a medication is safe for you.



THINGS TO REMEMBER

- Acute kidney injury is usually a short-term condition, but sometimes it may lead to long-term chronic kidney disease.
- If you are at increased risk of acute kidney injury, it is important to protect your kidneys.
- If your kidneys already have reduced function make sure that you tell all health professionals caring for you. They can avoid medications that can lead to further kidney damage or reduce doses to avoid build up of medications in your system.

Sick Day Plan

How to prevent acute kidney injury if you are sick or dehydrated

When you are ill, particularly if you become dehydrated (e.g. vomiting or diarrhoea), some medicines could cause your kidney function to worsen or result in side effects.

If you are unable to drink enough fluids to stay hydrated, you should stop taking the following medications until you see your healthcare

professional.

- Blood pressure pills - as they may further reduce your blood pressure
- Water pills - as they may dehydrate you further
- Diabetes pills – as they may reduce your blood sugars or cause side effects, including increasing risk of kidney failure
- Pain medications, which include non-

steroidal anti-inflammatory drugs like Nurofen, Voltaren, Mobic and Indocid that are available over the counter and can worsen your kidney function.

If you have an underlying kidney disease, please check with your pharmacist before using over-the-counter medications.

What does that word mean?

Anaemia - When there are only a small number of red blood cells in the blood. Red blood cells carry oxygen, so if you have anaemia you can feel weak, tired and short of breath.

Catheter - A plastic tube that is used to remove urine from bladder.

Chronic kidney disease - Progressive reduction in kidney function or kidney damage which is present for at least three months.

Creatinine - waste product that is produced by the muscles. It is usually removed from the blood by the kidneys and passes out in the urine (wee). When the kidneys aren't working properly, creatinine levels increase in the blood.

Dehydration - Happens when you haven't got enough fluids in your body. If severe, dehydration can cause serious problems and you may need to go to hospital.

Diabetes - A chronic disease caused by problems with the production and/or action of insulin in the body which helps control blood sugar levels.

Dialysis - A treatment for kidney failure that removes waste products and excess fluid from your blood by filtering your blood through a special membrane.

Enema - A procedure where fluid is injected into your rectum (bottom) to cause a bowel movement.

Fluid retention - When your body does not remove enough liquid (water). This can cause swollen or puffy ankles, face or hands.

Kidney stones - Kidney stones happen when salts in the urine form a solid crystal. These stones can block the flow of urine and cause infection, kidney damage or even kidney failure.

Laxatives - Medication to relieve constipation (passing of hard, dry bowel motions (stools) that may be infrequent or difficult to pass).

Toxic - something that is harmful or dangerous.

Urine - The name for excess fluid and waste products that are removed from the body by the kidneys. Commonly called wee.

For more information about kidney or urinary health, please contact our free call Kidney Helpline on 1800 454 363.

Or visit our website kidney.org.au to access free health literature.

This is intended as a general introduction to this topic and is not meant to substitute for your doctor's or Health Professional's advice. All care is taken to ensure that the information is relevant to the reader and applicable to each state in Australia. It should be noted that Kidney Health Australia recognises that each person's experience is individual and that variations do occur in treatment and management due to personal circumstances, the health professional and the state one lives in. Should you require further information always consult your doctor or health professional.

Kidney Health Australia gratefully acknowledges the valuable contribution of Associate Professor Kamal Sud (Nephrologist) in the review of this material.



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For all types of services ask for 1800 454 363