# Health Facts for You

UWHealth

## Preventing and Managing Kidney Stones

You may need to change your diet to prevent kidney stones. You may need to increase fluid or potassium, reduce salt, or increase or decrease calcium. **But not everyone needs to make changes to their diets.** Your dietitian will look at your diet and other factors (such as your type of stone and risk factors) to see if diet changes may reduce your risk of kidney stones. If so, the dietitian will design a plan that is right you.

**Risk factors for kidney stones vary.** Parts of this worksheet may not apply to you. Your nutritionist will review and explain those that do.

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**Check risk factors below:**

**Fluids**

☐ Low urine volume makes urine too concentrated and raises the risk for all types of stones.

- Drinking 3 or more liters (quarts) daily is the best way to lower your stone risk. **You may need more if you exercise a lot or are in hot weather.**
- Try to drink all day and before bed.
- All drinks count toward your fluid intake, but low-sugar and low-calorie drinks are best.
- You may need to schedule your fluid intake. Try to divide the day into equal parts with a goal of drinking a certain amount of fluids in each part so that it adds up to about 100 ounces per day.

☐ **Salt (Sodium Chloride)**

Salt causes too much calcium to be in your urine and thus is a risk factor for calcium stones.

Most diets contain too much salt. **Only about 10% of salt intake comes from the salt shaker.** The rest comes from processed and prepared foods. The amount of salt in your 24-hour urine collection will tell us about your salt intake.

- Limit sodium to 3000 milligrams per day or less.
- Reduce portion sizes or how often you eat foods high in salt, like:

| |
|---|
| Added salt in cooking and at table |
| Salty, cured meats and deli meats |
| Canned soups, vegetables |
| Packaged foods |
| Fast foods and restaurant foods |
| Breads, bagels, rolls, baked goods |
| Some breakfast cereals |
| Salty snacks (chips, pretzels, popcorn, crackers, salted nuts, salty candy bars) |
| Creamy salad dressings, sauces (soy, teriyaki), and other condiments |
| Pickles and olives, pickled vegetables |
| Cheese (all kinds) and foods made with cheese |
| Bottled or canned pasta sauces |

☐ **Fruits and Vegetables**

Eating too few can increase the risk for all types of stones. Eating at least 5 servings of fruits and vegetables daily could decrease your risk for stones.

- **Aim to eat fruits or vegetables at each meal and as snacks.**
- Increase serving sizes to help reach the 5-a-day goal.

☐ **Calcium**

Avoid getting either too much or too little as both extremes may increase your risk for calcium stones. Calcium is good for your bones. It can also lower your risk for calcium oxalate stones, when consumed at meals. Calcium intake guidelines:

- 1300 mg – boys & girls 9-19 years
- 1000 mg – men 19-70 years
- 1200 mg – men above 70 years
- 1000 mg – women 19-50 years
- 1200 mg – women above 50 years

Tips:

- Choose 3-4 servings of calcium rich foods per day.
- Dairy foods are rich in calcium, but there are non-dairy options, too.
- **If you are at risk for calcium oxalate stones, have something with calcium at meals**.
- Below is a list of foods you are likely to be able to work into your daily schedule, ideally, one at each meal.

| **Non-Dairy Calcium Content** | |
|---|---|
| Calcium-fortified milks, juices | May have up to 450mg per 8oz |
| Dried figs | 1 cup has 300mg (beware of calories!) |
| Tofu set with calcium; soy yogurt with added calcium | Up to 300-500mg per serving |
| Broccoli, cooked | 200 mg per 1 cup |
| **Dairy Calcium Content** | |
| Milk, buttermilk, eggnog | 300mg per 8oz |
| Kefir | 300mg per 8oz |
| Yogurt from cow's milk | May have 150-500mg per ¾ cup |
| Cheese and cottage cheese* | 150-200mg per oz (cheese) or cup (cottage cheese) |

*Cheese and cottage cheese are high in salt. Eat these in small amounts.

**What about supplements?**

Calcium from foods and drinks is best. You may use calcium supplements but take them with meals. Always discuss with your dietitian before starting a supplement.

☐ **Higher Oxalate**

Higher oxalate in your urine raises the risk for calcium oxalate stones. Controlling and reducing the amount of oxalate in your urine may have **nothing** to do with the foods you eat. It may have more to do with foods you **don't** eat. The major reason for high urine oxalate is low calcium intake.

Calcium binds with oxalate in the GI tract and prevents oxalate from getting absorbed. Because of this, we may tell you to eat or drink something with calcium at every meal.

**Another reason for high oxalate is super high doses of vitamin C from supplements** (in amounts of 1000mg/day or more). Food sources of vitamin C are fine as it is hard to get "too much" vitamin C without supplements.

**There are a few specific high-oxalate foods might cause high urine oxalate**. These include nuts and nut butters, spinach, rhubarb, beets and beet greens, chocolate, whole grains, potatoes, potato chips, and French fries. A lot of these are healthy foods that you should still include in your diet if you also eat or drink something with calcium at the same time. Your dietitian will tell you if you need to limit these foods.

☐ **Higher Uric Acid**

**You are at a higher risk for uric acid stones if your urine has high uric acid.** Large portions of meats, fish, and poultry can raise uric acid or reduce urine pH; both are risk factors for uric acid stones. If this affects you, the dietitian will address it.

If you are a UW Health patient and have more questions please contact UW Health at one of the phone numbers listed below. You can also visit our website at: www.uwhealth.org/nutrition

Nutrition clinics for UW Hospital and Clinics (UWHC) and American Family Children's Hospital (AFCH) can be reached at: (**608) 890-5500.**

Nutrition clinics for UW Medical Foundation (UWMF) can be reached at: **(608) 287-2770.**