

Dietary Changes to Prevent Calcium Oxalate Stones

By reducing the concentration of oxalate and calcium in your urine, you may reduce the risk of future calcium oxalate stone formation. The amount of fluid protein, sodium, and oxalate in your diet can affect the concentration of oxalate and calcium in your urine. Below are dietary guidelines to assist you:

1. Drink More Fluids

By increasing the fluid in your diet, your urine will be less concentrated with calcium or oxalate. Aim for eight cups of non-alcoholic, caffeine free fluids per day. The color of your urine is a good indicator of its concentration. It should appear light yellow in color.

2. Limit Protein

Excessive protein in your diet can increase both the calcium and oxalate in your urine. To eat adequate, but not excessive amounts of protein:

A) Limit milk and milk products to two servings per day.

One serving equals:

1 cup of milk, or yogurt or

1 ounce of cheese

B) Limit your intake of fish, poultry, and meat to five ounces per day. A deck of cards is approximately the same size as three ounces of these high protein foods.

3. Limit Foods High in Oxalate

By avoiding foods very high in oxalate, you may reduce the oxalate in your urine.

A list of high oxalate foods

Protein Foods	Grains	Beverages	Fruits	Vegetables	
Nuts	Grits	Cocoa	Blackberries	Beets	Leeks
Peanut butter	Soybean Crackers	Ovaltine	Blueberries	Beet Greens	Lima Beans
Soy protein	Wheat germ	Tea	Fruit cocktail	Carrots	Mustard Greens
Tofu		Cola	Grapes	Cauliflower	Okra
		Cranberry juice	Lemon Peel	Celery	Pokeweed
			Orange	Collard greens	Rutabagas
			Orange Peel	Dandelion Greens	Squash
			Plums	Eggplant	Sweet Potato
			Red currants	Green Beans	Swiss Chard
			Rhubarb	Green Peppers	Waxed Beans
			Strawberries	Kale	

1. Reduce Sodium

Too much sodium in your diet can result in more calcium in your urine. Aim for less than 3000 milligrams of sodium per day.

To reduce the sodium in your diet:

A) Enjoy your food without added salt. Use vinegar, herbs, and spices to flavor your foods instead of salt.

B) Cook without salt.

C) Check food labels. If the food contains more than 250 milligrams of sodium per serving, it contains too much sodium. In general, the more processed a food is, the greater is its sodium content.

1. Avoid Vitamin C Supplements

- Vitamin C rich foods are acceptable.
- Vitamin C supplements are not recommended since it can increase oxalate in your body.

1. Calcium Restriction is NOT necessary

- Low calcium intake may lead to bone loss (osteoporosis).
- Low levels of calcium may increase the oxalate absorbed during digestion.

Regular Diet	Serving size	Oxalate Content
Breakfast Meal (Early Morning)		
Raisin Bran Cereal	1/2 cup	46.1
Bagel, plain	1/2 bagel	4.1
Cantaloupe	1/4 fruit	1.3
Milk (skim or 1%)	1 cup	0.5
Cream Cheese (reduced fat)	1 TBS	0.06
Total Oxalate		52.06

Mid-Morning Snack		
Poptart	1 tart	6.6
Total Oxalate		6.6

Lunch		
Whole Wheat Bread	2 slices	11.4
Turkey	2 oz	0.0
Lettuce & Tomato	slices	1.0
Mayonnaise	1 TBS	0.0
Apple	1 fruit	0.6
Vegetable Beef Soup	1 cup	4.6
Total		17.6

Mid-Afternoon Snack		
Pretzels	3/4 oz	4.5
Total Oxalate		4.5

Dinner		
Chicken breast, baked	3 oz	0.0
Baked Potato	1 medium	97.4
Sour Cream	2 TBS	0.07
Broccoli	1/2 cup	4.0
Salad	small	2.0

Choices Low Oxalate Diet	Serving size	Oxalate Content
Breakfast Meal (Early Morning)		
Multi-Grain Cheerios	1 cup	4.3
Milk (skim or 1%)	3/4-1 cup	0.5
Cantaloupe	1/4 fruit	1.3
Apple or Orange Juice(optional)	6 oz	1.7
Coffee (decaff or reg) with or without cream & sugar	1 cup	1.0
Total Oxalate		8.8

Mid-Morning Snack		
Yogurt with Fruit	1 cup	1.0
Total Oxalate		1.0

Lunch		
Whole Wheat Bread	2 slices	11.4
Tuna Salad	3 oz	2.5
Lettuce & Tomato	slices	1.0
Cheese (american, swiss)	2 slices	1.2
Mayonnaise	1 TBS	0.0
Grapes	1/2 cup	1.0
Chicken Noodle Soup	1 cup	3.0
Total		20.1

Mid-Afternoon Snack		
Popcorn (air-popped)	1 1/2 cups	6.75
Total		6.75

Dinner		
Any fresh fish (haddock, cod etc)	3 oz	1.0
White Rice with stir-fried Vegetables (mushrooms, onions, broccoli, zucchini)	1 cup	8.4
Salad (use low oxalate veg)	small	2.0
Salad Dressing (oil based)	2 TBS	0.2

Low fat Salad Dressing	2 TBS	0.1
Dinner Roll	1 roll	5.9
Orange Slices	3/4 cup	23.8
Skim or 1% Milk	1 cup	0.5
Total		133.77

Snack (Dessert)		
Ice Cream (vanilla)	1/2 cup	0.4
Strawberries	1 cup	3.0
Total		3.4

Total Oxalate		217.93
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Dinner roll	1 roll	5.9
Diet Lemonade	1 cup	0.7
Total		18.2

Snack (Dessert)		
Crackers (Ritz, Wheat etc)	5 crackers	2.5
Cheddar Cheese	5 oz	0.5
Red or White Wine	4 oz	1.0
Total		4.0

Total Oxalate		58.9
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Low Oxalate Alternatives

Foods High in Oxalate	Low Oxalate Alternatives
Nut Products (Almonds, Cashews, Peanuts, Pecans, Walnuts)	Popcorn
Potato Chips	Popcorn, Graham Crackers, Triscuits, Saltines
Chocolate Chip Cookies	Oatmeal Cookies, Fig Bars, Popsicles, Pudding, Jello
Rice Dream	Soy Milk
Grapefruit, Oranges, Tangerines	Cantaloupe, Honeydew Melon, Mango, Nectarines
Dates	Figs, Raisins
Canned Pineapple	Canned Peaches, Canned Pears
Dried Figs, Dried Pineapple	Dried Apricots, Apples or Cranberries
Fava, Navy or Refried Beans	Soybeans, Mung Beans
Spinach	Lettuce, Broccoli, Brussels Sprouts
Turnip, Yams	Yellow Squash
Asparagus	Broccoli, Brussels Sprouts, Cauliflower
Collards	Kale, Mustard Greens
Potatoes	White Rice, Macaroni & Cheese
Cream of Wheat, Red River Cereal, Farina Cereal, Corn Grits	Oatmeal Cereal, Granola Bars
French Toast, Pancakes	Cornbread, Eggs
Clam Chowder, Lentil Soup, Miso Soup	Chicken Noodle Soup
Cheeseburger	Hot Dog, Chicken Nuggets
Lasagna	Macaroni & Cheese
Peanut Butter	Apple Butter
Tomato Sauce	Cream Sauce, Olive Oil, Mozzarella Cheese
Blueberry Muffins	Oat Bran Muffin, Corn Bread

Low Oxalate Foods

Delicious, Nutritious, and Ve-r-y Low Oxalate Foods

The following are ultra-low oxalate foods available on a low oxalate diet.

Meat: All fresh and frozen meats: beef, pork, chicken, turkey; fish and seafood such as flounder, salmon, tuna, shrimp, scallops; and eggs. (Avoid cured meats.)

Dairy: Dairy products made with cow's and goat's milk, including buttermilk, skim milk, 1% and 2% milk, whole milk; butter; all cheeses, including cheddar, feta, farmer, goat, mozzarella, Parmesan; sour cream, whipping cream, half & half; yogurt, plain, or with low oxalate fruit.

Fruits: Apples, avocados, cherries, cranberries, melons (cantaloupe, honeydew, watermelon), seedless grapes (red and green), peaches, plums.

Vegetables: Asparagus, broccoli, cauliflower, cucumbers; iceberg and Romaine lettuce; radishes, mushrooms, onions (yellow and white); squash (zucchini, acorn, and yellow); red sweet peppers, turnips (root), water chestnuts.

Beverages: Spring and filtered water, chamomille tea, ginger ale, beer, apple juice, apple cider.

Chocolate: White chocolate.

Grains: White and wild rice; barley.

Herbs and Spices: Basil, cilantro, mustard, nutmeg, white pepper, saffron, tarragon, vanilla, salt.

Condiments: Mustard, mayonnaise, vinegar.

Nuts, Peas and Seeds: Coconut; black-eyed peas, green peas, and yellow split peas; flax seeds.

Fats and Oils: All vegetable oils, including olive, canola, safflower, soy; margarine.

Sweets and Sweeteners: Sugar (white), maple syrup, corn syrup, honey.

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