



York and Scarborough
Teaching Hospitals
NHS Foundation Trust

Diet and Chronic Kidney Disease (CKD stage 4-5)

Information for patients, relatives and carers

① For more information, please contact:

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I have been told I have kidney disease. What does this mean?

It means that your kidneys are not working as well as they should. Important functions of the kidneys include clearing waste products and chemicals from the blood, control of salt and water balance and control of blood pressure.

What can I do to help look after my kidneys?

Having kidney disease increases the risk of developing problems which affect the heart and blood vessels. There are a number of lifestyle changes you can make to help look after your kidney function and to reduce the risk of developing complications.

Lifestyle changes include:

- Eating more healthily
- Maintaining a healthy body weight
- If you have diabetes, keeping good control of your blood sugars
- Stopping smoking
- Exercising regularly

These lifestyle changes will help with:

- Good control of your blood pressure
- Controlling your blood fats

Why is diet important?

Making appropriate changes to your diet can be an important part of your care and can help to keep you well with kidney disease.

The type of diet that you need to follow will depend on your individual needs. Dietary changes can help to control certain chemicals in your blood and your fluid balance both of which can be a problem in kidney disease. Your dietary advice may change over time according to your appetite, your level of kidney function, your blood results or how well you are feeling.

Making changes to your diet that are not necessary could mean that you miss out on some important nutrients. The kidney dietitians will advise and support you in adjusting your food choices and eating patterns when needed so that you can always continue to enjoy food and eat well.

What general changes can I make to my diet to eat more healthily?

- Reduce salt intake
- Include a healthy five portions of fruit and vegetables a day
- Drink alcohol only in moderation
- Eat the right amount of protein
- Eat the right type and amount of fat

Healthy eating

Even if you need to change your diet to help your kidneys, it is still important to follow the principles of healthy eating so that you stay well nourished. If you have high blood pressure or diabetes, eating a healthy balanced diet can help you to manage these conditions, as well as reducing your risk of developing other conditions, including heart disease.

- Try to include starchy foods such as bread, potatoes, rice, or pasta at each meal. Wholegrain starchy foods are higher in fibre, which plays an important part in heart and bowel health.
- Aim to include at least five portions of fruit and vegetables each day. This can include fresh, frozen, dried or tinned varieties.
- Include some protein foods such as meat, fish, eggs, beans and other non-dairy sources of protein. (Recommended portion sizes for protein foods are on pages 9-10).
- Include the right amount of milk and dairy foods, or suitable non-dairy alternatives, as good sources of calcium for bone health. Try to choose lower fat options, e.g. skimmed or semi-skimmed milk, and lower fat cheeses and yoghurt.
- Limit foods and drinks which are high in fat and / or sugar such as sweets, sugary fizzy drinks, chocolate, biscuits, cakes, pastry, butter, cream and oil.

- Be aware of how often you use processed foods as these can be high in salt, fat, sugar and other additives such as potassium and phosphate.
- Keep within the recommended limits for drinking alcohol to lower the associated health risks. Both men and women are advised to avoid having more than 14 units of alcohol per week. If you do drink as much as 14 units per week, it is best to spread them evenly over three days or more and include alcohol free days.

What other dietary changes may be necessary in kidney disease?

The dietary components which are most likely to need some adjustment include:

- salt
- protein
- phosphate
- potassium
- fluid

The dietitians will give you information on modifying your intake of each of these nutrients if it becomes necessary. If you have not been told to reduce foods for specific reasons such as potassium and phosphate, you can be confident that they are not currently a problem for you. Remember that making changes to your diet or cutting foods out of your diet when it is not necessary could mean that you miss out on some important nutrients.

Salt

It is important to follow a low salt diet as this can help to control blood pressure, reduce fluid retention and help your kidneys function as well as they can. You may have already received some advice about reducing salt in your diet, but this remains an important part of looking after your kidneys.

What's the daily limit?

It is recommended that we consume no more than 6g of salt a day (one teaspoon). The salt that occurs naturally in fresh foods is enough to provide the small amount of salt that your body needs.

Reducing your salt intake

Not adding salt to foods is a small, but important, part of reducing your salt intake to help you get used to a less salty taste. Cutting down on processed foods can also make a big difference to your intake.

What about salt substitutes?

We do not recommend that you use a salt substitute. Salt substitutes are made from a mixture of potassium chloride and sodium chloride.

Reading the food labels

Nutrition labels are usually found on the back or the side of food packaging. The full nutritional information is provided per 100g of the product. Sometimes they also tell you the information per serving or per pack.

Some foods now have the nutritional information displayed on the front of the packaging. This is usually given per portion. Be aware that the serving on the pack may be different to the amount that you plan to eat.

Some products combine colour coding with the nutritional information. Colour coded labelling makes it easy to see at a glance if a product is high (red), medium (amber) or low (green) in certain nutrients. This includes salt. Aim to mainly choose products where salt is coded green. Have amber products occasionally and limit the number of red products.

Low salt (green)	Less than 0.3g per 100g
Medium salt (amber)	Between 0.3g and 1.5g per 100g
High salt (red)	More than 1.5g per 100g or more than 1.8g per portion

Protein

Protein is used for building and repairing the body. It is important to eat enough protein to maintain good health, but when your kidney function is low, too much protein adds to the waste products which can build up in your blood and make you feel unwell.

Protein foods include meat, fish, poultry, eggs, dairy products and non-animal sources such as peas, beans, nuts, seeds and lentils.

How much protein should I keep to?

You should aim to eat protein foods at two meals each day in order to meet your nutritional requirements, but you should avoid large portions.

Try to avoid having a lot of processed proteins such as sausages, burgers, fish fingers, processed vegetarian and vegan products. These are usually very high in salt and other additives including phosphate.

Try to avoid smoked fish and meat such as bacon as they are very salty.

Sensible portion sizes for protein foods are:

- 50g (2oz) protein foods at a small meal such as two slices chicken in a sandwich
- 100-125g (4-5oz) protein food at a main meal such as a small chicken breast or fillet of fish.
- Two eggs.
- Three tablespoons beans, peas, chickpeas, lentils
- A handful unsalted nuts.

What about dairy?

Dairy products like milk and cheese give your body calcium and other important vitamins but also contain protein (cheese is also high in salt). Keep to a maximum of two to three portions of dairy foods each day. Go for lower fat and lower sugar products where possible.

Sensible portion sizes for dairy are:

- 200mls (third of a pint) milk for drinks and cereals
 - If using plant milk (soya, nut, rice, oat) choose unfortified, unsweetened versions
- One small pot yoghurt (125g) or three tablespoons
- 25g cheese (1oz) for example a matchbox size
- One tablespoon cream cheese
- Three tablespoons cottage cheese

Phosphate

The kidneys normally control the amount of a mineral called phosphate in your blood. We know it is important to keep phosphate levels as near to normal as possible.

Having high phosphate levels over a longer period of time can lead to:

- weaker bones that are more susceptible to breaking
- aching joints
- hardening of the blood vessels, increasing your risk of heart disease and circulation problems

Phosphate is found in many foods and drinks.

The amount of natural phosphate in your diet is usually related to the amount of protein that you eat as it is present in meat, fish, eggs, pulses and dairy foods. Phosphate is also added to food during manufacturing as additives. Phosphate additives are used as a preservative or to improve the taste and texture of food. Reducing your intake of processed foods will not only help to manage your intake of salt but may also help to limit phosphate. Choosing fresh foods as much as possible is advised. It is also useful to check food labels for additives.

You will receive individual dietary advice on how to manage your phosphate intake if it becomes necessary.

Potassium

Potassium is a mineral which is found naturally in many foods and is needed as part of a healthy diet.

Potassium is needed in your body for your muscles and heart to work properly.

Some people with kidney disease may have a raised level of potassium in the blood. High levels of potassium in your blood can cause muscle weakness or changes to your heart rhythm. There are many reasons why blood potassium levels can become raised and in a lot of cases raised levels can be corrected by changes in medication.

Occasionally it may be necessary to modify your diet in order to help control your blood potassium levels. Preventing constipation and having good blood sugar control if you are diabetic are the first steps for this. If levels remain raised then you may be advised to make adjustments to drinks, snacks and/ or cooking methods to help to reduce it. A dietitian will support you to make appropriate changes.

Fluid

The kidneys help to maintain normal levels of salt and water in the body. When your kidneys are not working well, salt and water can build up and lead to fluid overload.

If you become fluid overloaded, you may be advised to reduce your salt intake and some people also need to drink less. If you have not been advised to reduce your fluid intake, it is important to keep drinking normally.

Other considerations

Over time, some people with kidney disease may experience symptoms related to their poor kidney function which can affect the way they eat. Symptoms can include taste changes, nausea, vomiting and a lack of appetite. Other people may lose their enjoyment of some protein foods or find certain foods difficult to eat due to the symptoms they are experiencing. It is important to try to maintain a balanced diet as much as possible and to have enough energy and protein to support the body's needs.

If you feel you are not managing to eat as well as usual, it is important to discuss it with your dietitian.

Eating well with a poor appetite and kidney disease

Eating well can be difficult if your appetite is poor. Without adequate protein and energy, the body may use up fat and not eating well, it may be necessary to focus less on the usual healthy eating guidelines and to eat more high calorie foods in order to make sure your energy intake is always adequate. Further advice and support is available from the dietitians if your appetite is poor and you are not managing to eat well.

Nutritional assessment

To help monitor your flesh weight (fat and muscle) the dietitian may take some quick and easy measurements on your upper arm.

These measurements are part of assessing how well-nourished you are and help to identify any changes over time. The measurements we take are important as it is not always easy to interpret your weight, or flesh weight changes, if you are fluid overloaded.

Additional resources and useful websites

The following resources are available from the dietitians for further information:

- Managing your phosphate
- Managing your potassium levels
- How to follow your fluid allowance
- Eating well with a poor appetite
- Eating well with progressive kidney disease
- Managing the nutritional symptoms of chronic kidney disease
- Eating a plant based diet with chronic kidney disease

Useful websites:

NHS Choices (Lose weight-Better health)

<https://www.nhs.uk/better-health/lose-weight/>

This provides links to the free NHS Weight Loss Plan as well as other free weight loss plans and programmes.

Kidney Beam

<https://beamfeelgood.com/kidney-disease>

This is a web-based exercise resource available free of charge, which helps people living with kidney disease feel good through movement, education and wellbeing support. You can access exercise sessions and advice from experts using your electronic devices at home or away.

Kidney Kitchen

<https://kidneycareuk.org/get-support/healthy-diet-support/kidney-kitchen/>

This website provides kidney-friendly recipes that can be enjoyed every day and at every stage of kidney disease. It has been developed by kidney dietitians and food experts in the UK and the recipes have been carefully analysed and approved by the British Dietetic Association Renal Nutrition Specialist Group (RNG).

Kidney Care UK

<https://kidneycareuk.org/get-support/healthy-diet-support/>

As well as Kidney Kitchen also see the healthy diet support section of the Kidney Care UK website for information relating to eating well with kidney disease, flavouring foods without using salt, potassium and phosphate.

Also see for information on exercise and being active.

British Dietetic Association

<https://www.bda.uk.com/food-health.html>

See food fact sheets developed by the British Dietetic Association including healthy eating, salt, blood pressure management, type 1 and type 2 diabetes.

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:

The Nutrition and Dietetics Department, Telephone 01904 725269 or email: yhs-tr.yorkdietitians@nhs.net.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email yhs-tr.patientexperienceteam@nhs.net.

An answer phone is available out of hours.

Leaflets in alternative languages or formats

If you would like this information in a different format, including braille or easy read, or translated into a different language, please speak to a member of staff in the ward or department providing your care.

Patient Information Leaflets can be accessed via the Trust's Patient Information Leaflet website:

www.yorkhospitals.nhs.uk/your-visit/patient-information-leaflets/

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