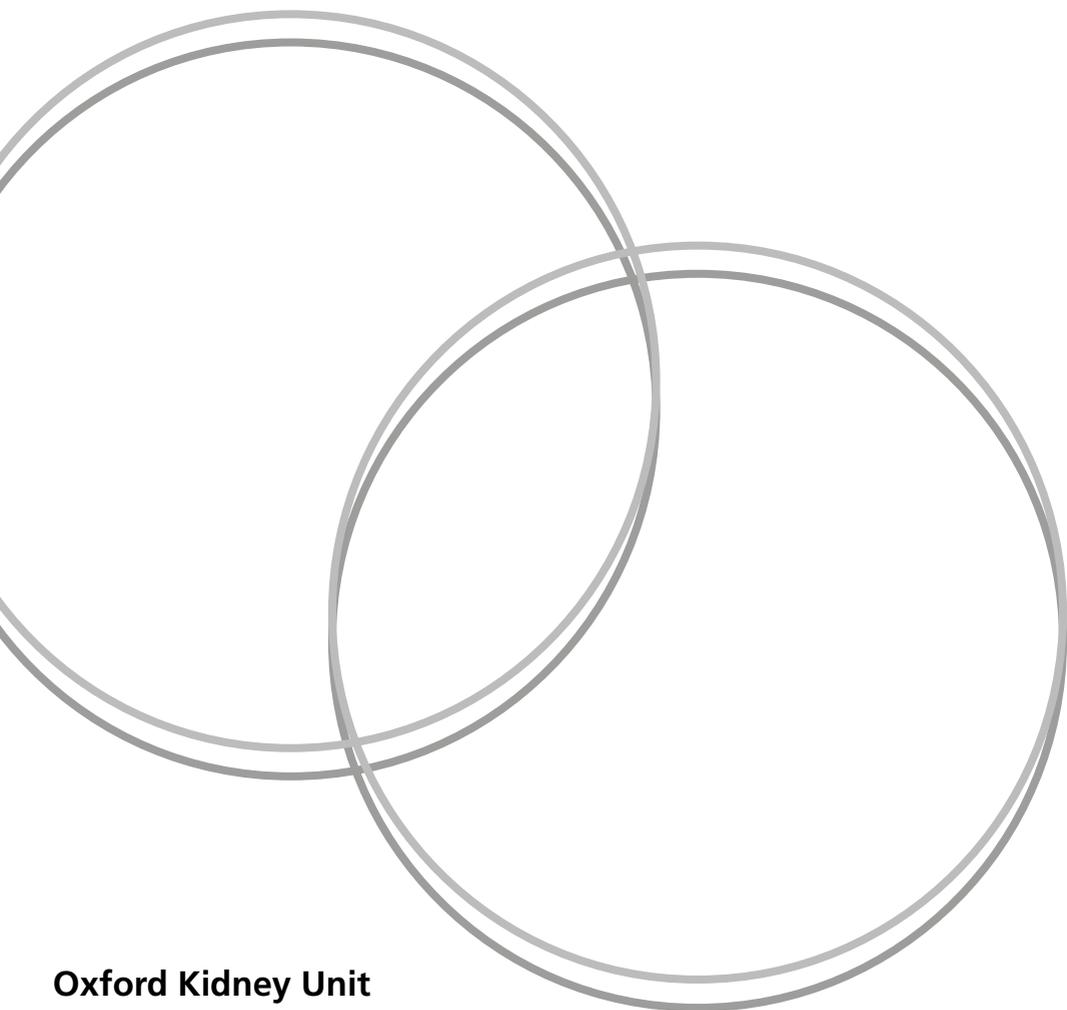




Oxford University Hospitals
NHS Foundation Trust

Managing your food and fluid intake when on haemodialysis



Oxford Kidney Unit

If you are on haemodialysis this leaflet will help you manage your food and fluid intake. Your dietitian will also be able to answer any questions or concerns.

When your kidneys are not working properly, waste products build up in your blood. Haemodialysis works by removing these waste products and excess fluid. However, it cannot completely replace the work of normal kidneys. Therefore, to stay well it will be necessary to alter some of the foods and drinks you usually have.

The dietitians will look at the following in your diet:

- protein
- salt
- fluid
- potassium
- phosphate
- fibre.

Protein

Protein is needed for the growth and repair of all body tissues. This includes maintaining your muscle strength.

A small amount of protein is lost during the dialysis process. Therefore, to ensure that you have enough protein in your diet you should **aim to eat high protein foods at least twice a day**.

The following foods that are good sources of protein to include as part of your meals:

- meat, poultry
- fish
- soya protein products, Quorn, tofu, pea protein products
- lentils, pulses
- eggs.

These foods also contain protein, but they are higher in phosphate so may have to be limited (see the phosphate section on page 10):

- milk
- cheese
- yogurt.

Salt

We would advise you to reduce salt in your diet. Reducing salt can help:

- Reduce feelings of thirst (useful if you are on a fluid restriction).
- Prevent carrying extra fluid (oedema).
- Reduce blood pressure.

Some simple ways of reducing your salt intake include:

- Avoid or using less salt in cooking and avoid adding salt at the table (this includes sea salt, pink Himalayan salt as well as table salt).
- Use alternative flavourings such as herbs, spices, black pepper, garlic, lemon juice to flavour your food.
- Reducing your intake of foods which are high in salt and switching to lower salt alternatives.

List of high and lower salt alternative foods

MEAT, FISH AND VEGETARIAN ALTERNATIVES	
Higher salt foods	Lower salt alternatives
Processed meat such as bacon, ham, salami, sausages, pies and burgers	Unprocessed meat and fish such as freshly cooked chicken, lamb, pork, beef and fish
Smoked fish such as smoked haddock, smoked salmon	Unsmoked fish
Tinned fish in brine	Tinned fish in spring water or oil
Meat-free bacon, sausage & nuggets	Meat-free mince, Quorn pieces, Tofu

DAIRY

Higher salt foods

Cheese spread (such as Dairylea, Primula), hard cheeses (such as cheddar, edam, stilton, halloumi)

Lower salt alternatives

Cottage cheese, cream cheese (such as Philadelphia), mozzarella

SAVOURY SNACKS

Higher salt foods

Crisps, salted nuts, salted snacks (such as Twiglets, Pretzels), Ritz biscuits, TUC biscuits, mini cheddars

Lower salt alternatives

Plain popcorn, plain breadsticks, cream crackers, Ryvita, rice cakes

MISCELLANEOUS

Higher salt foods

Marmite, Bovril, stock cubes, gravy granules, tinned or packet soups, Pot Noodles, bottled sauces such as soy sauce and tomato ketchup

Lower salt alternatives

Natex savoury spread, Meridian yeast extract, low or zero salt stock cubes, reduced salt gravy granules or homemade gravy, homemade soup, reduced salt sauces, vinegar

If you have been advised to follow a low-potassium diet, you should avoid all salt substitutes such as LoSalt and SoLo as they contain potassium chloride.

Understanding food labelling

Approximately 75% of our salt intake comes from ready-made foods. It is important to look at food labels when making decisions about which foods to buy. Remember, food labels may show the salt content per 100g and not always the salt content of the entire portion.

This is high	This is moderate	This is low
Over 1.5g per 100g or over 1.8g per portion	0.3-1.5g per 100g	Under 0.3g per 100g

Choose foods with more green coding and fewer with amber coding. Where possible try to avoid foods with red coding.

Fluid

When your kidneys are not working properly you are not able to get rid of all the fluid that you drink. Haemodialysis helps to remove fluid from the body, but if you drink more than is being removed you can become fluid overloaded.

The signs of being fluid overloaded are a rapid increase in weight between dialysis sessions and a rise in blood pressure. It may also cause swollen ankles and breathlessness.

Your fluid allowance = 500ml + previous days 24-hour urine output

Most people on dialysis pass less urine over time; if this happens you will need to have your fluid allowance reassessed and will need to reduce your fluid intake. Ask your haemodialysis nurse or dietitian for more information.

What counts as fluid?

- all hot and cold drinks
- soup, gravy, thin sauces
- jelly, ice lollies
- ice cubes.

Fluid rich foods such as custard, yoghurt and ice cream count as half the volume of fluid, for example 120ml yoghurt = 60ml fluid.

Tips to help you keep to your fluid allowance:

- Use a measuring jug or water bottle to help manage your allowance.
- Use a smaller cup or only fill your cup or mug to halfway.
- Try to drink only when you are thirsty rather than out of habit or to be sociable.
- Sucking ice cubes or ice lollies can be more refreshing, use squash to flavour ice cubes.
- Sucking sugar free sweets such as mints, boiled sweets or chewing gum.
- A piece of fruit can be a refreshing alternative to having a drink.
- Avoid eating salty foods or adding salt to your foods as these will make you thirsty.

For more information, ask your dialysis nurse or dietitian for the managing your fluid balance leaflet.

Potassium

Potassium is a mineral found naturally in foods. Haemodialysis removes potassium from the blood, but levels build up between dialysis sessions. It is therefore often necessary to restrict dietary potassium to avoid levels becoming too high.

The target potassium level is 3.5-5.9 mmol/ L.

A high level of potassium in your blood can be dangerous for your heart. However, the amount of potassium you can include in your diet is very individual and not everyone on haemodialysis needs to follow a low potassium diet.

Here is a table highlighting some foods and drinks that are high in potassium. If you need to reduce your potassium your dietitian can give you guidance and more detailed information.

List of foods that are high in potassium

Potato	Non-boiled potatoes, such as chips, jacket potato, hash browns, potato waffles
Vegetables	Brussel sprouts, spinach, parsnips, tomatoes
Fruit	Bananas, mango, melon (except watermelon which is lower in potassium), dried fruit
Drinks	Fruit juice, coffee, hot chocolate, beer, cider
Snacks	Potato crisps, nuts, chocolate

Phosphate

Phosphate is a mineral found naturally in foods and is also used as a food additive.

Phosphate levels in the blood can increase when the kidneys are not working properly.

Over time, this can lead to heart disease and weaker bones which are more likely to break. It can also cause your skin and eyes to be itchy.

The target phosphate level is 1.1-1.7mmol/L.

Haemodialysis removes some phosphate from the blood, but it may be necessary to have less phosphate in your diet as well. You may also have been prescribed a medicine called a phosphate binder, which reduces the amount of phosphate you absorb from your food. Your dietitian can give you more information on when to take this.

Here is a list of your individual goals for controlling phosphate:

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Fibre

Fibre is important to prevent constipation and keep your bowels regular.

Foods high in fibre that are good for you to eat are:

- Wholemeal or granary bread instead of white bread.
- Whole wheat breakfast cereal such as Weetabix, Shredded Wheat, Bran flakes.
- Brown rice and wholemeal pasta rather than white.
- Pulses such as lentils, chickpeas, beans, try and include these in a meal once a week.
- Fruit and vegetables, aim to eat 5 portions per day.

Eating when on Dialysis

During haemodialysis, it is still important to follow your individual diet. It is a good idea to eat a sandwich or other protein containing snack on dialysis if you can.

If you eat foods that are high in potassium or phosphate during a dialysis session, they won't be absorbed into the body until after your dialysis has finished. This means they will have the same effect on your blood results as eating them on non-dialysis days.

Remember to take your phosphate binders to the dialysis unit.

If you have a poor appetite

- Eat little and often, have small meals with nourishing snacks in between.
- Cold foods can sometimes be more appetising, try a sandwich or chilled dessert.
- If there are times of the day when your appetite is better, take advantage of this.

Contact your renal dietitian or dialysis nurse if your appetite remains reduced and you are losing weight.

Keeping Active

When you first start haemodialysis, you may feel tired and lack energy. However, dialysis should not prevent you from being physically active. In fact, it can help with your overall health.

Benefits include:

- Improved heart health
- Better blood pressure control
- Improved sleep
- Increased efficiency of dialysis
- Less cramp on dialysis
- Helping to maintain strength and balance
- Improving your mood and mental wellbeing.

If you would like more information on suitable exercises you can ask one of the team for the Trust's information sheet on Chair Based Exercises for Strength and Balance (Information for renal dialysis patients) or visit the MOVE website: **www.move.bangor.ac.uk** *which includes explanations and videos of activities for those on haemodialysis.

To keep safe when exercising, remember to always stay within your capabilities, so start slowly and build up steadily, take rests as you need to and do not overdo it.

If you have concerns about performing certain activities with a Tesio or fistula, you should check with your dialysis nurse or doctor to ensure it is safe to do so first.

*[*This website has been produced outside of the Oxford University Hospitals NHS Foundation Trust and has therefore not been through our clinical guideline meeting. We endeavour to check the accuracy of the content annually but cannot ensure all material is up to date].*

Meal suggestions

Breakfast

- Porridge
- Weetabix, Shredded Wheat, Shreddies, Rice Krispies or Cornflakes
- Bread or toast with butter/spread and jam/marmalade
- Boiled/scrambled or poached egg with bread or toast
- English muffin with butter/spread and jam.

Light meal

- Sandwiches, rolls, pitta bread or bagels
- Sandwich fillings – fresh chicken, turkey, beef, lamb, pork, cottage cheese, cream cheese, egg, tuna, salmon (fresh or tinned boneless in oil or spring water), hummus
- Pasta or rice salad with salmon, tuna or chicken and / or chickpeas
- Poached or scrambled egg on toast
- Omelette with red pepper and / or courgette
- Reduced salt baked beans on toast.

Main meal

- Chicken or mixed bean casserole with mashed potato and broccoli
- Spaghetti Bolognese (prepared with 400g tinned tomatoes to serve 4)
- Lamb, beef, chicken, lentil, chickpea curry with rice or chapatti
- Roast meat (or Quorn roast) with carrots, green beans and roast potato (par boiled first)
- Gravy made with gravy browning or reduced salt gravy granules
- Shepherds pie, cottage pie, can use meat-free mince instead
- Fish pie with peas
- Salmon with boiled potato and green salad
- Tofu stir-fry with whole wheat noodles
- Chicken or lentil tagine with couscous
- Chilli con carne with rice, can use meat-free mince instead
- Chickpea curry or lentil dhal with rice and vegetables.

Desserts

- Fruit pie, fruit crumble, tinned fruit (juice drained off), fresh fruit, pavlova
- Yoghurt or fromage frais, ice cream, custard, rice pudding, trifle, crème caramel
- Soya yogurts.

Snack foods

- Cucumber, carrot, pepper sticks with hummus, cream cheese or tzatziki
- Breadsticks, cream crackers, water biscuits, oat cakes, crispbread, rice cakes
- Bread, toast, English muffin, croissant
- Vegetable or meat samosa
- Plain biscuits, cream filled biscuits, jam filled biscuits
- Unsalted popcorn, corn or maize snacks such as tortilla chips, Wotsits, Skips, Monster Munch
- Sponge cake, plain flapjack.
- Fruit

Drinks

- Water, tonic water, soda water, flavoured water
- Tea, 1x weak instant coffee per day
- Squash, cordial
- Light coloured fizzy drinks - e.g. lemonade, Fanta, Sprite.

If you have diabetes, limit or avoid sugary foods.

The dietitians can only provide advice or information to patients cared for under the Oxford Kidney or Transplant Unit (Churchill hospital). This includes the network units at Banbury, High Wycombe, Milton Keynes, Stoke Mandeville and Swindon (Great Western Hospital). If you do not attend these sites, then please contact your local care team.

Contacts

Renal Dietitians

Tel: **01865 225 061**

Please leave a message on the answerphone and one of the team will call you back.

Further information

Oxford Kidney Unit

The website has lots of information about the Oxford Kidney Unit for patients and carers.

Website: **www.ouh.nhs.uk/oku**

Kidney Care UK

A charity which has lots of practical support and information for people with kidney disease.

Website: **www.kidneycareuk.org**

Six Counties Kidney Patients Association

The SCKPA is run for patients by patients or family members.

They offer support to people suffering from kidney disease or who are on dialysis. They work closely with the Oxford Kidney Unit and have branches in Oxfordshire, Northamptonshire, Buckinghamshire, and Milton Keynes, and parts of Wiltshire, Gloucestershire and Berkshire.

Website: **www.sixcountieskpa.org.uk**

National Kidney Federation

A charity which has lots of practical support and information for people with kidney disease.

Website: **www.kidney.org.uk**

Health for Me (patient portal)

Health for Me enables you to access to your digital health record via the OUH Patient Portal. It is an online system that allows you to easily view parts of your digital health record safely and securely from a computer or smartphone.

Please ask a member of the renal team to sign you up to the patient portal.

If your bloods are taken by the Oxford Kidney Unit you will be able to see these results. We can give you a leaflet that will help you understand the results. If you would like a copy, please ask a member of the renal team.

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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