

Low Oxalate Diet in Short Bowel Syndrome

When you have Short Bowel Syndrome with an intact colon, eating a diet low in oxalates can help prevent kidney stones from forming. This handout shows you which foods are high in oxalates and steps you can take to prevent kidney stones.

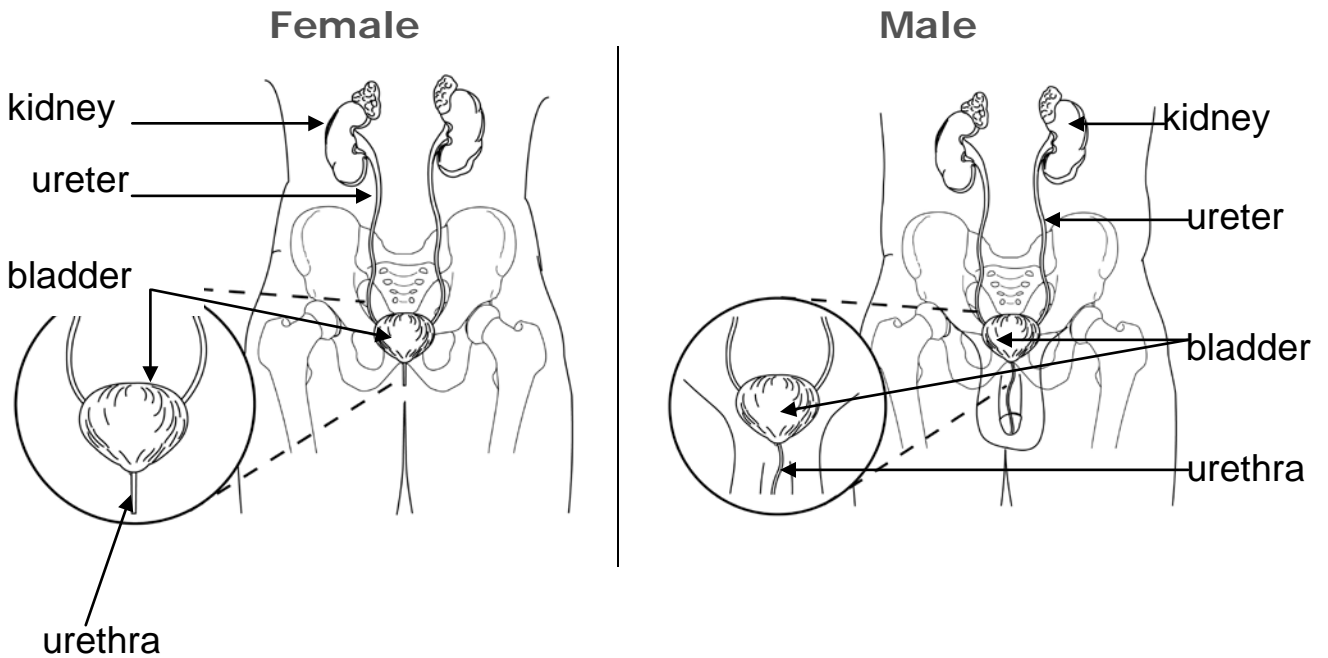
What are kidney stones?

A kidney stone is a hard, stone-shaped mass in your urinary tract. Your body can get rid of very small kidney stones by passing urine.

Urine flows from the kidney, down through the ureters and into the bladder. Urine then flows from the bladder through the urethra and out your body when you go to the bathroom.

However, larger kidney stones can become stuck in your urinary tract, causing severe pain.

The Urinary Tract



How do kidney stones form?

A kidney stone forms when certain chemicals in your urine stick together and slowly grow into a stone. There are a number of different kinds of kidney stones, but the most common stone is made of **calcium oxalate**. These stones are more likely to form when:

- there is too much oxalate in your urine
- there is too much calcium in your urine
- you have small amounts of urine
- you eat too much OR not enough calcium and vitamin C

How does having Short Bowel Syndrome (SBS) increase my risk for developing kidney stones?

Normally, calcium binds to oxalate in the intestine allowing it to be excreted in the stool. In SBS, unabsorbed fats bind to calcium. This leaves oxalate free to be absorbed by the colon. When your body absorbs more oxalate, you have a higher risk of developing kidney stones.

What can I do to prevent developing kidney stones?

1. Drink fluids

The more fluids you drink, the more urine you will make. This will help prevent the chemicals in your urine, such as oxalate, from sticking together.

Your Registered Dietitian will tell you how much fluid to drink each day and give you tips on how to get enough fluids.

Dietitian's suggestions:

1. _____

2. _____

3. _____

2. Avoid high oxalate foods

Certain foods and drinks contain high amounts of oxalates. You do not need to stop eating these foods completely. However, keep in mind that eating these foods on a regular basis can increase your risk of developing kidney stones.

Food Group	High Oxalate Food Items
Beverages	Black tea, chocolate beverage mixes, chocolate milk, cocoa, cola, draft beer, instant coffee, juices made with berries high in oxalates (see fruits section), ovaltine, soy milk
Breads and Cereals	Amaranth, buckwheat, cereals high fibre, graham crackers and bread, kamut, quinoa, spelt, stone ground flour, wheat bran, wheat germ, whole wheat flour and bread
Vegetables	Beets, canned tomato sauce, celery, dark leafy greens (such as spinach, swiss chard, collards, kale, dandelion, escarole, parsley and arugula), eggplant, green beans, green peppers, leeks, okra, parsnips, pumpkin, summer squash (such as zucchini), rutabaga, watercress, wax beans, yams/sweet potatoes
Fruits	Apricots, blackberries, blueberries, concord grapes, damson plums, figs, gooseberries, kiwi, lemon peel, lime peel, orange peels, raspberries, red currants, rhubarb (most consider it a fruit), strawberries, tangerines
Legumes, Nuts, Seeds	Baked beans, legumes such as kidney beans, chick peas and lentils, peanuts/peanut butter and other nuts/nut butters, sesame seeds, soy nut, sunflower seeds, tahini, tofu
Desserts	Fruitcake, Fig Newtons, marmalade
Other	Black pepper (more than 1 tsp or 5 ml a day), chocolate, cinnamon (more than 1½ tsp or 7 ml a day), soy products such as cheese, yogurt and soy-based meat analogs (vegetarian burgers, hot dogs and deli meats) and tofu products, soy sauce, wheat bran

3. Include foods with Vitamin C

When vitamin C is processed by your body and passed into your urine, it becomes citrate. Citrate is helpful in preventing kidney stones because it prevents oxalate and calcium crystals from sticking together. Fruit and vegetables are the best sources of vitamin C.

Include:

- asparagus
- avocado
- broccoli
- clementine
- grapefruit
- lychee
- oranges
- pineapple
- red and yellow peppers (raw)

Vitamin C supplements in high doses (over 1000 mg a day) are not recommended unless directed by your doctor. Vitamin C supplements are proven to increase urinary oxalate, which will increase your risk of developing kidney stones

4. Eat Enough Calcium

Studies show that people who eat the recommended amount of calcium (1000 to 1200 mg a day) have a decreased risk of developing kidney stones, as dietary calcium helps to bind oxalate in the gut.

Try to include 2 to 3 servings of dairy foods or high calcium foods every day. It is recommended you get your calcium from foods rather than supplements. However, some people may need a calcium supplement to help them meet their needs.

Calcium supplements are not recommended unless directed by your doctor.

Tip

If you decide to eat a food that is high in oxalates, eating a high calcium food **at the same time** (such as milk) can help bind the oxalates. See the chart on the next page for examples of foods that have calcium.

Food Item	Serving	Calcium (mg)
Hard cheese (such as cheddar or swiss)	1.5 oz (50 g)	360 to 400
Milk	1 cup (250 ml)	300
Yogurt, low fat	$\frac{3}{4}$ cup (175 ml)	294
Orange juice, calcium-fortified	$\frac{1}{2}$ cup (125 ml)	185
Salmon, canned with bones	$\frac{1}{3}$ can (75 g)	171
Cottage Cheese, 1%	$\frac{1}{2}$ cup (125 ml)	70
Orange	1 medium	60
Snow peas, cooked	$\frac{1}{2}$ cup (125 ml)	36
Broccoli, cooked	$\frac{1}{2}$ cup (125 ml)	33
Antacids	1 tablet	200 to 600

Dietitian's suggestions:

1. _____
2. _____
3. _____

