

Patient information

Acute Kidney Injury (AKI) Who Is At Risk?

Trust Wide Information Royal Liverpool Hospital Sites

What is Acute Kidney Injury (AKI)?

Acute Kidney Injury or AKI is a sudden reduction in a person's kidney function. It does not mean that the kidneys have been physically injured. An individual's kidney function is measured by a specific blood test.

Up to one in five people admitted to hospital in the UK have AKI. AKI often gets better in a few days or weeks, but sometimes it does not resolve fully and can cause long term problems.

What causes AKI?

AKI can be caused by a number of factors, such as dehydration, infections, major surgery and trauma, or as a side effect of certain drugs. AKI may also be caused when the drainage system of the kidneys (the ureters or bladder) is blocked.

The risk of having an AKI increases with age. Those with chronic kidney disease (CKD), diabetes, heart or liver failure, are also at a higher risk.

What do kidneys do?

Most people have two kidneys that lie on either side of the back bone just below the ribs. The kidney's receive blood from the circulation and filter this to make urine. The production and excretion of urine allows our bodies to stay in overall balance by removing waste products and excess fluid that will otherwise be harmful to the body.

Who is at risk of AKI?

- Elderly over 65 years old.
- If you have an infection / sepsis (infection causing organ dysfunction due to the way the body is responding to the infection).
- Dehydrating Illness (diarrhoea and vomiting).
- Known chronic kidney disease.
- Previous acute kidney injury.
- Post-surgery.
- Certain medications – including over the counter, herbal or prescribed.

- Other diseases such as - peripheral vascular disease, diabetes, heart failure, liver disease.
- Low blood pressure (example post heart attack, dehydrated).
- IV Contrast Agent - given for some CT scans.
- Limited access to fluid (brain function impairment) (Nice: 2013). e.g. Dementia/ Alzheimer's

What are the symptoms of AKI?

You may not feel unwell until kidney function has deteriorated significantly, sometimes to less than 10%.

AKI can have the following symptoms:

- Changes in urine output and colour, particularly a reduction in amount passed, or the inability to pass urine.
- Nausea and vomiting.
- Abdominal pains and feeling generally unwell.
- Dehydration with thirst.
- Low blood pressure.
- Later symptoms can include confusion and drowsiness.

How is AKI diagnosed?

Clinicians perform a blood test to measure the blood level of a substance called creatinine. This is produced by the muscles and is removed by the kidneys. If there is a reduction in kidney function the creatinine levels will rise. It is also diagnosed by monitoring how much urine you are passing.

What is the treatment for AKI?

Once the cause of the AKI is identified, treatment is directed at the underlying cause. Hydration is assessed and intravenous fluids are given if appropriate. Some medications may be stopped while others require a dose adjustment, as many drugs are excreted through the kidneys.

Doctors and nurses monitor kidney function by measuring the volume of urine produced and this can require placing a small tube called a catheter into the bladder in order to do this.

Blood tests, chest X-rays and ECGs can also be used to detect complications of AKI. An ultrasound scan of the kidneys may be performed in certain situations.

How to prevent AKI while you are in hospital.

- Tell the nurses or doctors if you notice a decrease in your urine output or you have any pain, burning or difficulty passing urine.
- If you are at risk, we will want to measure how much urine you are passing and may ask you to use a bottle or pan over the toilet to do this .You can assist by remembering to collect and measure your urine into containers that will be provided by the staff, every time you use the toilet.
- Monitor the colour of your urine – report to staff if it appears dark and concentrated.
- Ensure you keep well hydrated (unless you have been told to restrict your fluid intake).
- Tell the nurses or doctors if you have any diarrhoea or vomiting.
- Bring an up to date medication list with you.
- Tell the doctors of any herbal or over the counter bought medications that you have been taking, so that these can be reviewed.
- Tell the doctors if you have had any recent viral illnesses, falls or recent travel.

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

For further information please contact the Renal Nurse Practitioner Team

Tel: 0151 706 2000 and ask for Bleep 5150

Text phone number: 18001 0151 706 2000 and Bleep 5150

Or email: Renalnursepractitioners@Liverpoolft.nhs.uk

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