

# Dietary Advice for Stone Formers

## Frequently Asked Questions

### How much do I need to drink?

Drinking enough fluid is the most important aspect of preventing stone formation and will reduce your risk of stone formation by almost one third.

Not drinking enough fluid can make you urine concentrated and make stones more likely to form. Aim to drink 2–3 litres (4–6 pints) of fluid each day (e.g. water, squash, or fizzy drinks).

You should aim to keep your urine colourless throughout the day; this equates to a urine output of at least 2 litres (4 pints) per day. In patients with cystine stones, however, an output of 3.5 litres per day is required.

Tea, coffee & alcohol can be consumed in moderation but the majority of your fluid intake should be as above. In addition, it is helpful to try and drink 1 or 2 glasses of water before going to bed and on rising in the morning.

### Should I restrict my protein intake?

Yes. A high intake of animal protein appears to increase the risk of stone formation. Avoid large portions of meat, fish, eggs, cheese and milk. Aim for 4 of the following exchanges each day:

- ~ 50–75g red meat, fish or chicken
- ~ 2 eggs
- ~ pint of milk
- ~ 50g cheese
- ~ 120g yogurt (1 small pot)

2 of the 4 exchanges should be milk, cheese or yogurt to ensure an adequate intake of calcium. You can replace protein with starchy foods (e.g. bread, potatoes, pasta, fruit & vegetables) to fill you up.

Reducing your protein intake also increases the amount of citrate you excrete in your urine; citrate is a known inhibitor of stone formation. Example menu plan:

<b>Breakfast</b>	2 eggs scrambled on toast
<b>Lunch</b>	Sandwich with 50g cheddar cheese & salad, 1 apple
<b>Dinner</b>	1 small chicken breast (approx 75g), New potatoes, Vegetables, Fruit salad

### Should I restrict the amount of salt I take?

Yes. A high salt intake can contribute to calcium stone formation. Do not add salt to your food at the table but use pepper, herbs, spices or vinegar as alternative flavourings. You can, however, add a small amount of salt during cooking. Foods which contain less than 0.4g (40mg) of sodium per serving are low-salt choices and you should aim to keep your salt intake down to these levels. Avoid high-salt, tinned, packet and processed foods (e.g. soups, salted crisps or nuts, tinned meats, meat paste, smoked fish and fish paste).

### Do oxalates play a part in stone formation?

You need to avoid oxalate-rich foods to reduce the amount of oxalate in your urine. The following foods are high in oxalate:

- ~ Tea (more than 2–3 cups per day)
- ~ Chocolate
- ~ Nuts & peanut butter
- ~ Cocoa & carob
- ~ Strawberries
- ~ Rhubarb
- ~ Celery, spinach & beetroot
- ~ Parsley

It is not necessary to exclude oxalate-rich foods completely; simply eat them in small amounts.

## **Dietary Advice for Stone Formers continued...**

---

### **Does calcium restriction help?**

Severe calcium restriction can actually be harmful and increase the risk of stone formation because it will result in high levels of oxalate in your urine. If you follow the recommendations above for milk, cheese and eggs, no further action is needed. The calcium you drink in the water cannot cause kidney stones and there is no need to restrict your intake of tap water, drink mineral water or purchase a water softener

### **Should I take vitamin supplements?**

Most vitamins are harmless but do not take Vitamin D preparations, including fish oils and multivitamin preparations since they increase calcium absorption. Avoid Vitamin C supplements because they can increase the excretion of oxalate in your urine.

### **Summary**

A normal calcium, low-salt, low-protein, dietary regime can reduce your risk of stone formation by a half. Keeping your urine colourless may reduce the risk by a further one third.

# Low Oxalate Meal Plan

## Dietary Advice for Stone Formers continued...

OXOLATES IN FOODS	LITTLE	MODERATE	HIGH
<b>Beverages/Juices</b>	Apple Juice	Coffee	Draft beer
	Beer	Grape Juice	Juices with Berries
	Coca-Cola	Orange Juice	Ovaltine
	Grapefruit Juice	Tomato Juice	Tea
	Lemonade(Lemons)		Cocoa
	Wine		
	Pepsi Cola		
	Pineapple Juice		
<b>Milk</b>	Buttermilk		
	Yoghurt with allowed fruit		
	Milk		
<b>Meat &amp; Protein</b>	Eggs	Sardines	Baked Beans in Tomato Sauce
	Cheese, Cheddar		Peanut butter
	Lean Lamb, lean beef		Tofu
	Pork		
	Poultry		
	Seafood		
<b>Vegetables</b>	Avocado	Asparagus	Beans(Green)
	Brussel Sprouts	Broccoli	Celery
	Caulitflower	Carrots	Chive
	Cabbage	Corn	Eggplant
	Mushrooms	Cucumber	Leeks
	Onions	Lettuce	Okra
	Peas(Green)	Lima Beans	Parsley
	Potatoe	Parsnips	Peppers(green)
	Radishes	Tomato	Potatoes (sweet)
		Turnips	Spinach
			Watercress

# Low Oxalate Meal Plan

## Dietary Advice for Stone Formers continued...

OXOLATES IN FOODS	LITTLE	MODERATE	HIGH
<b>Fruits</b>	Banana	Apple	Blackberries
	Cherries	Apricots	Blueberries
	Grapefruit	Black Currants	Lemon Peel
	Grapes	Orange	Lime Peel
	Honeydew Melon	Pears	Orange Peel
	Mangoes	Pineapple	Rasberries
	Nectrines	Prunes	Rhubarb
	Peaches		Strawberries
	Plumes(Golden)		Tangerine
	Rockmelon		
	Watermelon		
<b>Breads/Starches</b>	Cornflakes	Spaghetti	Sponge Cakes
	Macaroni	White bread	Spaghetti in tomato sauce
	Noodles		
	Oatmeal		
	Ricebubbles		

### Foods high in Oxalates

Aviode these:

- ~ Beetroot
- ~ Carob powder
- ~ Chocolate and any products containing Cocoa
- ~ Parsley(can be used in small amounts)
- ~ Any of the nut family including peanuts
- ~ Rhuburb
- ~ Spinach
- ~ Tea2

### Foods containing moderate amounts

- ~ Strawberries
- ~ Celery
- ~ Instant Coffee

---

## Dietary Advice for Stone Formers continued...

---

### Who can I contact for more help or information?

**Dr Peter Campbell**

Suite 9, level 9, Evan Thomson Building, The Wesley Hospital,  
Chasely St,  
Auchenflower, QLD 4066  
(07) 3367 1608,  
[www.campbellurology.com.au](http://www.campbellurology.com.au)

**The Wesley Hospital, Urology Ward**

451 Coronation Drive,  
Auchenflower, QLD 4066  
(07) 3232 7168  
[www.uhc.com.au/wesley](http://www.uhc.com.au/wesley)

**The Wesley Emergency Centre**

451 coronation Drive,  
Auchenflower, QLD 4066  
(07) 3232 7333

**Greenslopes Private Hospital, Continence Advisor**

Newdgate St,  
Greenslopes, QLD 4120  
(07) 3394 7978  
[www.greenslopesprivate.com.au](http://www.greenslopesprivate.com.au)

**Greenslopes Private Hospital Urology Ward**

Newdgate St,  
Greenslopes, QLD 4120  
(07) 3394 7261  
[www.greenslopesprivate.com.au](http://www.greenslopesprivate.com.au)

**Greenslopes Private Hospital Emergency Centre**

Newdgate St,  
Greenslopes, QLD 4120  
(07) 3394 6777  
[www.greenslopesprivate.com.au](http://www.greenslopesprivate.com.au)

**The Queen Elizabeth II Jubilee Hospital,  
Urodynamics Department**

Kessels Rd,  
Coopers plains, QLD 4108  
(07) 3275 6346

**American Urological Association Foundation**

1000 Corporate Blvd, Suite 410,  
Linthicum, MD 21090  
1800 828 7866  
[www.UrologyHealth.org](http://www.UrologyHealth.org)

---

Thank you for taking the trouble to read this information sheet. If you are satisfied with the explanation of the test, please sign below and this leaflet will be filed in your chart.

If you wish to retain a copy for you own records, one will be provided.

*I have read this information sheet and I accept the information it provides.*

Signature

Date

---