



keeping your Kidneys Safe

– a leaflet for young people

Who is this leaflet for?

This information has been developed to help young people who have been told that they may be at risk of Acute Kidney Injury, and to help answer any questions you may have.

This leaflet is for young people who are taking medicines that may reduce how well your kidneys work, particularly if you are dehydrated. Doctors call this acute kidney injury or AKI. These medicines are usually quite safe and are used by many young people without any problems. This leaflet will give you information on what you can do to avoid developing AKI if you are taking one of these medicines. The particular medicines this leaflet is about are;

- Angiotensin Converting Enzyme (ACE) inhibitors e.g. enalapril, lisinopril
- Non-steroidal anti-inflammatory drugs (NSAIDs) e.g. ibuprofen, Nurofen, Calprufen
- Angiotensin receptor blockers (ARB) e.g. losartan
- Diuretics e.g. furosemide

What do your kidneys do?

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 help **control fluid balance**, making sure that we do not have too much or too little salt and water in our body
3. They help **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.

What is acute kidney injury (AKI)?

'Acute' is a term used to describe something that has changed or developed over hours or days. 'Kidney Injury' describes damage to the kidneys usually with a change in the kidney function. It is often shortened to "AKI".

The best ways to measure kidney function is a blood test to measure a waste product called creatinine and to measure how much urine is made.

AKI usually gets better without treatment but sometimes people need to be admitted to hospital.

When might I be at risk of AKI?

Anyone is at risk of AKI if they have an illness which reduces how much blood goes to the kidneys. The most common cause of this in young people is dehydration (lack of fluid in the body) caused by diarrhoea and vomiting (d&v). Less common causes include blood infection (sepsis) or major surgery. The medicines that can reduce blood flow through the kidneys if you are unwell and dehydrated are listed in this leaflet.

If you are taking one of these medicines the risk of AKI increases.

You may have another medical condition or treatment that increases your risk of AKI, for example;

- Known kidney disease e.g. chronic kidney disease or a kidney transplant
- Heart disease
- Liver disease
- Cancer undergoing treatment
- Bone marrow transplant
- Any condition which makes you dependent on others for access to fluids
- Treatment with some antibiotics e.g. gentamicin, tobramycin
- Treatment with other medications e.g. tacrolimus or ciclosporin

What can I do to prevent AKI?

If you are unwell with vomiting, diarrhoea or a high fever, then you can become dehydrated. This is a risk if you are not able to drink enough to make up for water that you lose through diarrhoea and vomiting (d&v). It is important that you take frequent small amounts of water. Fruit juice and fizzy drinks should be avoided. But high fluid content foods such as ice lollies and jelly can help you to take extra fluid.

There are a number of things you should discuss with your GP or hospital doctor if you are unwell with d&v and taking ACE inhibitors or ARBs:

1. If you are taking any of the medicines listed in this leaflet it is not advisable to take oral rehydration solution (such as diarolyte) and you should seek advice before taking them if you have d&v.
2. It may be best to stop or change your medication until you have been drinking normal amounts for 5 days. It might help to write down what your GP or hospital doctor tells you in the section on the right.

What should I do if I am concerned I have AKI?

You may not have any clear signs or symptoms of AKI as they often aren't obvious until the kidney function is very much reduced. Early action can help prevent AKI or stop it becoming severe. So you should contact your GP, hospital doctor or nurse if you are concerned you might be dehydrated because you have vomiting, diarrhoea, a high fever, are not able to tolerate fluids or are passing less urine. They will advise you whether you need to alter your medication, and whether you need to go to hospital for blood tests or to have the amount of urine you pass monitored, or to have fluids into a vein via a drip to prevent AKI.

Where can I find out more?

You can get further information from your GP, hospital doctor or nurse.

There is more information at:

infokid.org.uk

nice.org.uk/guidance/CG84/ifp/chapter/Preventing-and-treating-dehydration

medicinesforchildren.org.uk

thinkkidneys.nhs.uk

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What my doctor has told me to do if I am unwell?

Use this space to write down what your doctor has told you to do if you are unwell.

