

A Guide to a Low potassium diet Incorporating Chinese and Far Eastern Foods

Approved by

BDA The Association
of UK Dietitians



Renal Nutrition

Specialist Group



Introduction

This diet sheet has been developed by the Renal Nutrition Group, of the British Dietetic Association. The Renal Nutrition Group (RNG) is the leading source of expertise for renal nutrition advice in the UK and is made up from specialist expert renal dietitians.

What is potassium?

Potassium is a mineral that is found naturally in many foods. Some potassium is needed as part of a healthy diet. It is required to ensure healthy working muscles, including the heart.

**Your potassium level should be 3.5 – 5.5mmol/l
(3.5 – 6.0mmol/l if on haemodialysis)**

Why do I need to control the amount of potassium in my blood?

Too much potassium in your blood can be dangerous as it affects the rhythm of your heart and can cause your heart to stop beating if levels are very high.

Why is the level of potassium in my blood too high?

The level of potassium in your blood is controlled by the kidneys. When your kidneys are not working properly, the potassium level in your blood may rise. It is quite common for people with kidney problems to have too much potassium in their blood.

Can I tell if my potassium is high?

There are usually no symptoms to indicate if your potassium is high and the most reliable way to tell is by having a blood test.

What should I do to control my blood potassium levels?

You can control your blood potassium levels by:

- Following a low potassium diet
- Ensuring regular bowel habit as some potassium is removed this way
- If you have diabetes, ensure good blood sugar control
- If you are on dialysis, keeping to your scheduled sessions and times

How do I follow a low potassium diet?

This booklet provides information on foods high in potassium, and those that need to be limited. It offers lower potassium alternatives to keep your blood potassium levels within range. Your dietitian will advise you on the changes that you need to make.

Will the low potassium diet include healthy eating advice?

This resource only focuses on a low potassium diet. We aim to include low potassium foods that are suitable swaps for foods commonly eaten, e.g. doughnut can replace fruit cake. For this reason, some of the foods in the low potassium section may be high in sugar, salt or fat. Please take into consideration any other diet that you may be following when making choices from the suitable/ low potassium columns. If there are any questions, please discuss with your renal dietitian.

Carbohydrate

(Starchy foods)

Carbohydrate, also known as starchy food, it provides energy, vitamins and fibre. You should try to include something starchy at each meal to provide you with energy.

Examples of carbohydrates include:

- Potato, sweet potato, cassava and yam
- Rice, noodles, pasta and other grains
- Breakfast cereals
- Breads, bao

Starchy Root Vegetables

Some starchy root vegetables like potato, sweet potato, cassava and yam are particularly high in potassium and need to be limited in the diet. Choose up to one boiled serving per day, see table below. Other starchy foods based on wheat or rice are low in potassium and are good alternatives. If you do not usually eat high potassium starchy root vegetables, you may be able to have more potassium foods elsewhere in your diet.

Choose up to one boiled 150g serving per day	Limit
Cassava	Baked/ fried/ roasted/ steamed/ pressure cooked taro, potato and sweet potato
Potatoes	Frozen/oven/microwave/shop-bought chips
Radish, white	Instant mashed potato varieties
Radish, red	Manufactured potato products: hash browns, potato waffles, potato wedges, potato croquettes, potato fritters
Sweet potato	
Taro	Steamed starchy vegetables
Yam	

Cooking instructions for starchy root vegetable

- The starchy root vegetables in the table on page 3 should be **boiled** in water to lower their potassium content. Discard the water after boiling and **do not use** for stock, soups and sauces.
- The skins on potatoes provide a good source of fibre and B vitamins. However, if your potassium levels are often high, peel your potatoes and cut into small pieces before boiling, this helps to remove more potassium.
- Baking, frying, roasting and steaming starchy root vegetables and grains does not reduce potassium. Pre-boiling helps to remove some potassium before cooking in this way.
- Microwaving is only suitable for reheating starchy root vegetables that have previously been boiled.

Rice, noodles, pasta and other grains

Noodles, rice, glutinous rice, sago, pasta and some other boiled grains such as pearl barley are low in potassium and can be eaten freely.



Breakfast cereals

- Cereals made from wheat, oats, rice and corn are lower in potassium and may be eaten regularly.
- Cereals containing bran, dried fruits, nuts and chocolate are higher in potassium and should be limited.
- Milk and yoghurt added to cereals should be counted within your dairy allowance (see dairy section).
- If you have diabetes, choose lower sugar breakfast cereals.

Breads

- Bread, rolls, pittas and crackers without nuts and seeds may be eaten regularly.
- Breads and crackers containing nuts, seeds, coconut, dried fruits and chocolate are higher in potassium and should be limited.

Fruit and Vegetables



Fruit and vegetables are a good source of vitamins, minerals and fibre and form a large part of a healthy balanced diet. The potassium content of all fruits and vegetables varies and these are listed in the table below as low, medium, high and very high.

- Aim for a total number of 4-5 portions of fruits and vegetables daily or as advised by your dietitian.
- Choose most of your fruits and vegetables from the low or medium columns. If choosing from the high column, you may need to reduce the number of fruit and vegetable portions you have that day.
- Fruit and vegetables listed as being very high in potassium content should be avoided.
- All vegetables should be boiled, rather than steamed or microwaved. Boiling allows some of the potassium to come out into the water which should be thrown away and not used for gravy or stock. Choose low potassium vegetables when stir-frying.
- Canned fruit & vegetables should be drained before cooking or eating.

Fruit and Vegetables

Vegetables and Salad

A portion of vegetables is 80g and boiled unless otherwise stated in the table below. If one portion of vegetables is not taken, then you can swap for a portion of fruit or a handful of salad.

Low	Medium	High	Very High
Beansprouts or Taugeh 3 tbsp	Aubergine (fried/baked) 1/4	Asparagus (fried) 3 spears	Avocado
Cabbage (boiled) 2 tbsp	Bamboo shoots (canned) 1/4 small tin	Brussel sprouts	Celeriac (raw)
Carrots (canned/drained) 4 small	Broad beans 3 tbsp	Courgette (raw) 1 small	Chard
Cauliflower 3 florets	Broccoli 2 medium florets	Curly kale (raw)	Choi sum (raw)
Cucumber (raw)	Cabbage (raw) 2 tbsp	Green/French beans 3 tbsp	Edamame beans (frozen/ prepared)
Gherkins 2 medium	Carrots 1 medium	Kerala/bitter gourd	Kantola
Green/French beans (canned) 3 tbsp	Celery (raw) 1 stick	Leek (raw) 1/2 stalk	Lohbak/Chinese radish
Lettuce (raw) handful	Courgette	Mushrooms (raw/fried) 6 medium	Mushroom (dried)
Marrow	Curly kale	Parsnip 2 tbsp	Okra (stir fried)
Mixed vegetables (frozen)	Gourd	Spinach (not baby)	Karela (fried)
Mushroom (canned)	Mangetout (raw/fried) 2 tbsp		Kailan (raw)
Okra (canned)	Peas 2 tbsp		Pak choi (raw)
Pumpkin 2 tbsp	Pepper (raw) 1/2		Spinach, baby variety (raw/boiled)
Radishes (raw) 3	Spring greens 2 tbsp		Tomato puree
Rocket (raw) medium handful	Sweetcorn (canned/ fresh/frozen) 3 tbsp		
Runner beans	Tomatoes 1/4 of a 400g can		
Shallots (raw)	Tomato (raw) 1 medium		
Spring onions (raw) 3	Turnip		
Sugar-snap peas 2 tbsp	Water chestnuts (raw) 5		
Tung Kuah /water gourd/ winter melon			
Tung Choi/Morning Glory			
Watercress (raw) 40g			
Water chestnuts (canned)			

tbsp = tablespoon

If you are using tomatoes in cooking, it is recommended that you use canned whole plum tomatoes and drain off the juice before adding to your cooking, and avoid tomato puree.

Fruit and Vegetables



Fruit

A portion is based on 80g unless stated otherwise in the table below. If one portion of fruit is not taken, then you can swap for a portion of vegetables or a handful of salad. Canned fruit should be drained before eating. As a general rule, **dried fruit, fruit or vegetable juices and smoothies** should be **avoided** as they are concentrated sources of potassium.

- Starfruit or carambola can be toxic for patients with kidney disease, please avoid.
- Grapefruit can interfere with some medications, please check with your doctor or pharmacist.

Fruit and Vegetables

Low

Apple 1 small

Blueberries

Chinese pear (yellow) 1 medium

Clementine 1

Duku

Durian

Fig 1

Fruit cocktail 1/3 of 415g can

Lemon/Lime 1 fruit

Longans (canned) 6 fruits

Lychees (canned) 6 fruits

Mandarins 1/2 of 298g can

Mangosteen/Manggis

Passion fruit 2

Peach 1 small

Peach 1/3 of 420g can

Pear (canned/ stewed) 2 halves

Pineapple (canned) 2 rings/12 chunks

Plums (canned) 4 halves

Pomelo 1/4 fruit

Rambutan

Satsuma 1

Tangerine 1

Watermelon 1/2 slice

Medium

Blackberries 16

Cherries 20

Ciku/Sapodilla 1 fruit

Grapefruit 1/2

Grapes 16

Guava 1 small

Hog plum/Kedondong

Kiwi 1

Kumquat 10

Langsat 5

Loquats 6

Lychees 5

Mango 2 slices

Melon 1/2 slice

Papaya 1/2 slice

Pear 1 small

Pineapple 1 slice

Raspberries 16

Strawberries 7

Tamarind, sweet

High

Apricots 2

Custard apple/Soursop ½ medium

Jackfruit/Cempedak

Jackfruit/Nangka

Nectarine 1 medium

Orange 1 medium

Persimmon/Sharon fruit 1

Plums 2 small

Pomegranate 1/2

Prickly pear/Dragon fruit 1 medium

Very High

Banana

Coconut

Dates

Goji berries

Grenadilla/Delima

Prunes

tbsp = tablespoon

Protein

Protein is necessary for growth and repair and the building and maintaining of muscle. Your dietitian will suggest the amount of protein you require daily.

General advice on protein foods:

- Choose lean meat, chicken, fish or eggs.
- Cured, smoked, salted, tinned and processed meats, chicken and fish are high in salt. These foods should be kept to a minimum.
- A portion of beans, pulses, lentils such as baked beans, soya sources or soybean sources such as tofu and tempeh can replace a portion of meat, chicken, fish or eggs.
- Canned and drained pulses, beans and lentils tend to be lower in potassium than dried and boiled varieties.
- Nuts and seeds are high in potassium and may need to be restricted. If you need to use a small amount in cooking, please discuss with your dietitian.

Soups



Soups form a common part of meals in Chinese and Far Eastern diets. They are not generally encouraged in many patients with kidney disease due to their high salt and potassium content, and their inclusion can displace more nutritious foods in the diet.

- If you are on a fluid restriction, they would also count towards your daily fluid allowance.
- If your potassium levels are well controlled and fluid is not a concern, they can be included in your diet with careful planning.
- Packet and tinned soups are high in salt and potassium content; therefore you are encouraged to make your own. This way, you can control the amount of salt used and also choose lower potassium ingredients and cooking methods to reduce the amount of potassium in the soup.
- Make a meat or chicken stock or use a ready-made low salt stock e.g. Kallo, or Boots baby stock cubes instead of LoSalt. Rice, barley or mini pasta shapes to give it texture and cornflour can be used to thicken.
- Choose lower potassium vegetables (see page 6), boil them and drain before adding to the stock. Flavour your soup with herbs and spices rather than salt.

In addition to the soups made from meat and vegetables served at mealtimes, the Chinese and the Far Eastern diet also include traditional herbal medicinal soups. These soups are made from a combination of dried plants, roots, vegetables and herbs, simmered over long periods of time. Due to the nature of the raw ingredients and the cooking method, they can be very high in potassium. Additionally, there are concerns regarding the safety of their use in chronic kidney disease and any possible interactions with your current medications. Therefore, the use of medicinal soups and alternative or Ayurvedic medicine are not recommended.

Dairy Products and Dairy Alternatives



Milk and dairy products play an important role within our diet as they contain protein and essential nutrients such as calcium, that is needed for healthy bones. Dairy alternatives such as plant and grained based milks are a lower source of protein.

- Milk is high in potassium and therefore should be limited.
- A recommended allowance of up to 300ml ($\frac{1}{2}$ pint) milk can be taken daily: this includes cow's, sheep's and goat's milk.
- Milk in cereals, milky puddings, yoghurts, yoghurt drinks, kefir, buttermilk, milk-based probiotics and milk-based sauces should be counted within this allowance.
- Most rice and oat milks are low in potassium.
- Milk made from nuts containing less than 10% nut, for example almond milk, is low in potassium.
- Unsweetened soy milk contains approximately half the amount of potassium compared to dairy milk.
- Milkshakes, dried milk powder, evaporated milk, condensed milk, coconut milk and creamed coconut are all high in potassium and therefore should be restricted.
- All types of cream and cheese may be eaten as usual on a low potassium diet.

Snacks



Some snacks can be high in energy (calories), sugar, fat and salt such as confectionary, cakes and crisps. Therefore they should make up only a small part of your overall diet. However, if you have a poor appetite or are losing body weight, high calorie snacks can be helpful in maintaining or improving your weight. Your dietitian will be able to guide you in making the best snack choices.

Savoury snacks

- Potato and vegetable crisps are naturally high in potassium and should be avoided.
- Crisps/snacks made with lentil/soya/quinoa flour are also high in potassium.
- Crisps/snacks made from corn, wheat or rice tend to be lower in potassium.
- Some potato and non-potato crisp varieties have **potassium chloride** added as a salt substitute. If potassium chloride appears on the ingredients list, please avoid.

Low

Breadsticks 3
Cream crackers 2
Prawn/Fish crackers
Pork scratching 24g
Popcorn ½ bowl
Tortilla chips 1 small packet

Medium

Cheese flavoured snacks 33g
Corn snacks 27g

High

Banana crisps
Cassava crisps
Fried peas
Nuts and seeds
Potato crisps

Sweets snacks

Healthy eating advice includes reducing your sugar consumption and choosing low sugar or sugar free varieties where possible. Snacks containing nuts, chocolate, evaporated or condensed milk, dried fruit, dried milk powder, coconut and coconut milk are high in potassium and should be avoided. Please choose lower potassium alternatives. If you have diabetes, it is recommended that you limit your intake of sugar.

In accordance with your dietary intake, your dietitian will guide you as to which snacks that are safe for you to consume.

Biscuits - Low

Biscuits (plain, wafer, jam, cream) 2

Shortbread 1

Cakes/Desserts - Low

Cake (plain, cream) 1 slice

Dau fu far (sweet soy curd dessert)

Doughnut 1

Jelly

Plain scone 1

Swiss roll 1 slice

Sweets - Low

Boiled/chewy sweets, fruit pastilles 10

Jellies, marshmallows, mints, sherbets

Sweetened popcorn ½ bowl

Milky puddings (as part of milk allowance) - Low

Custard

Ice cream

Yoghurt

Biscuits - High

Biscuits containing nuts, chocolates, dried fruit

Cakes/Desserts - High

Banana bread

Cakes or scones containing chocolate, coconut, nuts, dried fruit

Chinese sweet peanut soup

Dessert or sweet served with coconut milk e.g. sago pudding

Trifle

High Sweets - High

Fruit gums

Liquorice Allsorts

Peanut, nut & sesame brittles

Sweets containing chocolate, coconut, nuts, dried fruit

Milky puddings (as part of milk allowance) - High

Any puddings with evaporated or condensed milk

Any puddings containing chocolate, coconut, nuts, dried fruit

Drinks

If you are following a fluid restriction, ensure that you count all your fluid intake as part of your daily allowance. Please consult your doctor if you are unsure about your fluid allowance.

Non-alcoholic drinks

Low

Barley water, squash

Fizzy drinks

Fruit squash

Lemonade

Lucozade

Soy drink

Tonic water

Teas, all varieties

High

Coconut water

Coffee

Drinking chocolate

Evaporated and condensed milk

Fruit and vegetable juices/smoothies

Malted drink powder with milk e.g. Horlicks, Ovaltine, Milo

Milkshake

Alcohol

Low

Liqueurs

Shandy

Sherry

Spirits

Vermouth

High

Beer, bitter

Cider

Lager

Port

Stout, Guinness

Wine

Miscellaneous

Some common miscellaneous foods are listed here. If you use this regularly in cooking or consume it in large quantities, please seek advice from your dietitian.

Low

Apple sauce

Gravy granules/stock cube

Herbs, spices

Honey/syrups

Jam/preserves/lemon curd

Mustard/mayonnaise/salad cream

Pickles/chutney

Vinegar

High

Black treacle

Brown sauce

Chocolate spreads

Instant soup powders

Nut butters

Tamarind paste

Tomato ketchup, puree, chutney

Yeast extracts e.g. Marmite, Vegemite

Herbs, curry spices, coriander, chilli, garlic and ginger can be used as required.

Processed foods are high in salt and should be limited, for example, soy sauce, stock cubes and MSG (Monosodium Glutamate).

Salt substitutes e.g. Lo-Salt, So-Lo, Low Sodium Salt contain potassium in place of sodium and should be avoided.

If you need further information on a low potassium diet, please contact your dietitian.

A Guide to a Low potassium diet Incorporating Chinese and Far Eastern foods

Acknowledgements:

Gabby Ramlan, Diabetes & Renal Specialist Dietitian, North Middlesex University Hospital NHS Trust (Lead Contributor)

Severine Gregory-Smith, Renal Specialist Dietitian, Oxford University Hospitals NHS Foundation Trust (Lead Contributor)

Lakshmi Chandrasekharan, Diabetes & Renal Specialist Dietitian, Southend University Hospital NHS Foundation Trust

Susan Dawe, Renal Specialist Dietitian, Gloucestershire Hospitals NHS Foundation Trust

Tina Dilloway, Renal Specialist Dietitian, Imperial College Healthcare NHS Trust

Deepa Kariyawasam, Renal Specialist Dietitian, King's College Hospital NHS Foundation Trust

Ruple Patel, Renal Specialist Dietitian, Epsom and St Helier University Hospital NHS Trust

Dietitian:

Contact Details:

Produced by:



Supported by:



www.bda.uk.com/regionsgroups/groups/renal/home