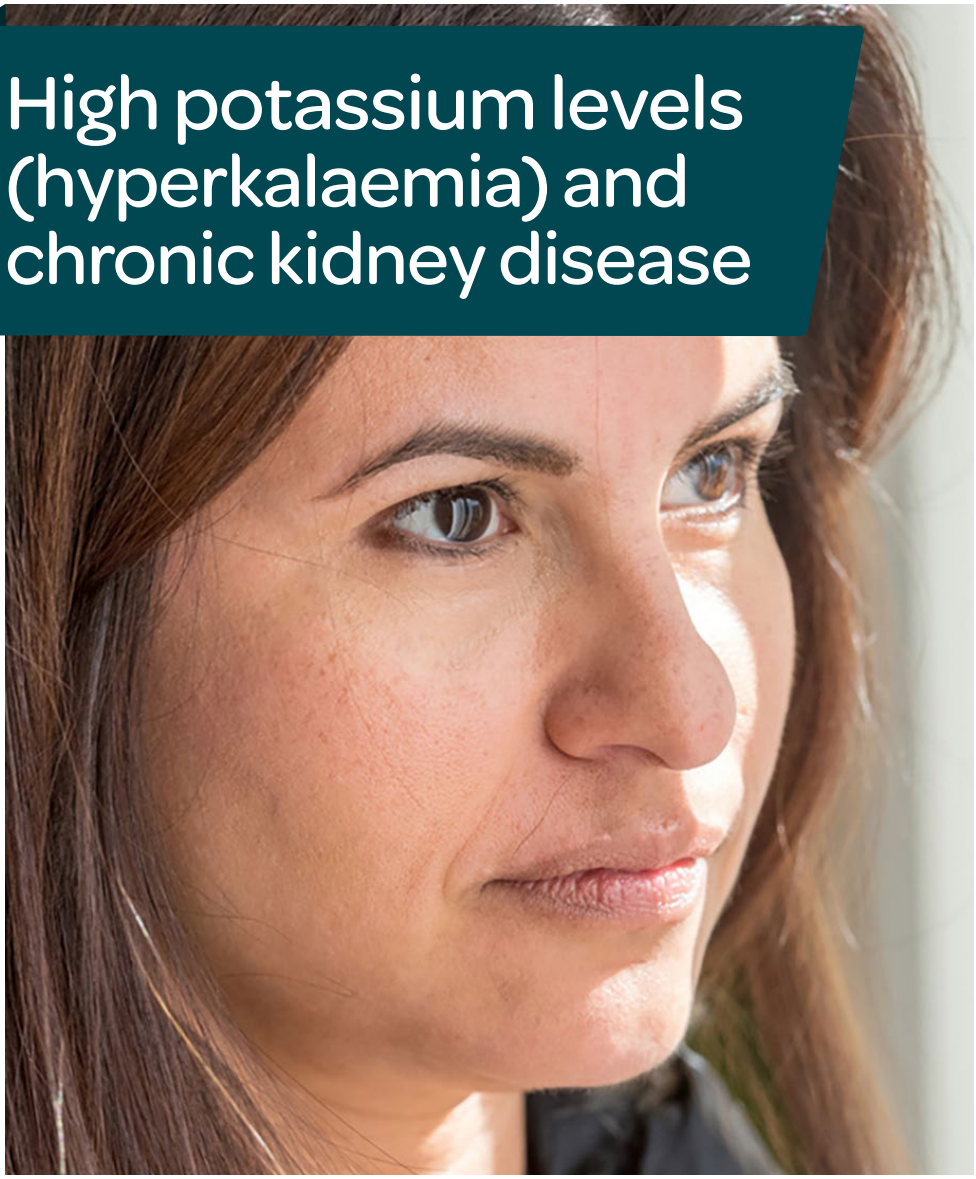
High potassium levels (hyperkalaemia) and chronic kidney disease



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Hyperkalaemia is a condition where you have too much potassium in your blood. Potassium, which you get from food, is a mineral that helps to keep your nerves and muscles working properly. Too much potassium in your blood can affect the way your heart works, causing it to go into an abnormal rhythm which can be very dangerous.

This leaflet explains the causes of hyperkalaemia, its symptoms and possible treatments.

Why might I have hyperkalaemia?

Hyperkalaemia is common in people with kidney problems. Your kidneys help to remove excess potassium from the body in the form of urine (wee).

If you have chronic kidney disease (CKD), your kidneys are not working as well as they should, so they cannot get rid of the extra potassium. It therefore builds up in your blood.

Additional causes of hyperkalaemia include metabolic acidosis (where the blood is high in acid, which can be common in kidney disease), medications, constipation, high blood sugars due to problems managing diabetes or infection.

Hyperkalaemia can also be related to your diet, but it's important to exclude other causes before making changes to the food you eat.

What are the symptoms of hyperkalaemia?

Although hyperkalaemia itself does not usually have any obvious symptoms, you may notice some of the following:

- feeling very tired or weak
- stomach pain or nausea
- dizziness
- muscle pain or cramps
- trouble breathing
- weakness in the arms and/or legs
- unusual heartbeat or chest pains

These symptoms may develop slowly over several months. However if you have CKD and are receiving dialysis, things can change very quickly over just a few days. Talk to your doctor if you have any concerns.

How is hyperkalaemia diagnosed?

Hyperkalaemia is diagnosed by a blood test that measures the potassium levels in your blood.

If your nurse or doctor is worried about your potassium level, they may suggest that you have an **electrocardiogram (ECG)**.

This is a test that can be used to check your heart's rhythm and electrical activity. Patches are stuck to your skin to record the electrical signals produced by your heart each time it beats.

A high potassium level can cause changes to your heart rhythm that can be seen on an ECG.

How is hyperkalaemia treated?

Treatment will depend on how high the levels of potassium are in your blood. If they are only slightly above normal, you may not need any treatment. You will have regular blood tests to check that this does not change.

Urgent treatment is usually needed if the potassium levels are above 6 mmol/L. This may mean a short stay in hospital to allow your potassium levels to be closely monitored and to start treatment.

Treatment may include:

Medication

Your doctor might prescribe:

- **Sodium bicarbonate.** This acts by binding with the acid in your blood stream. This helps your kidneys to process the potassium, allowing them to get rid of the build-up more effectively.
- **Potassium binders.** These work by removing the extra potassium from your body in your poo. There are a few potassium binders that you may be prescribed: calcium resonium, patiromer or sodium zirconium cyclosilicate (Lokelma). They may be given over a few days or longer term to help keep your potassium levels low.

- **Diuretics** (water tablets, for example, furosemide and bumetamide). These make your kidneys produce more urine which can get rid of the potassium in the body.

You should always follow your doctor's advice regarding medicines.

Changing or altering the dose of your medications

Your doctor may also decide to reduce the dose of some of your existing medicines if they are affecting your potassium levels. For example, some medicines that are used to treat high blood pressure can cause hyperkalaemia or make it worse. Reducing the dose of these medicines can help to lower your potassium levels.

Changing your diet

Your kidney team may also advise you to make changes to the food you eat. Your doctor may refer you to a dietitian who can advise you on swapping foods that are higher in potassium for lower potassium alternatives, while also maintaining a healthy balanced diet, which is important for your kidney disease.

Find more information about making healthy lifestyle choices when you are living with kidney disease, visit the Kidney Care UK website.

Dialysis

Sometimes, with more advanced kidney disease, a high potassium level can be a warning that you need to start dialysis. Potassium is removed during dialysis.

Your kidney team will explain how dialysis works if they feel this is the right treatment for you.

If you are already having regular dialysis, a high potassium level can be a sign that your dialysis is not working well enough. Your nurse or doctor can discuss this with you.

Where can I find out more information?

- NHS website: **Potassium Test -** www.nhs.uk/conditions/Potassium-test
- Kidney Care UK: **Lowering your potassium levels -** www.kidneycareuk.org/about-kidney-health/living-kidney-disease/kidney-kitchen/lowering-your-potassium-levels/
- Kidney Care UK: **Kidney Kitchen –** www.kidneykitchen.org

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Please share your feedback

In partnership with UKKA
UK Kidney Association

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