

Nutrition and Dietetics

Kidney disease - a guide to diet

A healthy diet is important for everyone. If you have kidney disease, making careful food choices can help you to:

- control your blood pressure and manage your fluid levels
- maintain safe levels of waste products in your blood
- reduce symptoms such as nausea and itching
- maintain a healthy weight or to help you achieve weight loss
- improve your blood sugar control if you have diabetes
- control long term issues such as bone and heart disease

There is no standard 'kidney diet'. Diet advice depends on your blood results, appetite, current treatment, and stage of kidney disease.

A renal dietitian can support you with individual recommendations. If you'd like to see a dietitian, ask your renal nurse or consultant for a referral.

Symptoms of chronic kidney disease

Common symptoms of chronic kidney disease include:

- poor appetite
- weight loss
- tiredness
- itching
- nausea



Patient Information

In some cases, you can change your diet to help reduce some of your symptoms. Ask your doctor or specialist nurse to refer you to a renal dietitian.

Salt

Eating less salt is important if you suffer with high blood pressure or kidney disease. Most of the salt in our diets comes from salt:

- we add at the table or when cooking
- used in food manufacturing

To help reduce your salt intake:

- Reduce the amount of processed foods you eat. This includes ready meals, processed meats and smoked fish.
- Try salt-free flavour boosters, such as pepper, herbs, garlic, ginger, vinegar and spices. It only takes 6 weeks for your tastebuds to adjust to having less salt.
- Try to choose lower salt products when shopping (0.3g salt/100g or less).
- Use less salt in cooking.
- Avoid salty snacks such as crisps and salted nuts. Choose unsalted varieties instead.
- Avoid adding salt to food or at the table.

Ask your dietitian if you would like more information.

Fluid

Your kidney doctor or nurse will advise you on your recommended fluid intake. A dietitian can support you with managing any changes.

The amount of fluid you need to drink depends on the type & stage of kidney disease you have and your treatment. Your recommended fluid intake may change over time.

Protein

Your body needs protein to build muscle, repair body tissues and fight infections. When your body digests and processes protein, it produces a waste substance called urea. Healthy kidneys usually remove urea from your blood.

Avoid eating large portions of protein. This will reduce the amount of urea your kidneys need to remove from your blood.

In the earlier stages of kidney disease, the meat or fish portion for your main meal should be less than 140g (5 oz).

- You can have milk and dairy foods in moderation.

Plant-based proteins can be a good alternative to animal-based protein. They contain other beneficial nutrients such as fibre and vitamins. Plant-based proteins include tofu, soya, beans & pulses, and nuts & seeds.

In later stages of kidney disease, you may need to limit the amount of protein in your diet. A renal dietitian can help you to find out how much protein you need.

Avoid ready-to-eat smoked or cured fish products such as smoked salmon or gravlax. This is due to an increased risk of listeriosis.

Listeriosis is an infection caused by bacteria called listeria. You are at higher risk of serious illness from listeriosis if:

- you have kidney disease
- you are taking medicines or having treatments that weaken your immune system

You can find more information on how to reduce the risk of listeriosis at www.nhs.uk/conditions/listeriosis/ and www.food.gov.uk/listeria.

Phosphate

Our kidneys control the level of phosphate in your blood, which is usually between 0.8 and 1.5mmol/L. It's important to keep your phosphate levels in the recommended range to support your cardiovascular (heart), and bone health.

Not everyone with kidney disease needs a low phosphate diet. If your blood levels of phosphate are high, a reduced phosphate diet can help you to control your blood phosphate levels.

To reduce the phosphate in your diet:

- reduce your intake of processed foods.
- stop drinking cola or Dr Pepper type drinks.
- avoid processed cheeses such as Dairylea and primula cheese.

Ask your doctor or specialist nurse to refer you to a renal dietitian if:

- you are vegetarian
- you have a reduced appetite
- you'd like more information

Potassium

Our kidneys control the level of potassium in our blood. Usual blood potassium levels are between 3.5 to 5.3mmol/l.

If you're worried about your blood potassium levels, ask doctor or specialist nurse to refer you to a renal dietitian. A renal dietitian can help you with any dietary changes.

If you've been advised your blood potassium levels are normal, you don't need to avoid high potassium foods.

If your blood levels of potassium are high and you have a good appetite, reducing your potassium intake can be beneficial.

Patient Information

To reduce your potassium intake:

- avoid drinks, snacks, and salt substitutes high in potassium
- avoid potassium additives

Drinks, snacks, and salt substitutes high in potassium

- Drinks - coffee, chocolate, Horlicks, fruit juices, smoothies
- Snacks - potato crisps, chocolate, toffee, fudge and nuts, Bombay mix
- Salt substitutes such as Lo-Salt contain a significant amount of additional potassium

Potassium additives

Many processed foods contain potassium additives. Manufacturers add these to improve the texture and lifespan of foods or to reduce the salt content of foods.

Avoid foods containing potassium additives. Potassium additives are very easily absorbed by your body and can significantly raise your potassium levels. Look for **'potassium chloride', 'potassium lactate', 'potassium phosphate' or 'potassium citrate'** on the labels of processed foods such as:

- low salt products
- meat
- vegetarian meat alternatives
- processed cheese
- soups
- powdered drink mixes such as hot chocolate and malted drinks

If your potassium level is still high, ask your doctor or specialist nurse to refer you to a renal dietitian.

Diabetes

Chronic kidney disease (CKD) can be a long-term complication of diabetes. Controlling your diabetes can help to slow the progression of kidney disease. To help control your diabetes, it's important that you have regular check-ups with the diabetic team.

The recommended target range for HbA1c is between 6.5 and 8% (47.5 to 63.9 mmol/mol).

If you'd like more information about diet and diabetes, ask your doctor or specialist nurse to refer you to a diabetes dietitian.

Exercise

Regular activity is important for everyone, including people with chronic kidney disease. Regular activity helps with:

- blood pressure control
- strength and fitness
- maintaining a healthy weight
- diabetes management

The UK guidelines suggest that adults should aim for:

- 150 minutes (2 and a half hours) of moderate intensity exercise per week
- 75 minutes (1 hour and 15 minutes) of vigorous activity per week
- a combination of both of the above

This activity can be done in sessions of 10 minutes or more. It's also recommended to carry out muscle strengthening exercises at least twice a week.

During moderate activity, you should still be able to talk whilst moving. Moderate activity can include gardening, walking, swimming, cleaning, or mowing the lawn. It also includes doing more organised exercise such as Kidney Beam or a gym class.

Patient Information

During vigorous activity, you should be out of breath enough that you cannot hold a conversation whilst exercising.

Kidney Beam

Kidney Beam is a free online service helping people living with kidney disease to feel good through movement, education and wellbeing support. All classes have a fitness rating so you can choose the right one for you <https://www.kidney.org.uk/kidney-beam>.

If it's been some time since you last exercised regularly, check with your doctor before starting a new exercise.

Vitamin and mineral supplements

Discuss with your consultant or member of the renal team before taking a vitamin and mineral supplement. Some supplements can be harmful for people with kidney disease:

- Avoid standard multivitamin preparations - they contain too much vitamin A and E. If you wish to take a multivitamin, the most suitable types are those produced for pregnancy.
- Avoid fish **liver** oil. Fish oil can be taken as an alternative.
- Avoid glucosamine if you have advanced kidney disease.

Patients with kidney disease are at an increased risk of vitamin D deficiency. Request a blood test with your doctor if you're concerned.

If you're eating a fully plant-based or vegan diet, you should get a regular source of vitamin B12, vitamin D, and iodine. Ask your renal doctor, dietitian or pharmacist which supplement is best for your needs.

Herbal tablets, remedies and homeopathic medicines

Avoid taking herbal tablets, remedies and homeopathic medicines unless you have discussed these with your consultant or a member of the renal team.

Patient Information

Avoid star fruit

Star fruit contains a chemical which can be extremely dangerous to people with kidney problems.

Cookbooks

Eating well with Kidney Failure

A practical guide and cook book with guidance and recipes. You can buy these books online from www.kidney.org. The renal dietitians also hold a stock of order forms.

Food with Thought

Amgen – available from www.kidney.org

Useful websites

The list below details a few of the websites which we feel may be helpful to you. Many of the websites have links to other sites with useful information and recipes.

UK based websites

- For information on all aspects of renal failure, the National Kidney Foundation - www.kidney.org.uk
- A site with useful, patient friendly information and sensible information on diet - www.kidneypatientguide.org.uk
- For recipes suitable for all stages of kidney disease - www.kidneycareuk.org/about-kidney-health/living-kidney-disease/kidney-kitchen/
- For information about diabetes and diet - www.diabetes.org.uk

International websites

- The National Kidney Foundation has information on diet, including recipes - www.kidney.org
- Kidney Health Australia has a useful diet section and links to other websites and information - www.kidney.org.au
- DaVita is a comprehensive resource regarding dialysis and kidney disease. It has an extensive diet section - www.davita.com

American website with useful information about kidney disease including recipe ideas - www.freseniuskidneycare.com

Patient Information

Monitoring your blood results

Accessing 'Patients Know Best' is a good way to get to know your blood results and keep track of your progress. Patients Know Best is an online tool which records your blood results.

If you would like to gain access to Patients Know Best, log on to www.patientsknowbest.com/renal or speak to a member of your renal team. If you don't use Patients Know Best, the following table may help you to:

- monitor your blood results
- identify when you may wish to ask your doctor or specialist nurse for a referral to a dietitian

Test	What is it?	Desirable level	Date	Date	Date	Date	Date
Estimated glomerular filtration rate (eGFR)	A guide to percentage of kidney function						
Potassium (K⁺)	An electrolyte which can affect the heart if too high or low	3.5–5.3 mmol/l					
Phosphate (PO₄)	Correct levels important to maintain healthy bones and heart	0.8 – 1.5 mmol/l					
Calcium (Ca²⁺)		2.2-2.6 mmol/l					
Parathyroid hormone (PTH)		1.6 – 6.9 pmol/L					
Vitamin D		>49 nmol/l					

Patient Information

More information

If you'd like more information or have any questions, contact us on 024 7696 6151. You can also follow the Renal Dietitians on X (formerly known as Twitter) @UHCW_RenalDiet.

Produced by Coventry Renal Dietitians, University Hospitals Coventry & Warwickshire NHS Trust.

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