

# Your Haemodialysis Diet

Patient Information Leaflet

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## What is Haemodialysis?

Haemodialysis is one of the treatment options for people with established kidney disease. Haemodialysis works to remove waste products and the additional fluid that you might be carrying in your body.

## Why is it important to follow a special diet when on Haemodialysis?

A normal human kidney filters waste products out of the body at a constant rate. When you have chronic kidney disease, you may need haemodialysis to help clear the wastes from your body as your kidneys are no longer able to do this effectively.

Haemodialysis typically lasts for 3-5 hours, 3 times a week, although this may vary from person to person. This means, that on the days in-between your dialysis sessions, waste products from metabolism can build up in your blood. Eating the right foods and following the dietary advice given in this diet sheet can help you manage your condition, keep you well and prevent health problems in the future.

## What are the main aims of the diet for those on haemodialysis?

1. Try to **avoid** foods that are high in potassium
2. Try to **avoid** or **limit** certain foods high in phosphate
3. Take your phosphate binders correctly (if you are prescribed these)
4. Keep within your fluid allowance (if you are on one)
5. To eat **less** salt
6. Eat regular balanced meals and make sure that your protein and calorie intake is adequate
7. Try to keep to a healthy weight
8. If you have diabetes, it is important that your blood sugar levels are well controlled

## What is a Renal Dietitian?

Renal Dietitians' work closely with your Renal Doctors, Specialist Nurses, Dialysis Nurses and other health professionals to help you understand your haemodialysis diet. They provide dietary suggestions specific to your likes and dislikes and will explain how your diet can affect your blood results. They can visit you on the haemodialysis unit. If you are on home haemodialysis, they can arrange a clinic appointment or a telephone review. Please ask your Dietitian if you would like a copy of your Dietetic letters.

## Everybody is different!

Diet and fluid restrictions depend on your remaining kidney function, medical conditions, eating pattern, urine output and blood results (e.g. potassium and phosphate). Your Dietitian will advise you on what diet to follow. Your diet may be different to others who are on haemodialysis. If this is the case, your Dietitian will explain the reasons for this.

## Potassium

### What is potassium?

Potassium is a mineral that everyone has in their blood. It is represented by the chemical symbol  $K^+$ . It appears naturally in many foods and drinks. When your kidneys are not working properly this potassium cannot be filtered out properly in the urine, so potassium levels can build-up in the blood.

### What is the ideal level of potassium to have in the blood?

The ideal range of potassium for haemodialysis patients is between \_\_\_\_\_ and \_\_\_\_\_ mmol/L. Too much potassium in the blood is called **hyperkalaemia**.

### Is a high blood potassium level dangerous?

**Yes.** A high potassium level in the blood can cause irregular heart beat and increases your risk of having a heart attack. You could be admitted to hospital if your potassium level is high.

### How can I control my blood potassium levels?

You need to follow a low potassium diet in order to keep your blood potassium at a safe level. Your Dietitian will discuss your diet with you and tell you which foods you should avoid or cut down on.

Eating high potassium foods on dialysis is not recommended. It takes hours to digest your food, meaning that you may be finished your dialysis session before the potassium from your food has been released into your bloodstream.

If you eat a high potassium food on dialysis, this can cause your blood potassium levels to rise later on that day. This is dangerous as high potassium can affect your heart beat.

### Can anything else affect my blood potassium levels other than my diet?

**Yes.** Your medical team and Dietitian will also take into account other causes of a high potassium level other than your diet first, but most people on haemodialysis do need a potassium-restricted diet.

Other causes of high potassium levels could include: certain medications, bowel habits, blood transfusions, uncontrolled diabetes, how well you are dialysing and other blood results. This will be discussed with you if relevant.

## Cooking Tips to Help Lower Your Potassium Intake

Potatoes (including sweet potatoes and yam) and vegetables all contain potassium. You cannot avoid potassium altogether, but potatoes and vegetables helps to reduce the potassium content of these foods. Boiling allows the potassium to come out of the food and into the water. You then throw this water away.

1. Peel and cut potatoes into small pieces before cooking and boil in a large amount of water. Once cooked, throw the cooking water away. **Do not** use this water for making gravy, sauces or soups. You **do not** need to boil potatoes twice (double boiling), boiling once in a large amount of water is sufficient to lower the potassium content.
2. Microwave, pressure cookers, steamers or stir-frying should **not** be used for cooking potatoes and vegetables from raw, but can be used to reheat food that has already been boiled.
3. Partly boil potatoes for ten minutes before making chips or roast potatoes.
4. Only have potatoes at one meal a day. Rice, pasta, plain couscous and noodles are low in potassium and can be eaten instead.
5. Avoid potato products that have not been boiled, e.g.
  - X Ready meals containing potato (unless advised otherwise by your Dietitian)
  - X Chip shop chips/oven chips/frozen roast potatoes
  - X Oven chips or roast potatoes that have not been pre-boiled first
  - X Jacket (baked) potatoes
  - X Potato croquettes
  - X Potato waffles
  - X Hash browns
  - X Potato crisps
  - X Potato bread

## Fruit and Vegetables

**All** Fruit and vegetables contain potassium. It is important to eat fruit and vegetables as they provide a good source of vitamins, minerals and fibre to keep you healthy and to ensure you have regular bowel habits. We do not advise that you avoid eating fruit and vegetables just because they contain potassium as they are an important part of a healthy diet.

Certain fruit and vegetables contain more potassium than others. Some fruits should be avoided altogether as they are very high in potassium. **The tables on the next 2 pages give you the portion sizes for fruit and vegetables which are allowed. It also tells you what fruit and vegetables to avoid altogether.**

**Lower potassium fruit and vegetables are coded with a \* so these can be eaten in larger quantities.**

You should aim for \_\_\_\_\_ Portions of fruit and vegetables per day.

**X Star fruit should be avoided by people with kidney problems as it has been shown to cause neurological problems when eaten by people with a reduced kidney function.**

**X Avoid all Nuts and Seeds as these are high in both potassium and phosphate**

**Fruit Portions** - All fruit can be raw unless otherwise stated. If you eat tinned fruit, it is important to drain off the fruit juice as this is high in potassium. Tinned fruit is often lower in potassium.

**X Avoid X Bananas, sharon fruit, durian fruit, melon, papaya, avocado, figs, pure fruit juices, fruit smoothies, coconut, star fruit, guava, blackcurrants, redcurrants and dried fruit eg. Raisins/ sultanas/ figs/ dried dates and dried apricots, molasses.**

Fruits allowed	Portion size
Apples	1 medium or 3 tablespoons stewed apple
Apricots	1 medium fresh apricot (avoid dried apricot)
Blackberries*	20 berries
Blueberries*	2 handfuls – approximately 200g
Clementines/tangerines/mandarins/satsumas	2 fruits or ½ large tin
Cherries*	15 fresh or 1 large can of cherries
Cranberries*	20 Fresh berries stewed or 20 dried cranberries
Damson	1 fruit stewed
Fruit cocktail	1 small tin (drain off juice)
Grapefruit	½ fresh or ½ tin of grapefruit
Grapes*	15 grapes
Gooseberries	Stewed 140g or raw 75g (¾ cup size)
Kiwi	1 small
Kumquats	5 fruits
Lemons/Limes	No restriction
Lychees*	6 fresh fruits or 1 large tin (drain off juice)
Mango	½ small
Nectarine	1 medium
Orange	1 medium
Passion fruit	4 small passion fruits
Peaches	1 medium
Pears	1 small or tinned 4 pear halves
Pineapple	1 slice of fresh pineapple or 4 tinned rings
Plums	2
Pomegranate	1 fresh
Prunes	3 tinned prunes (discard juice) avoid dried prunes
Raspberries*	20 berries
Rhubarb	2 tablespoons of stewed or ½ tin rhubarb
Strawberries*	½ tin or 8 small strawberries

**Vegetable portions** – all vegetables should be boiled unless otherwise stated

**X Avoid X Vegetable juices, bamboo shoots, roasted vegetables, Karela (bitter melon/gourd), seaweed (fresh/dried), Dried mushrooms, tomato puree, sundried tomatoes**

<b>Vegetable/Salads allowed</b>	<b>Portion Size</b>
Asparagus	3 spears
Artichoke	1 boiled
Aubergine, fried	6 thin slices
Beetroot	4 slices pickled beetroot or 1 small boiled beetroot
Beansprouts*	Handful of raw or fried beansprouts
Broccoli	2 small spears
Brussel sprouts	5 small sprouts
Butternut squash	¼ squash boiled
Cabbage*	5 heaped tablespoons shredded
Carrots*	2 medium size carrots boiled or 1 medium carrot raw
Cauliflower*	10 small florets
Celeriac	2 tablespoons shredded
Celery	2 sticks
Coleslaw	2 heaped tablespoons
Courgette	1 small courgette boiled (Avoid fried courgettes)
Cucumber *	20 thin slices
Corn on the cob/sweetcorn	1 small cob or 3 heaped tablespoons tinned sweetcorn or 4 baby corn
Coleslaw	2 tbsp.
Curly Kale	3 tablespoons shredded
Gherkins*	4 pickled whole gherkins (may be salty if in brine)
Green beans/runner beans*	4 heaped tablespoons
Leeks	1 small stem boiled
Lettuce (all types)	Handful
Marrow *	6 heaped tablespoons boiled
Mushy peas	3 tablespoons tinned/frozen
Olives, fresh or in jar	Can be high in salt, so best to use as a garnish
Onions or Shallots	2 tablespoons fried
Okra	6 fingers fried, 8 fingers if par boiled first
Parsnips	1 tablespoon boiled
Peppers (capsicum)	½ raw/cooked pepper
Peas	2 heaped tablespoons or 4 heaped tablespoons petit pois
Pumpkin	3 tbsp. mashed (boiled first) 2 tablespoons roasted
Radish*	10 small radishes raw/cooked
Spinach	2 tablespoons boiled (avoid raw/steamed spinach)
Spring onion*	6 stems
Swede*	8 tablespoons
Turnip	2 tablespoons
Tomato	1 small tomato or 4 cherry tomatoes or 1/4 large tin of tomatoes
Mushrooms (fried) *	9 button mushrooms or 1 large Portobello mushroom
Waterchestnuts	½ small can
Watercress, fresh*	3 handfuls

## Phosphate

### What is phosphate?

Phosphate is a mineral that is found in your food. Your body needs phosphate to keep your bones strong and healthy. It is represented by the chemical symbol  $\text{PO}_4$ . When the kidneys are not working properly they are unable to get rid of the excess phosphate out of your body via your urine.

Dialysis removes only a small amount of phosphate, so you will need to follow a low phosphate diet, keep to phosphate food allowances and take your phosphate binders (if you are prescribed these).

### Where is phosphate found?

Phosphate is found in lots of protein foods e.g. meat, fish, cheese, offal, milk and eggs. You will be advised on what high phosphate foods to avoid or limit.

### What is the ideal level of phosphate to have in the blood?

The ideal range of phosphate is between \_\_\_\_\_ and \_\_\_\_\_ mmol/L. Too much phosphate in the blood is called **hyperphosphataemia**.

### What are the symptoms of a high phosphate?

Some people may experience some or all of these:

- Itchy skin
- Bone/joint pain
- Red eyes

Often, a high phosphate level causes no symptoms at all and the only way of checking is by looking at your monthly blood phosphate levels. Your Doctor, Nurse or Dietitian can inform you of your phosphate levels.

### What happens if I have a high phosphate over time?

- **Weakened bones** - A high phosphate level causes the bones to lose calcium. This makes the bones weak and brittle and increases the risk of bone breakages.
- **Hardening of blood vessels** - This calcium released from the bones can then build up in the blood vessels. This causes hardening (calcification) of blood vessels which can lead to **heart disease, circulation problems, fistula problems, and an increased risk of strokes or heart attacks**.
- **Hardened blood vessels may not be suitable for kidney transplant operations so it is very important to keep your phosphate levels controlled.**

### Phosphate allowances:

Dairy foods (milk, cheese, eggs) are a good source of protein which is important in order to keep you healthy on dialysis. Some dairy foods are high in phosphate, so must only be eaten in the quantities advised below.

**Milk:** ½ pint (280ml) of milk per day of full fat, semi skimmed or skimmed milk

**Or**

¾ pint (430ml) of soya or rice milk can be taken as this is lower in potassium and phosphate

**Eggs:** \_\_\_\_\_ per week

**Hard Cheese:** (e.g. Edam, Cheddar, Gouda, Emmental) \_\_\_\_\_ oz / \_\_\_\_\_ (g) per week

Soft cheeses are lower in phosphate compared to the hard cheeses, so you may want to choose these instead.

**Soft Cheese:** (e.g. Cottage cheese, cream cheese, goats cheese, feta) \_\_\_\_\_ oz/ \_\_\_\_\_ (g) per week

\_\_\_\_\_ **items from the following list per week:**

1 small pot of yoghurt/fromage frais

1 small bowl of custard

1 small bowl of rice pudding

2 scoops of plain ice cream

**The below items are very high in phosphate and ideally should be avoided.**

Offal (e.g. Liver, kidney, sweetbreads, heart)

Sardines

Mackerel

Pilchards

Lobster

Crab

Alternatively, if you really like these foods, limit to a maximum of once a month.

It is very important that you take your phosphate binders with these foods. Phosphate binders are discussed on the next page.

### **Phosphate Food Additives**

Phosphate can also be found in processed foods in the form of phosphate containing additives which are easily absorbed by the body. Cooking your meals from scratch and reducing your intake of processed foods can help to control your phosphate level over the long term and improve your overall health and well-being.

Foods that can commonly contain these additives include: processed meats, (such as hams, burgers, sausages), battered or breaded chicken and fish, dark coloured fizzy drinks, sterilised and UHT milks, cake mixes and packet sauces, noodles and pastas.

By checking the ingredient lists on your food labels you will be able to identify if these contain phosphate additives and if you need to consider swapping your food brand for one which doesn't use a phosphate additive. See the handy **“Looking out for “PHOS”** information in the table opposite for which additives to look out for.

### Look out for PHOS

E338 Phosphoric acid  
E339 Sodium phosphates  
E340 Potassium phosphates  
E341 Calcium phosphates  
E343 Magnesium phosphates  
E450 Diphosphates  
E451 Triphosphates  
E452 Polyphosphates

## Phosphate binders

### What are phosphate binders?

These are tablets that help lower phosphate levels. They bind with the phosphate in food when it is in your stomach. This prevents the phosphate from entering your blood stream, which helps to keep your blood phosphate levels within the normal range.

Phosphate binders only work if taken with foods containing phosphate. Phosphate binders **should** be taken with meals or snacks which include meat, fish, eggs, cheese, milk or pulses. Phosphate binders **do not** need to be taken with meals or snacks that do not contain protein, such as toast, jam or salad sandwiches, biscuits or fruit.

You should still aim to take the total number prescribed each day. Your Doctor or Dietitian can discuss how best to take your binders with you.

The table below shows some of the commonly used phosphate binders here at Aintree. You may be prescribed a binder which is not on the list below.

Brand Name	Drug name	When to take	How to take
Calcichew or Adcal	Calcium Carbonate	Immediately <b>before</b> a meal	Chew tablets thoroughly
Phosex	Calcium Acetate	Immediately <b>before</b> a meal	Swallow tablets whole
Renacet	Calcium Acetate	Immediately during or after a meal	Swallow tablets whole
Renagel	Sevelamer Hydrochloride	Immediately <b>before</b> or during a meal	Swallow tablets whole
Velphoro	Sucroferric Oxyhydroxide	Taken with meals	Chew Tablet thoroughly
Fosrenol	Lanthanum carbonate	<b>During</b> or immediately <b>after</b> a meal	Chew tablets thoroughly
Alucaps	Aluminium hydroxide	Immediately <b>before</b> a meal	Swallow tablets whole



## Important points

- Remember to keep a supply of phosphate binders with you when eating away from home e.g. on dialysis unit when eating. A pill box is useful for carrying your binders. Your Dietitian may be able to supply you with one.
- Always take the dose you have been prescribed.
- Phosphate binders should always be taken with food unless advised otherwise by a Doctor.
- If you are on iron tablets, take these two hours apart from your phosphate binders as these can reduce the effectiveness of your iron tablets.
- If you are on Levothyroxine you should take this at least 4 hours before the binder Velphoro. Your Doctor or pharmacist will be able to provide more guidance if needed.
- If you are having difficulty taking your binders, please ask your Doctor, Dietitian, Pharmacist or nurse for an alternative. You may be able to use a tablet crusher if you have problems chewing or swallowing the binders. Please ask your Doctor, Dietitian or Pharmacist about this.

## Fluid and Salt

If you are on haemodialysis, you may find that you pass less urine, causing a fluid build-up in the body. This is called fluid overload or oedema.

Dialysis removes some excess fluid in the body, but in-between dialysis sessions, fluid can build-up in the body again. This extra fluid cannot always fully be removed during one dialysis session. Too much fluid removal on dialysis can cause drops in blood pressure and painful leg cramps.

### Problems associated with fluid overload include:

- Swelling of ankles, feet, face (oedema)
- Shortness of breath/difficulty breathing
- High blood pressure
- Extra strain on the heart
- Collections of fluid around the lungs, which can cause chest infections/pneumonia

If you have diabetes then good diabetes control is important. If your blood sugars run too high this can make you thirstier and harder to keep to your fluid allowance.

A high salt intake can also cause thirst and make it difficult to restrict your fluid intake. Salt also leads to water retention in the body.

## How much fluid can I have in a day?

This depends on your urine output which may change over time. Everyone is different. Some people still have some kidney function left and pass good amounts of urine, so can drink more.

You may not pass any urine at all or pass only a very small amount. In this case you would need to be careful about how much you drink.

For haemodialysis patients, you can drink **500mls plus equivalent of previous days urine output.**

Occasionally you may find it useful to measure your urine output over a 24 hour period. This is called a 24 hour urine collection. This will give you an idea as to how much you can drink. Ask your Doctor or Dialysis nursing staff if you would like to do this.

Example: Someone who passes 300ml of urine a day can drink 500ml + 300ml = total 800ml fluid a day. If you are unsure of your fluid allowance, please ask your Doctor, Nurse or Dietitian.

## What is my target or dry weight?

Your target weight is your estimated 'dry' weight. This is the weight you are without holding any excess fluid. The Doctor usually assesses your target weight. As a means of monitoring the amount of fluid in your body you will be weighed before every dialysis session.

If you are more than 2kg over your target or 'dry' weight then you may have had too much to drink and may have to reduce your fluid intake.

Your target weight may be adjusted over time by the Doctors e.g. if you are on a diet or have an illness your target weight will go down, or if you eat more than your body needs your target weight will go up as you gain 'flesh' weight.

## What counts towards fluid?

- All drinks throughout the day, including the fluid to take your tablets.
- Milk from your daily allowance should also be counted.
- Some foods e.g. milky puddings, jelly, porridge, ice lollies, ice cream, gravy and soup all contribute towards your fluid intake.

Handy Hospital Measures	Handy Home Measures
Glass = 120ml	Average cup = 200ml Average mug = 300mls
Soup bowl = 120ml	Average soup portion = 200mls
Milk	Pint = 568ml ½ pint = 285ml
Plastic feeding cup = 200ml	One ice cube 20mls
Plastic tea cup = 150ml	Can of fizzy drink 330mls
Plastic coffee cup = 170ml	One tablespoon = 15mls One dessertspoon = 10mls One teaspoon = 5mls
Plastic cup (vending machine type) = 150mls	Milk on cereal = 100mls Average milky pudding = 100mls

## Tips to help you keep to a fluid restriction

- ✓ Spread your fluid allowance throughout the day
- ✓ To help quench your thirst without having a drink suck ice cubes, boiled sweets, slice of lemon/lime or use chewing gum
- ✓ Use smaller glasses and cups for your drinks
- ✓ Drink only when you are thirsty and not to be sociable
- ✓ Sip drinks rather than gulp
- ✓ Brush your teeth regularly and use mouthwash to freshen your mouth
- ✓ Try freezing grapes or segments of Satsuma, tangerines, pineapple etc.
- X Avoid salty foods that may make you thirsty e.g. bacon, crisps and processed foods.
- X Try not to drink at meal times, save it for in-between your meals

**Remember - alcohol or spicy food can make you thirstier.**

## Salt

**Too much salt in your diet can cause:**

- Thirst
- High blood pressure
- A build-up of fluid in your body.

**Try to eat less salt by:**

- ✓ Try adding other flavourings like pepper, garlic, lemon, ginger, chilli, herbs and spices to food rather than salt.
- ✓ Choose fresh cuts of meat from the deli counter rather than processed meats
- ✓ Look for foods tinned in oil or fresh spring water instead of brine, e.g. tuna.
- ✓ Have fresh or frozen vegetables rather than those tinned in brine.
- ✓ Cottage cheese tends to be lower in salt.
- ✓ Use a pinch of salt in cooking but try not to add any at the table. To start with food may taste bland; however, it does not take long for your taste buds to lose the taste for salt.
- ✓ Choosing “low salt” or “reduced salt” foods can help. Try and look at food labels to find out which products contain less salt. (See below)

## Food Labels Explained

A lot of salt: 1.5g salt per 100g of product or more (or 0.6g sodium per 100g)

A little salt: 0.3g salt per 100g of product or less (or 0.1g sodium per 100g)

- X Avoid too many convenience foods such as dried packet or tinned soups, frozen ready meals, dehydrated meals, e.g. pasta, noodle or rice packet meals, and manufactured products, e.g. meat pies, spam, corned beef, beef burgers

- X Meat, poultry and fish that are tinned, smoked, cured, pickled or salted, such as bacon, sausages, ham, meat or fish pastes and pates, corned beef and luncheon meat, have a high salt content.
- X Limit salty snacks such as crisps, salted nuts and salted crackers. And use sauces sparingly, e.g. soy sauce, tomato sauce, brown sauce and mayonnaise.
- X Remember foods tinned in brine means they are tinned in salt water.
- X Try not to eat too much cheese.
- X Salt substitutes such as Ruthmol, Selora, Losalt, Pansalt and Biosalt are **not suitable** as they are high in potassium. Check food labels to ensure that foods do not contain these salt substitutes.

**Aintree Renal Dietitians have a Reduced Salt Renal Diet Sheet if you want more information on how to reduce your salt intake. Please ask your Renal Dietitian for one.**

### **Foods to avoid and suitable alternatives**

Please note if you have diabetes then not all of the foods in these groups will be suitable for you. Sugar free, diet or reduced sugar varieties are available for many of the foods and drinks outlined.

<b>Food Group</b>	<b>Avoid X</b>	<b>Suitable alternatives ✓</b>
<b>Cereals</b>  If you have diabetes, avoid sugary cereals	Ready Brek All Bran, Wheat bran, Branflakes, Sultana Bran Muesli, Raisin Split Cereals containing chocolate, cocoa, coconut, dried fruit or nuts. Cereal bars containing dried fruit/nuts/bran e.g. Alpen bars, cocopop bars, granola bars.	Porridge oats Weetabix, Shredded Wheat, Shreddies Cornflakes, Special K, Rice Krispies, Ricicles, Frosties, Cereal bars without nuts/dried fruit e.g. Special K, Rice Crispie Squares, Nutrigrain, Yoghurt Breaks
<b>Breads</b>	Scones Pain au chocolate Bread containing a lot of seeds and nuts Potato bread Malt loaf	Limit Naan bread to ½ Naan a day Pancakes, croissants, crumpets pitta bread, rye bread, bagels, wheaten/soda bread, chapattis, tortilla wraps, white/brown/wholemeal/ granary bread, breadsticks, melba toast
<b>Cakes and puddings</b>	Malt bread, banana loaf, banoffee, chocolate cake and biscuits, fruit cake (eg. Tea loaf, mince pies), date and walnut loaf, coconut cake, Eccles cake, fruit scones, egg custard, Chelsea buns, Bakewell tart,	Plain/jam sponge, Madeira, cherry cake, cream horn, doughnut, apple slice, Danish pastry, lemon meringue pie, meringue, plain biscuits, shortbread.  Some chocolate coated biscuits are lower in potassium and phosphate,

Food Group	Avoid X	Suitable alternatives ✓
	cakes made with large amounts of baking powder, e.g. scones, rock buns. Angel Delight Bread and butter pudding Oatcakes Marzipan	but must only be <b>eaten in small quantities</b> . E.g. Jaffa cakes, bourbons once or twice a week.
<b>Other savoury foods</b>	Poppadoms Tinned pasta in tomato sauce e.g. Ravoli, Spaghetti hoops Pot noodle Potato crisps, Vegetable crisps, Twiglets, Oatcakes Nuts and seeds Vegetable pakora Biscuits containing nuts and/or chocolate Bombay Mix Twiglets Nut roast	Yorkshire puddings, Dumplings Pastry Sago, tapioca, semolina, flours, Taco shells Pasta Rice Plain couscous (no dried fruit) Plain fresh/dried noodles Unsalted rice cakes e.g. Snack a Jacks Corn crisps (eg. Wotsits, Monster Munch, Doritos, Wheat Crunchies, Plain popcorn, Pretzels (unsalted), water biscuits, unsalted crackers, melba toast Limit Ryvita to 2 slices a day. <b>(some of these foods are high in salt so limit these)</b>
<b>Dairy</b>	<b>Cheeses:</b> Processed cheeses, e.g. Primula, Dairy Lea, cheese strings, cheese slices <b>Milks:</b> Evaporated, condensed milk and dried milk powder. <b>See phosphate allowances for more information</b>	<b>Spreads:</b> Butter, margarine <b>Creams:</b> double cream, single cream, whipping cream, clotted cream, crème fraîche <b>See phosphate allowances for details of amounts of dairy foods you can eat.</b>
<b>Meat and meat products</b>	Pigeon, Game, e.g. goose, pheasant Veal White and black pudding Shish and Doner kebab meat Offal (liver, heart, sweetbreads, tripe, haggis) are high in phosphate. If you eat these, limit to one item a month. <b>See phosphate food allowances for more information</b>	Lamb, beef, pork, chicken, turkey, duck, venison. Limit ham to once or twice a week. Try to use less processed meats and choose off deli counter. Processed meats are salty and can also be high in phosphate (some preservatives contain phosphate). Some also contain potassium in the form of salt replacers, eg. Potassium chloride. It is best to use fresh meat off the bone or deli meat if possible.

Food Group	Avoid X	Suitable alternatives ✓
		Limit processed meats eg. Luncheon meat, corned beef, tongue, spam, sausage rolls to 1-2 of these items a week.
<b>Meat alternatives</b>	No restriction.	Quorn/Soya mince, Tofu, veggie burgers
<b>Fish</b>	<p><b>Avoid:</b> Anchovies, whitebait, Smoked 'yellow' fish and fish tinned fish in brine. Paté, fish paste Fishcakes Fish roe and taramasalata</p> <p><b>High phosphate fish – limit to once a month only</b> kippers, hoki, pilchards (sardines), crab, mackerel, herring</p> <p><b>See phosphate food allowances for more information</b></p>	<p><b>Lower phosphate fish include:</b> Cod, haddock, plaice, skate shrimps, crabsticks, whiting, squid/calamari Mussels and cockles are salty, so limit to once a month only.</p> <p><b>Medium phosphate fish (limit to 1-2 of the below items a week)</b> Sole, tuna, trout, squid, fish fingers Jellied eel, halibut, salmon (fresh/tinned) Turbot</p> <p><b>See phosphate food allowances for more information</b></p>
<b>Beans and lentils (eg. Chickpeas, baked beans, red lentils, refried beans)</b>	Beans, lentils, pulses are all high in potassium. They can be eaten at a meal <b>only if you are not eating meat or fish at that meal</b> . E.g. If you are vegetarian beans and lentils are a good source of protein and can be eaten as part of your main meal.	They can be eaten at a meal <b>only if you are not eating meat or fish at that meal</b> .

Food Group	Avoid X	Suitable alternatives ✓
<b>Drinks</b>  <b>Choose reduced sugar/diet drinks if you have diabetes or watching your weight. Remember your fluid allowance</b>	Cocoa Malted drinks, e.g. Horlicks, Ovaltine and Bournvita Drinking chocolate, Milkshakes, Lassi, Complan, Build-Up drinks Fresh fruit juices (except for cranberry juice), Hi Juice cordial, tomato/other vegetable juices Soya/black bean drinks	One cup of coffee per day Camp coffee (low in potassium, but high in sugar, so avoid if you have diabetes) 1 small glass of cola a day (higher in phosphate than other fizzy drinks) All types of tea (including fruit, peppermint and herbal teas) Cordial and squash Fizzy drinks soda, tonic, mineral water. Limit Ribena to 1-2 glasses or 1 small carton a day Limit cranberry juice to 1 small 150ml glass a day (count as 1 portion of fruit and veg)
<b>Alcohol</b>  <b>(Remember Some medicines do not mix with alcohol. Ask your doctor or pharmacist if you are not sure.</b>  <b>Do not drink alcohol if your Doctor has advised you not to.)</b>	Red wine, beer, bitter, lager, cider, port, stout.  <b>Government guidelines on alcohol recommend:</b>  Men: 3-4 units/day maximum 21 units per week with 2-3 alcohol free days a week, Women: 2-3 units/day maximum 14 units per week with 2-3 alcohol free days a week.  You can find more information on <a href="http://www.drinkaware.co.uk">http: www.drinkaware.co.uk</a>	Spirits, sherry, sparkling wine, e.g. Champagne, Cava, Lambrusco  Spirits tend to be lower in potassium. Wines, sherry and ale do still contain potassium, so only have these in very small amounts. Your Dietitian can discuss this with you.  <b>Remember your fluid allowance and alcohol guidelines.</b>  <b>Follow your doctor's advice on alcohol as some medications can interact with alcohol.</b>
<b>Confectionary</b>  <b>(if you have diabetes, avoid these foods)</b>	Chocolate, toffee, black treacle, liquorice, fudge Marzipan, creamed coconut. Nut brittle. Asian sweets containing condensed milk.	Jam, honey, golden/maple syrup, marmalade, lemon curd, sweets, e.g. boiled sweets, mints, marshmallows, chewing gum, Turkish Delight, fruit pastilles, jellies, wine gums. cough sweets
<b>Sauces and miscellaneous</b>	Salt substitutes, e.g. Losalt, Selora Bovril, Marmite, Oxo Pot Noodles Gravy mixes Packet soups Potash Coconut milk Satay sauce	Bottled sauces, e.g. tomato ketchup, BBQ sauce – use sparingly Garlic Mayonnaise, salad cream – use sparingly Bisto Gravy Browning, Gravy powders – choose reduced salt varieties if possible

Food Group	Avoid X	Suitable alternatives ✓
	<p>Soy sauce/fish sauce – high in salt, avoid/limit if possible</p> <p><b>Many processed foods can contain potassium chloride (KCl), read labels to check if this is the case and avoid. Your dietitian can help you with this.</b></p>	<p>Herbs, vinegar, spices, pepper (as long as they do not contain salt)</p> <p>Mustard, horseradish, chilli sauce, curry powder, mint sauce, apple sauce, cranberry sauce</p> <p>Homemade white sauce/parsley sauce, tomato sauce made from tinned tomatoes (1/4 tin is 1 portion of your fruit and vegetable allowance)</p>
<b>Spreads and Dips</b>	<p>Nutella/chocolate spreads</p> <p>Peanut butter</p> <p>Guacamole</p> <p>Paté</p> <p>Tahini paste</p> <p>Taramasalata</p> <p>Hummus</p> <p>Yeast extract (Marmite, Vegemite)</p> <p>Tomato puree</p> <p>Hummus</p>	<p><b>Limit below to 2-3 tablespoons:</b></p> <p>Tomato salsa</p> <p>Sour cream</p> <p>Crème Fraiche</p> <p>Mango chutney/other chutneys</p> <p>Lime pickle/other Indian pickles</p> <p>Tzatziki</p>

## Additional Information

**We have a number of diet sheets available which may be relevant to you. These include:**

- Renal Recipes
- Recipes for the Festive season
- Guide to eating well with a small appetite for those with kidney problems
- Meal Delivery Booklets (Oakhouse and Wiltshire Farm Foods) and list of suitable foods from these booklets
- Renal ready meal information from 'Cuisine for Me'
- Cantonese Dialysis Diet sheets
- Renal Nutrition Group Dietsheets: Low potassium diet sheets – South Asian, Chinese, African and Caribbean foods and some translations available
- Renal inpatient renal menu information
- Weight management resources for those wanting to lose weight

**Please ask your Dietitian if you would like any of the diet sheets above.**

## Useful websites:



## Kidney Patient Guide Dietary Information

<http://www.kidneypatientguide.org.uk/site/diet.php>

## Kidney Kitchen

<https://www.kidneycareuk.org/about-kidney-health/living-kidney-disease/kidney-kitchen/welcome-kidney-kitchen/>

## Edinburgh Renal Unit Haemodialysis Dietary Information

<http://renux.dmed.ed.ac.uk/EdREN/EdRENINFObits/dietHD.html>

## Lawrence Keogh's rediscovering foods and flavours site:

<http://www.kidneywellbeing.co.uk/>

## Information on alcohol and unit measurements:

[www.drinkaware.co.uk](http://www.drinkaware.co.uk)

## Useful Books:

Kidney Failure: the facts by Stewart Cameron, Oxford University Press. ISBN 0-19-262643-4.

Eating well with Kidney Failure: A Practical Guide and Cookbook Helena Jackson 2006. ISBN 101859591167 or ISBN 139781859591161

Eat Right to Feel Right on Hemodialysis NIDDK (USA)

Lawrence Keogh's Rediscovering Food and Flavours Recipe Book – ask your Dietitian for this.

**This diet sheet has been produced by Aintree Renal Dietitians and is based on information from the Renal Nutrition Group of the British Dietetic Association and Dietary Analysis Programmes.**

## Contact details:

Dietitian name \_\_\_\_\_

Telephone number 0151 529 3473



## If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on audio tape or disk and in other languages on request. Please contact:

**Tel No: 0151 529 2906**

**Email: [interpretationandtranslation@aintree.nhs.uk](mailto:interpretationandtranslation@aintree.nhs.uk)**