



Basics of kidney failure

This leaflet explains what the kidneys do, what is likely to happen if they start to fail and how the condition is managed.

What do the kidneys do?

- Make urine – this removes salt and water.
- Remove waste products – ‘creatinine’ is the most common one you will hear about.
- Control blood pressure – as well as salt and water balance, the kidneys produce a hormone (rennin) which puts blood pressure up.
- Prevent anaemia – kidneys produce a hormone (EPO) which stimulates the bone marrow to produce blood cells.
- Keep bones healthy – the kidney activates Vitamin D, which promotes strong bones and also stops parathyroid hormone (PTH) destroying bones.
- Remove minerals – many minerals are removed by the kidneys. Three particularly important ones are phosphate, potassium and hydrogen ions.

What happens if the kidneys do not work well?

- Salt and water build up causing swelling, breathlessness and high blood pressure.
- Waste products build up causing tiredness, poor sleep, cramp and nausea.
- More rennin may be produced, causing further high blood pressure.
- Lack of EPO may cause anaemia with tiredness and breathlessness.
- Lack of Vitamin D may cause bone problems with pain and weakness.
- Minerals from the diet may build up in the body. Potassium may affect the heartbeat, phosphate may cause itching and ‘furring up’ of the arteries, hydrogen ions may cause acidosis, which affects appetite.

What treatment will I need?

- You will probably find that you are given quite a lot of tablets for these different parts of the kidney failure.
- You may be on a diuretic – a water tablet – to increase the amount of urine.
- You will be on a special diet – this may reduce some foods that are high in protein and that add to the body waste products.
- You will be on blood pressure tablets – as high blood pressure can make the kidneys worse and damage the heart.

- You may be given iron by infusion (a drip) and you may need special EPO injections to help the red blood count (haemoglobin) and prevent anaemia.
- You may be on a replacement active Vitamin D tablet called One Alpha.
- Your diet will include reduced amounts of foods containing phosphate and potassium. You may be on bicarbonate tablets to counter acidosis.

In addition

- You may be on treatment to slow the kidney damage – such as steroids or ACE inhibitors.
- You may have treatment to protect your heart, such as Aspirin, Warfarin or cholesterol lowering drugs.
- You will be asked to ‘protect’ your non-dominant arm in case you do eventually need dialysis. This means informing all healthcare staff that they may not measure blood pressure, take blood or insert venous cannulae in the arm that you do not write with. This protects the veins of that arm from long term narrowing or blockage.

How will the condition progress?

- Your kidney failure may stay the same and you go on with the tablets indefinitely.
- Your kidneys may deteriorate so that in the long term you enter the dialysis and transplant programme.
- In either case, you will attend the clinic regularly to see the doctors, dietitian and nurses.

Further information

www.kidney.org.uk (National Kidney Federation) Helpline 0845 601 0209

www.nkrf.org.uk (National Kidney Research Fund) Helpline 0300 303 1100

www.britishkidney-pa.co.uk (British Kidney Patients Association) 01420 541424

Contacting us

Kidney Care Nurses 0118 322 7899

Out of hours / Bank holidays – Victoria Renal Ward 0118 322 7476

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

RBFT Department of Renal Medicine, February 2025

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