

Patient information

Dietary advice for the prevention of kidney stones

This leaflet is to help adults who currently have kidney stones or have had a kidney stone and are keen to prevent it from happening again.

General advice

- Drink enough fluid to keep your urine clear. This is usually 2-3 litres a day, or more during exercise or hot weather
- Limit your salt intake
- Avoid excessive protein from meat, fish, poultry, eggs and dairy
- Achieve or maintain a healthy weight
- Meet recommended calcium intake from your food
- Aim for at least 5 portions of fruit and vegetables each day

1) Fluid

Drink at least 2.5 litres (4-5 pints) of fluid per day. At least half of this should be water. The rest can be either from squash or fizzy drinks (preferably 'sugar-free'). Tea and coffee may be consumed in moderation but the majority of your fluid should be from the above.

Drinks high in fructose such as fruit juice and sugary fizzy drinks may increase the risk of stone formation. They do not need to be avoided but limit to 1 glass a day.

Note: There is some evidence that orange juice may help prevent stone formation and may be recommended by your doctor if you are unable to tolerate potassium citrate medication. Check with your doctor if you are unsure if this is recommended for you.

Tip: drink a glass or two of water before bed to dilute urine overnight



2) Salt

A high salt intake may increase the risk of kidney stone formation. It is therefore important to limit the amount of salt you eat to no more than 6g/d. 75% of salt is hidden in processed foods.

Restrict salt in the diet by:

- Not adding salt at the table
- Eating 'freshly prepared' food in preference to convenience foods, take-aways and canned foods.
- Using only small amounts of salt in cooking.
- Using pepper, herbs, spices, vinegar and lemon juice to flavour food instead.
- Checking for hidden salt, for example in processed meats, ready meals, seasonings, sauces and ketchups by reading food labels. Avoid foods containing more than 1.5g salt per 100g salt of the product. If sodium is listed instead of salt then multiply by 2.5g to find out the salt level.

3) Protein

Protein is an essential nutrient for the growth and repair of your body. However, large amounts of protein from animal sources such as meat, poultry, fish, cheese and eggs can increase the risk of kidney stones. Avoid excessive protein intake by:

- Ensuring your protein intake includes a mixture of plant sources (such as pulses, lentils and grains) as well as animal sources
- Avoiding high protein fad diets for example Atkins and the Dukan diet
- Avoiding high protein build up drinks and supplements

4) Calcium

You do not need to restrict calcium in your diet. Dietary calcium has not been found to increase kidney stones and may actually help to prevent their development. Dietary sources of calcium include milk and dairy products, oily fish, Tofu, beans and broccoli. As part of a healthy diet choose low fat versions of milk and dairy products such as skimmed/semi-skimmed milk, low fat yoghurts and reduced fat cheeses. You should aim to consume 2-3 portions of foods rich in calcium a day.

Avoid calcium supplements unless your doctor has advised you to take them.

5) Oxalate

A high amount of oxalate in the gut may increase the risk of developing calcium oxalate stones, the most common type of kidney stones. The following foods are high in oxalate and should be limited but not avoided. Aim to have no more than one item from this list per day.

Fruits:

Rhubarb, kiwi, figs
Strawberries, blackberries
Grapefruit and cranberry juice

Miscellaneous:

Soy products (soy milk, soy drinks, soy yogurt, soy sauce, miso)
Nuts, peanut butter
Sesame seeds, tahini

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Vegetable

Celery, spinach and beetroot
Tomato juice and tomato puree
Okra
Chips, French fries

Chocolate and cocoa

Grains

Bran, including All bran cereal
Buckwheat

6) Vitamin C

Vitamin C can get converted into oxalate and supplements can increase the absorption of dietary oxalate. Vitamin C supplementation is therefore not recommended.

Where can I find more information?

Ask your doctor to refer you to a dietitian or you may find the following organisations useful:

NHS Choices www.nhs.uk/Conditions/Kidney-stones/Pages/Prevention.aspx

National Kidney Federation: www.kidney.org.uk

British Association of Urological Surgeons www.baus.org.uk

Edinburgh Royal Infirmary Renal Unit: www.edren.org/pages/edreninfo/kidney-stones.php

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Dietitian

Telephone No.

Site

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Patient Advice and Liaison Service

If you need general information or advice about Trust services, please contact the Patient Advice and Liaison Service (PALS) on 020 3594 2040 or visit www.bartshealth.nhs.uk/pals. Alternatively please contact staff who are providing your care if you require clinical advice.

Large print and other languages

For this leaflet in large print, please ring 020 3594 2040 or 020 3594 2050.

For help interpreting this leaflet in other languages, please ring 020 7377 7280.

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