

A Guide to a Low potassium diet Incorporating Eastern European Foods

Approved by

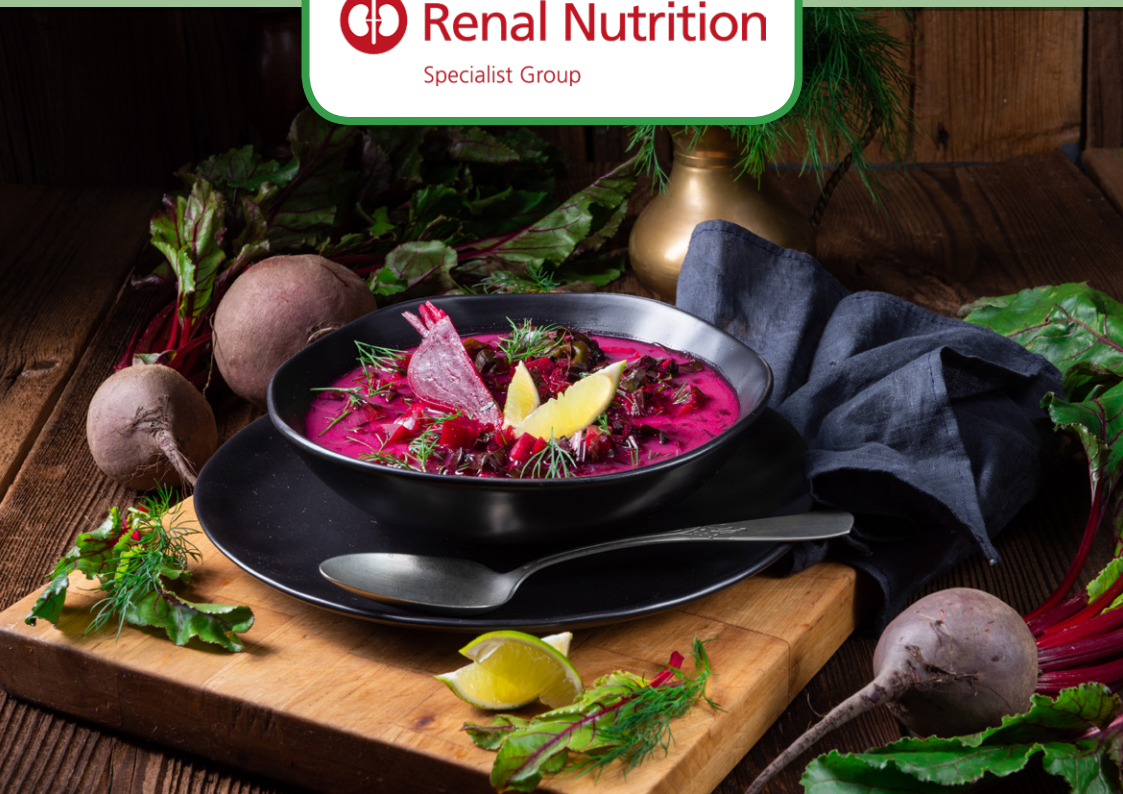
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Renal Nutrition

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, 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, pasta and other grains, for example quinoa, bulgur wheat, barley, rye, semolina, sago
- Breakfast cereals
- Bread

Starchy root vegetables including grains

Some starchy root vegetables like potato, sweet potato, and dumplings and some grains are 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. Your dietitian can discuss this with you on an individual basis.

Choose up to one boiled 150g serving per day

Amaranth

Potatoes

Potato dumplings (90g)

Quinoa

Rye

Spelt wheat

Sweet potato

Limit

Baked/fried/roasted/steamed/pressure cooked potato and sweet potato

Frozen/oven/microwave/retail chips

Instant mashed potato varieties

Potato flakes/flour

Manufactured potato products: hash browns, potato waffles, potato wedges, potato croquettes, potato fritters, potato crackers

Cooking instructions for starchy root vegetables

- The starchy root vegetables in the table above should be boiled in plenty of 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 do not remove 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

- Pasta, rice, noodles and yeast dumplings are lower in potassium and can be eaten freely.
- Examples of low potassium boiled grains include barley, bulgur wheat, buckwheat groats, millet, sago, semolina and pearl barley.

Breakfast cereals

- Cereals made from wheat, oats, rice and corn are lower in potassium and can 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 from your milk and dairy allowance (see dairy section).
- If you have diabetes, choose lower sugar breakfast cereals.

Breads

- Bread, rolls, pittas, wraps and crackers without nuts and seeds are low in potassium and may be eaten regularly.
- Bread, crackers (including buckwheat 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 fruit and vegetables varies and these are listed in the tables below as low, medium, high and very high.

- Aim for a total number of 4-5 portions of fruit and vegetables daily or as advised by your dietitian.
- Choose most of your fruit & vegetables from the low or medium columns. If you are choosing from the high column, you may need to reduce the number of portions you have that day.
- Fruit and vegetables listed as having a very high 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.
- Vegetables should also be boiled and drained before adding to stir fries, casseroles, stews, curries and soups.

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. Canned vegetables should be drained before cooking or eating.

Many eastern European dishes use tomato as a base. Canned plum tomatoes that are drained are lower in potassium than fresh tomatoes. It is recommended that you use canned whole plum tomatoes and drain off the juice before adding to dishes, and avoid tomato puree.

Fruit and Vegetables

Low

Beetroot (pickled) 4 slices
 Cabbage 2 tbsp
 Carrots (canned) 4 small
 Cauliflower 3 florets
 Chicory (raw) 4 leaves
 Cucumber
 Gherkins 2 medium
 Green/French beans (canned) 3 tbsp
 Lettuce medium handful
 Mange-tout 2 tbsp
 Marrow
 Marrowfat peas (can) 2 tbsp
 Mixed vegetables (frzn)
 Mushrooms (canned)
 Mustard & cress (raw) 2 tbsp
 Okra (canned)
 Olives green 10-15
 Onions (raw) 1 small
 Peas (canned) 3 tbsp
 Pumpkin 2 tbsp
 Radish (raw) 3
 Rocket (raw) medium handful
 Runner beans
 Seakale
 Shallots (raw) 2
 Spring onions (raw) 3
 Sugar-snap peas 2 tbsp
 Swede (boiled) 2 tbsp
 Watercress (raw) 40g

Medium

Asparagus (canned) 3 spears
 Aubergine (fried/baked) ¼
 Broad beans 3 tbsp
 Broccoli 2 medium florets
 Butternut squash
 Cabbage (raw) 2 tbsp
 Carrots 1 medium
 Celery (raw) 1 stick
 Chard (raw) 1-2 leaves
 Courgette 2 tbsp
 Curly kale 3 tbsp
 Endive salad leaf (raw) 4-6 leaves
 Leeks ½ stalk
 Mange-tout (raw/fried) 2 tbsp
 Peas 2 tbsp
 Pepper red/yellow/green (raw) ½
 Salsify 2 tbsp
 Sauerkraut 2 tbsp
 Spring greens 3 tbsp
 Squash spaghetti baked 2 tbsp
 Sugar-snap peas (raw) 2 tbsp
 Sweetcorn (canned/fresh/frozen) 3 tbsp
 Tomatoes ¼ 400 g tin
 Turnip

High

Asparagus (fried) 3 spears
 Beetroot 1 small
 Brussels sprouts
 Celeriac 2 tbsp
 Courgette (raw) 1 small
 Curly kale raw
 Fennel 2 tbsp
 Green beans 3 tbsp
 Kohl rabi, 2 tbsp
 Leeks (raw) ½ stalk
 Mushrooms (raw/fried) 6 medium
 Okra 10 fingers
 Onions (dried) 1 tbsp
 Peas (dried) 2 tbsp
 Radicchio (raw) 4 leaves
 Sorrel (raw) 2 tbsp
 Spinach (not baby)
 Sweetcorn on the cob, 1
 Tomatoes (fried) 1 medium

Very High

Artichoke hearts
 Artichoke Jerusalem
 Avocado
 Celeriac (raw)
 Chard
 Mushroom (dried)
 Okra (stir-fried)
 Pak choi
 Spinach baby (raw or boiled)
 Tomato puree

tbsp = tablespoon



Fruit

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

As a general rule, dried fruit, fruit or vegetable juices and smoothies should be avoided as they are concentrated sources of potassium. Canned fruit should be drained before cooking or eating.

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

Fruit and Vegetables

Low

Apples (stewed) 2 tbsp

Apples 1 small

Bilberries (Jagody, borowki)

Blackberry & apple (stewed) 3 tbsp

Blackcurrants 3/4 of 290g can

Blueberries

Buckthorn (seaberry/sea buckthorn) 2 tbsp

Cherries 1/3 of 425g can

Clementine 1

Cranberries 2 tbsp

Figs 1

Fruit cocktail 1/3 of 415g can

Fruit pie filling 1/4 of 410 g can

Gooseberries 1/2 of 300g can

Grapefruit 1/3 of 538g can

Lemon/lime 1

Lychees/longans (canned) 6

Mandarin oranges (canned) 1/2 of 298g can

Passion fruit 2

Peach 1 small

Peaches 1/3 of 420g can

Pears 1/2 of 410g can

Pears (stewed) 2 halves

Pineapple 2 rings/12 chunks can

Plums (canned) 4 halves

Pomelo 1/4 fruit

Raspberries 1/2 of 300g can

Rhubarb 1/3 of 539g can

Satsuma 1

Strawberries 1/2 of 420g can

Tangerine 1

Watermelon 1/2 slice

Medium

Apples baked 1 medium

Apricots (canned) 3 halves

Blackberries 16

Blackberries (stewed) 2 tbsp

Cherries 20

Cherries (stewed) 2 tbsp

Chokeberries (Ariona berries)

Gooseberries (stewed) 2 tbsp

Grapefruit* 1/2 fruit

Grapes 16

Greengages 1

Kiwi 1

Lychee 5

Mango 2 slices

Medlars 1

Melon 1/2 slice

Mulberries (stewed) 2 tbsp

Papaya, raw 1/2 slice

Pear 1 small

Physalis 10

Pineapple 1 slice

Plums (stewed) 3 halves

Raspberries 16

Raspberries (stewed) 2 tbsp

Strawberries 7-9 fruit

High

Apricots (stewed) 4 halves

Apricots 2

Damsons 3

Elderberries

Loganberries (stewed) 2 tbsp

Mulberries 2 tbsp

Nectarine 1 medium

Oranges 1 medium

Plum 2 small

Pomegranate 1/2

Dragon fruit/prickly pear 1

Quince 1/2

Persimmon/Sharon fruit 1

Sugar/custard apple 1/2 medium

Very High

Avocado

Banana

Blackcurrants

coconut

Dates

Goji berries

Greengages (stewed)

Prunes

Redcurrants

Rhubarb (stewed)

Whitecurrants

tbsp = tablespoon

Protein

Protein is necessary for building and maintaining 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, Quorn™, tofu or soya products can replace a portion of meat, chicken, fish or eggs. Tinned/canned beans and lentils are lower in potassium than dried and boiled equivalents.
- Nuts and seeds are high in potassium and may need to be restricted. If you need to use small amounts in cooking, please discuss with your dietitian.



Dairy Products and Dairy Alternatives

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

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



Soups



Soups are a regular dish in the Eastern European diet. They are not generally encouraged in many patients with kidney disease due to their high salt and potassium content.

- If you are on a fluid restriction, soup would count towards your fluid allowance for that day.
- If your potassium levels are well controlled and fluid is not a concern, nourishing soups can be included in your diet with careful planning.
- Packet and tinned soups are high in salt and potassium; therefore you are encouraged to make your own soup. 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 reduced salt containing stock cube e.g. Kallo, Boots baby stock cubes. Rice, barley, mini pasta shapes or cornflour may be added to thicken the soup.
- 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.
- If part of another meal choose a soup from the low column. If soup is your only dish in a meal try to choose a meat-containing one and it may be from the medium or high column.

SOUPS (All portions are 250 mls)

Low

Asparagus using tinned asparagus

Beef soup with meat dumplings

Meat soups with semolina dumplings, noodles, rice or pasta

Meat Bortsch

Meat or chicken soups without potatoes or vegetables

Medium

Bread Soups

Homemade meat or fish with pre-boiled vegetable or potato containing soups

French onion, homemade

Goulash Soup

Milk soups with low potassium grains, pasta, rice

Milk soup with non-potato dumplings

Minestrone, homemade

Mulligatawny, homemade

Pork Ragout soup

Sauerkraut soup with pork & pre-boiled vegetables

Solyanka (ham, frankfurters, beef, kidney, olives)

High

Beetroot containing soups

Potato or potato dumpling containing soups

Bouillabaisse, homemade

Soups containing grains high in potassium

Cabbage containing soups

Mushroom containing soups

Tomato based soups

Lentil or bean soups

Nettle soups

Soups containing vegetables & potatoes which have not been pre-boiled



Snacks



Some snacks can be high in energy (calories), sugar, fat and or salt such as confectionery, 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, snacks can help 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 made with lentil/soya/quinoa flour are also high in potassium.
- Crisps made from corn, wheat or rice can be low 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

Corn fritters

2 cream crackers

Pork scratching

Popcorn

Tortilla chips

Cheese flavoured crackers

Corn snacks

Pretzel twists

Rye crisps

High

Bombay Mix

Brown soya beans

Fried peas

Lentil crisps

Nuts

Potato crisps

Roasted corn kernels

Sauerkraut crisps

Vegetable crisps

Potato rings

Sweets snacks

Some Eastern European biscuits and sweets can be high in potassium. Your dietitian will guide you as to which snacks are better for you to consume.

- As a general rule, avoid cakes, biscuits and desserts containing nuts, chocolate, coconut, dried fruit, condensed or evaporated milk. Choose or make your own using lower potassium ingredients.
- If you have diabetes, you may need to limit your intake of sugary foods.

Cakes/Desserts - Low

1 slice sponge cake, plain or cream

1 doughnut

Fruit pie, individual

Jelly

Meringue

Sweets - Low

10 boiled, chewy, fruit pastilles, jellies, marshmallows, mints and sherbet

½ bowl sweet popcorn

Turkish delight

Biscuits - Low

2 Plain, semi-sweet or sandwich filled biscuits

1 ginger nut

Cakes/Desserts - High

Cakes containing nuts, chocolate, coconut, condensed milk, evaporated milk or dried fruit

Flapjack

Trifle

Sweets - High

Liquorice

Nut brittle

Sesame snacks

Biscuits - High

Biscuits containing nuts, chocolate, coconut, condensed milk, evaporated milk or dried fruit

Kringle with cinnamon

Kama balls



Drinks



If you are following a fluid restriction, ensure that you count your entire fluid intake as part of your daily allowance.

Please consult your dietitian if you are unsure about your daily amount of fluid allowance.

Non-alcoholic drinks

Low

Barley water, diluted squash

Fizzy drinks

Fruit squash

Herbal Teas

Lemonade

Lucozade

Malted drink powder made with water eg Horlicks, Ovaltine, Milo

Tonic water

Teas

High

Coconut water

Coffee (instant)

Drinking chocolate powder

Fruit & Vegetable juices/smoothies

Malted drink powder made with milk eg Horlicks, Ovaltine, Milo

Milk shake powder

Alcohol

Low

Liqueurs

Shandy

Sherry

Spirits

Vermouth

High

Beers, bitter

Cider

Lager

Lager, alcohol free

Port

Stout, Guinness

Wine

Miscellaneous



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

Low

Apple sauce

Gravy granules/stock cube

Herbs, spices

Honey syrups

Jam/ preserves/ lemon curd

Pickles and chutney

Mint sauce

Mustard/mayonnaise/salad cream

Sandwich Pickle

Stuffing (without dried fruit)

Vinegar

High

Black treacle

Brown sauce

Chocolate spreads

Horseradish

Instant soup powders

Nut butters

Pesto

Tahini

Tomato ketchup, puree

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, soya sauce, stock cubes and MSG (Mono Sodium Glutamate).

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

It is important that all salt substitutes are avoided.

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

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