



Acute Kidney Injury Patient Leaflet

Who is this for?

This leaflet is for people who have been told that they have had Acute Kidney Injury and it's been designed to answer questions you may wish to ask about this condition

What is Acute Kidney Injury?

'Acute' is a term used to describe something that has occurred over hours or days.

'Kidney Injury' describes evidence of damage to the kidneys usually with a change in the kidney function.

The best ways to assess kidney function in the short term is to measure a waste product in the blood called creatinine and also to assess urine output.

How can you assess kidney function?

The kidneys perform **5 important tasks** for the body:

1. They **remove waste products** and toxins from the body, including drugs, by making urine
2. They **control fluid balance**, making sure that we are not overloaded with water or too dry
3. They **control blood pressure**, keeping it at the right level for body functions
4. They **make vitamin D**, keeping our bones strong
5. They **make a hormone** called erythropoietin, which stimulates the production of red blood cells.

How do doctors know that I have had Acute Kidney Injury?

You have probably had a recent illness where you were unable to drink or eat properly, for example gastroenteritis, or after an operation. Your blood pressure may have been low and you had low urine output.

You will have had a blood test, which showed an increase in the level of creatinine, and from this the doctors will decide if you have had Acute Kidney Injury. Your urine will also have been tested as this may show damage with blood or protein in the test result.

Can anything make this worse?

Taking some tablets or medicines can make the situation worse. The family of medicines which are most associated with this are called '**non-steroidal anti-inflammatory drugs**' (NSAIDs). The one most commonly used is ibuprofen, others include naproxen and diclofenac. These drugs reduce the blood supply to the kidneys, which can make Acute Kidney Injury worse.

All medicines which lower blood pressure, including diuretics (known as water tablets, such as Furosemide, Bumetamide and Spironolactone), can also make things worse and will usually be stopped when you are unwell.

Some tablets and medicines also have a direct toxic effect on the kidneys if your kidneys are not able to remove them from your blood, and these may also need to be stopped for a short while.

It is important that you understand which of your regular medicines may have an impact on your kidney function.

If you have diabetes

Some people have poor control of their diabetes when they are unwell and may need to start treatment with insulin. Many medications used to treat diabetes are removed from the body by the kidneys and so the levels can build up in the blood if the kidneys are not functioning properly, with the risk of side effects.

This particularly applies to Metformin and a family of medications called Sulphonylureas which include glibenclamide, glipizide and gliclazide.

Will my kidneys be damaged for ever?

With prompt treatment you may only have suffered mild kidney damage called **Stage 1 Acute Kidney Injury**. If you had healthy kidneys before the illness and no underlying health problems it is likely that your kidney function will improve and you should have no lasting problems.

If you were particularly unwell however, and had severe changes, then although you should have an improvement in your kidney function, it may not return to normal.

This is particularly an issue if you have previous evidence of kidney problems known as '**Chronic Kidney Disease**'. More severe Acute Kidney Injury is called Stage 2 or 3.

What do I need to do next?

If you have more questions to ask about Acute Kidney Injury you should make an appointment to discuss these with your doctor. Your doctor will arrange follow up blood tests to assess the recovery of your kidney function. You can ask for the blood test results and see how they change. You should also ask to have your blood pressure checked. Your medications should be reviewed and the doses may need to be adjusted. You may be warned about the use of ibuprofen and other non-steroidal anti-inflammatory drugs.

Can I do anything to help things improve?

Our kidneys are very hard working organs and it is only when they fall below **10% efficiency** that they may need help such as dialysis.

There are important things, which you can do at an earlier stage to help them.

This involves healthy living with a healthy weight, avoiding salt or low salt alternatives in your diet and not smoking.

If you have diabetes or high blood pressure having good control can help stabilise kidney function and your doctor or nurse can advise you about this.

If you have been taking regular anti-inflammatory medication this will be reviewed and you may be offered alternative treatment.

What if there is still evidence of kidney damage?

If your blood tests show that your kidney function is less than 60% efficient at least 3 months after your illness (known as eGFR less than 60), then this is known as **Chronic Kidney Disease**. Here Chronic means more than 3 months. Your GP will identify this and you will be included on a register in your GP's practice. It is important that you have your blood pressure and urine checked at least once a year for this condition. You may also be at increased risk of suffering another episode of Acute Kidney Injury.

Can I avoid this happening again?

If you are unwell and unable to drink properly, particularly if you are losing extra fluid through vomiting or diarrhoea, or you have a high temperature and sweats, then it is important that you discuss your condition with a medical professional. This may be your GP or a specialist nurse, for example a heart failure or kidney nurse if you have one. You may be advised to stop taking medications which lower your blood pressure and a blood test will be arranged to check your kidney function. If you are admitted to hospital for a specialist x-ray or operation, you should make your health care team aware you have had Acute Kidney Injury.

If you are only passing small amounts of urine you may need admission to hospital. **Please do not delay calling your GP if this occurs.**

Where can I find out more?

NHS England has developed a very helpful website called **Think Kidneys**. You will be able to read the stories of other people who have had this problem and see what medical professionals are doing to learn more and reduce the risks of this condition.

The British Kidney Patient Association has lots of information and support for kidney patients. It has a counselling service and offers advocacy and direct grants, as well as funding patient-centred research, healthcare professionals and projects.

www.thinkkidneys.nhs.uk

www.britishkidney-pa.co.uk

This leaflet has been written by Dr Kathryn Griffith who is the Kidney Care Champion of the Royal College of General Practitioners, and it is supported by the British Kidney Patient Association and Think Kidneys.