

Oxalate in food

Information for patients and families

If you have kidney stones made from calcium oxalate, cutting back on high-oxalate foods may help prevent kidney stones.

Oxalate is found in many foods. The following resource will help you avoid foods high in oxalate and help you eat foods low in oxalate.

What is oxalate?

- Oxalate is an organic compound found in many plants. It is also produced by the body. It can attach to calcium in the urine and form calcium oxalate crystals. These crystals can grow into calcium oxalate kidney stones.
- The oxalate that is in the urine comes from 3 main sources:
 - Diet
 - Vitamin C breakdown
 - The body produces oxalate as part of its normal metabolism
- Oxalate in the diet comes mainly from plant sources. The oxalate that we eat is either absorbed into the body, or lost in stool. The oxalate that is absorbed into the body will eventually come out in the urine.

What can I do to reduce the amount of oxalate that my body absorbs?

1. Eat dairy products with meals

- Calcium in dairy products will attach to oxalate in food. This stops your body from absorbing the oxalate.
- Have one serving of dairy with each meal, such as:
 - Milk (1 cup, 8 ounces or 250 mL)
 - Plain yogurt (3/4 cup, 6 ounces or 175 g)
 - Low salt cheese (50 g or 1.5 ounces, approximately 1 inch cube)
 - Soy milk and rice beverage – for people who cannot have dairy

2. Cook your food to help lower the oxalate

- Boil, steam, bake or sauté your plant-based foods. This may help reduce the oxalate.

3. Avoid taking large doses of vitamin C – take no more than 1000 mg each day.

4. Eat a low oxalate diet (see next pages)

What is a low oxalate diet?

If your doctor or dietitian recommends a low oxalate diet, please review the lists of foods on the next pages. We have grouped foods into 3 categories:

1. Foods with a low oxalate content (we call these “good choices”)
2. Foods with a moderate amount (we provide a suggested daily limit)
3. Foods that are high in oxalate (reduce or avoid these foods as much as possible)

Choosing foods for a low oxalate diet

Fruits

Good choices	Eat in moderation (up to ½ cup daily)	Limit or avoid
<p>Apples</p> <p>Apricots</p> <p>Banana</p> <p>Blackberries</p> <p>Blueberries</p> <p>Cantaloupe</p> <p>Cranberries</p> <p>Cherries, fresh</p> <p>Fruit cocktail</p> <p>Grapes</p> <p>Honeydew melon</p> <p>Jackfruit</p> <p>Lemon</p> <p>Lime</p> <p>Mango</p> <p>Nectarine</p> <p>Papaya</p> <p>Peaches</p> <p>Pears</p> <p>Pineapple, fresh</p> <p>Plantain</p> <p>Plums</p> <p>Raisins</p> <p>Strawberries</p>	<p>Canned cherries</p> <p>Figs, fresh</p> <p>Lychee</p>	<p>Avocados</p> <p>Custard apple</p> <p>Dates</p> <p>Figs, dried</p> <p>Gooseberry</p> <p>Grapefruit</p> <p>Guava</p> <p>Kiwi</p> <p>Orange</p> <p>Pineapple, dried/canned</p> <p>Pomegranate</p> <p>Prunes</p> <p>Raspberries</p> <p>Tangerine</p> <p>Watermelon</p>

Vegetables

Good choices	Eat in moderation (up to ½ cup daily)	Limit or avoid
Alfalfa sprouts Bok choy Broccoli Brussels sprouts Cabbage Cauliflower Celery, fresh Chives Corn Cucumber Endive Green pepper Kale Lettuce Mushrooms Mustard greens Onions Peas Radish Sauerkraut Sea vegetables Water morning glory Yellow squash Zucchini	Artichokes Asparagus Carrots, cooked Capsicum peppers Hot chili peppers Mixed vegetables, frozen String beans Tomato Watercress	Bamboo shoots Beets Bitter melon Carrots, fresh Cassava Celery, cooked Chard Collards Eggplant Mallow Okra Olives Parsnip Parsley Purslane Rhubarb Rutabaga Spinach, fresh/cooked Tomato sauce Turnips Vine leaves Yams

Potatoes

Good choices	Eat in moderation (up to 1/3 cup daily)	Limit or avoid
(none)	Mashed potatoes Potato salad Sweet potatoes	Baked potato with skin French fries Potato chips

Legumes

Good choices	Eat in moderation (up to ½ cup daily)	Limit or avoid
(none)	Black eyed peas Garbanzo beans or Chickpeas Green split peas Lentils Lima beans Mung beans Yellow split peas	Anasazi beans Azuki beans Black beans Great Northern beans Navy beans Pinto beans Red kidney beans Small white beans Soybeans

Nuts, seeds and spreads

Good choices	Eat in moderation (less than 2-3 Tbsp daily)	Limit or avoid
Apple butter Flaxseed	Pecans Pistachios (without shells) Sunflower seeds Tahini	Almonds Cashews Chia seeds Hazelnut spread/Nutella Mixed nuts Nut butters Peanuts Pumpkin seeds Walnuts

Limit Chocolate: Milk chocolate, dark chocolate, cocoa powder, chocolate syrup and hot chocolate are high oxalate foods.

Breads, snacks and crackers

Good choices	Eat in moderation (up to 2 slices/choice daily)	Limit or avoid
Bran muffin Corn bread Cracked wheat bread Popcorn (1.5 cups) Oat bran bread Oatmeal bread Saltines (10) Triscuits (10) White bread Wheat crackers Whole oat bread Whole wheat bread	Biscuit (plain/buttermilk) Corn chips (15) English muffin (white) Rye bread Tortillas Pretzels (10) Wheat bran bread	English muffin (whole wheat) Pancakes (mix)

Pastas, rice and grains

Good choices	Eat in moderation (up to ½ cup daily)	Limit or avoid
Barley Corn bran Corn flour Oat bran White/parboiled rice White pasta	Couscous	Amaranth Brown rice Miso Wheat flour, whole grain Buckwheat groats Bulgur Cornmeal, corn grits Millet Quinoa Rice bran Soy flour Wheat berries

Cereals

Good choices	Eat in moderation (up to $\frac{3}{4}$ cup daily)	Limit or avoid
Cheerios Corn Pops Cornflakes Crispix Honey Bunches of Oats Oatmeal Puffed Rice Puffed Wheat Rice Chex Wheetabix	Cereals with nuts/dried fruit Cream of Wheat Fiber One Frosted Mini Wheats Mueslix Raisin Bran Red River	All Bran (buds/flakes) Bran Flakes with Raisins Oatmeal Crisp with Almonds Shredded Wheat

Beverages

Good choices	Drink in moderation (up to 1 cup daily)	Limit or avoid
Apple juice Coffee Cow's milk Grape juice Herbal tea Lemon juice Mango juice Orange juice Rice milk Soy beverage Water	Black tea Prune juice Plum juice	Almond milk Carrot juice Chocolate milk Cranberry juice Hot chocolate V8 juice

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This information does not replace the advice you receive from your health care provider. If you have questions, ask your health care team.