

## Patient information factsheet

# Acute kidney injury

**This factsheet has been developed to provide you with information about acute kidney injury (AKI). Please keep this leaflet in case you need to refer to it in the future.**

### About acute kidney injury

Acute kidney injury (AKI) occurs when the kidneys suddenly stop working properly. It is **not** the result of a physical blow to the body, as the name may suggest. The effects of AKI can range from minor loss of kidney function to complete kidney failure, the effects of which can be fatal. It's essential that AKI is detected early, as the earlier AKI is picked up the better the chance of the kidneys fully recovering. AKI is different to chronic kidney disease (CKD) when there is a reduction in the function of the kidneys that does not get better.

### What do the kidneys do?

Most people have two kidneys that sit in the back part of the tummy. They are 'bean-shaped' and are usually about 10 to 12cm (4 to 5 inches) long. Their main function is to remove fluid and waste products from the body by making urine. Urine passes down a tube from each kidney to the bladder where it is stored until you go to the toilet. As well as making urine, the kidneys are involved in other functions. These include preventing high blood pressure, producing hormones to keep bones healthy and helping the body produce red blood cells.

### Symptoms of AKI

The most common symptoms are:

- passing less urine than usual
- unexplained loss of appetite
- feeling sick or vomiting
- feeling short of breath
- swelling of the legs or other body parts

Sometimes AKI can occur without any symptoms and can only be picked up by a blood test.

### Causes

There are many causes of AKI. The most common are dehydration (due to vomiting and diarrhoea), infections, drugs (for example certain antibiotics) and blockage of one or both of the tubes leading from the kidneys to the bladder. Some people are more at risk of developing AKI than others, especially if they are older and have other medical conditions; for example underlying kidney disease, heart failure or diabetes. Sometimes drugs that are being taken for other reasons can affect the kidneys, leading to AKI.

These include:

- **Non-steroidal anti-inflammatory drugs (NSAIDs)** for example ibuprofen or diclofenac
- **Blood pressure tablets** for example ramipril, enalapril, losartan or candesartan
- **Diuretics** (sometimes known as water tablets) for example furosemide or bumetanide

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### Diagnosis

AKI is usually diagnosed from a blood test that looks at the level of a substance called creatinine in the blood. High levels of creatinine mean that the kidneys are not getting rid of waste products as well as they should. Sometimes a sample of urine will be checked for blood and protein (dipstick test) and an ultrasound scan of the kidneys will be done to pick up any blockages. Very occasionally a kidney biopsy may be needed to work out what is causing AKI. This involves taking a very small sample of tissue from one kidney using a fine needle. The area will be numbed using local anaesthetic.

### Treatment

Treatment for AKI will depend on the underlying cause. Some patients may need fluids via a drip if they are dehydrated. If there is an infection then antibiotics may be used. If there is a blockage of the bladder, then a catheter may be needed (this involves a thin, flexible tube being inserted into the bladder to drain it). Rarely, drugs such as steroids may be needed to help prevent further damage to the kidneys.

### Does AKI always get better?

In most patients with AKI, kidney function will return to normal. Regular blood tests will help your doctor to know whether this is the case. Very occasionally, AKI can get worse despite treatment. When this occurs, dialysis is sometimes needed. Dialysis is a treatment that involves being connected to a special dialysis machine that cleans the blood. This is usually a temporary treatment while the kidneys recover. Very rarely (in about 3 in 100 patients), the kidneys fail to recover meaning that treatment with dialysis will need to continue permanently.

### Can AKI happen again?

Patients who have had AKI are more at risk of developing it again in the future. They are also more at risk of developing a long-term kidney problem known as chronic kidney disease (CKD) so will need long-term monitoring by their GP.

### What should I do if I think I have got AKI?

You should contact your GP urgently if you have severe (or ongoing) vomiting and/or diarrhoea, especially if you are on blood pressure medications, or are unable to keep fluids down; or if you notice a reduction in the amount of urine you are passing.

In some situations your GP may tell you to stop certain medications, for example blood pressure tablets, water tablets or certain anti-inflammatory drugs or painkillers while you are unwell. Your GP will also ask for a blood test to make sure your kidneys are working properly. Occasionally it may be necessary to be admitted to hospital for treatment of AKI if it is not getting better.

### Further information

If you have any further questions or concerns after reading this leaflet, please discuss them with your hospital doctor or GP.

### Useful links

NHS Choices – Acute kidney injury

[www.nhs.uk/conditions/acute-kidney-injury/Pages/Introduction.aspx](http://www.nhs.uk/conditions/acute-kidney-injury/Pages/Introduction.aspx)

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