

# Preventing Kidney Stones

*Urology Care*  
FOUNDATION™  
*The Official Foundation of the  
American Urological Association*

## WHAT ARE KIDNEY STONES?

Urine contains many dissolved minerals and salts. When the urine has high levels of minerals and salts, it can help to form stones.

## WHAT CAUSES KIDNEY STONES?

- Low urine volume
- Diet
- Bowel conditions
- Obesity
- Medical conditions
- Medication
- Family history

## WHAT WILL MY HEALTH CARE PROVIDER DO TO HELP ME AVOID GETTING ANOTHER KIDNEY STONE?

Your stone may not have caused you a lot of problems. Or you may have had a stone that caused your kidney to swell, causing a lot of pain. What is important after you have a stone is preventing them in the future.

Your health care provider may do the following to find out why you are getting stones and give you the best tips to stop them from recurring.

## Medical and dietary history

Your health care provider will ask questions about your personal and family medical history. Understanding your medical, family and dietary history, your health care provider can find out how likely you are to form more stones.

## Blood and urine tests

Blood tests can help to find out if a medical problem is causing your stones. Your urine can be tested to tell if you have a urinary tract infection or crystals that are typical of different stone types.

## Imaging tests

These tests are done to see if there are any stones in your urinary tract. Imaging tests may be repeated over time to check for stone growth. You may also need imaging tests if you are having pain, hematuria (blood in your urine) or recurrent infections.

## Stone analysis

Testing the stone will determine what type of stone it is. Knowing the type of stone helps your health care provider decide the best way to prevent future stones.

Once your health care provider finds out why you are forming stones, he or she will give you tips on how to prevent them in the future. It is important to know there is no "one-size-fits-all" for preventing kidney stones. Everyone is different. You may have to change your diet and/or take medications to avoid getting another stone.

# Preventing Kidney Stones

## DIET TIPS TO PREVENT STONES

Half of all people who get a stone will get another one. Based on the type of stone you have, your current health issues, age and nutrition needs, your health care provider may give you tips to prevent future stones. It is very unlikely you will need to follow every tip below. But it is important to talk with your health care provider and find out which tips will work best for you.

Check which diet tips your health care provider recommends for you:

### ☐ **Drink enough fluids each day.**

If you are not producing enough urine, your health care provider will recommend you drink at least 3 liters of liquid each day. This equals about 3 quarts (about ten 10-ounce glasses). This is a great way to lower your risk of forming new stones. Remember to drink more to replace fluids lost when you sweat from exercise or in hot weather. All fluids count toward your fluid intake. But it's best to drink mostly no-calorie or low-calorie drinks. This may mean limiting sugar-sweetened or alcoholic drinks.

### ☐ **Reduce the amount of salt in your diet.**

This tip is for people with high sodium intake and high urine calcium or cystine. Sodium can cause both urine calcium and cystine to be too high. Your health care provider may advise you to avoid foods that have a lot of salt. The Centers for Disease Control (CDC) and other health groups advise not eating more than 2,300 mg of salt per day.

### ☐ **Eat plenty of fruits and vegetables.**

Eating at least five servings of fruits and vegetables daily is recommended for all people who form kidney stones. Eating fruits and vegetables give you potassium, fiber, magnesium, antioxidants, phytate and citrate, all of which may help keep stones from forming.

### ☐ **Eat foods with low oxalate levels.**

This recommendation is for patients with high urine oxalate. Eating calcium-rich foods (see next page) with meals can often control your urinary oxalate level. Urinary oxalate is controlled because eating calcium lowers the oxalate level in your body. But if doing that does not control your urine oxalate, you may be asked to eat less of certain high-oxalate foods. Nearly all plant foods have oxalate, but a few foods contain a lot of it. These include spinach, rhubarb and almonds. It is usually not necessary to completely stop eating foods that contain oxalate. This needs to be determined individually and depends on why your oxalate levels are high in the first place.

### ☐ **Eat less meat.**

If you make cystine or calcium oxalate stones and your urine uric acid is high, your health care provider may tell you to eat less animal protein.

If your health care provider thinks your diet is increasing your risk for stones, he or she will tell you to eat less meat, fish, seafood, poultry, pork, lamb, mutton and game meat than you eat now. This might mean eating these foods once or twice rather than two or three times a day, fewer times during the week, or eating smaller portions when you do eat them. The amount to limit depends on how much you eat now and how much your diet is affecting your uric acid levels.

### ☐ **Eat the recommended amount of calcium.**

If you take calcium supplements, make sure you aren't getting too much calcium. On the other hand, make sure you aren't getting too little calcium either. Talk with your health care provider or dietitian about whether you need supplements. Good sources of calcium to choose from often are those low in salt. Eating calcium-rich foods or beverages with meals every day is a good habit. There are many non-dairy sources of calcium, such as calcium-fortified non-dairy milks. There are good choices, especially if you avoid dairy.



# Preventing Kidney Stones

## RESOURCES

### *Academy of Nutrition and Dietetics: “Nutrition Care Manual”*

Review evidence-based diet manuals from registered dietitians, dietetic technicians and allied health professionals.

<http://www.nutritioncaremanual.org/>

### *National Library of Medicine*

In English:

<http://www.nlm.nih.gov/medlineplus/kidneystones.html>

In Spanish:

<http://www.nlm.nih.gov/medlineplus/spanish/kidneystones.html>

### *National Kidney and Urologic Disorders Information Clearinghouse (NKUDIC)*

Kidney Stones in Adults:

<http://kidney.niddk.nih.gov/kudisorders/pubs/stonesadults/>

### *Urology Care Foundation*

#### **UrologyHealth.org**

You may download this fact sheet and print it yourself at **UrologyHealth.org/PreventStones**. For copies of printed materials about stones and other urologic conditions, visit **UrologyHealth.org/Order** or call 800-828-7866.

Patient resources made possible through the generous support of Cook Medical.



**National Headquarters:** 1000 Corporate Boulevard, Linthicum, MD 21090

Phone: 410-689-3990 • Fax: 410-689-3878 • 1-800-828-7866 • [info@UrologyCareFoundation.org](mailto:info@UrologyCareFoundation.org) • [www.UrologyHealth.org](http://www.UrologyHealth.org)