



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, hard stones can form. These stones can be “silent” or very painful.

WHAT CAUSES KIDNEY STONES?

- Low urine volume
- Diet
- Bowel conditions
- Obesity
- Medical conditions
- Some medications and calcium vitamin C supplements
- Family history

WHAT WILL MY HEALTH CARE PROVIDER DO TO HELP ME PREVENT FUTURE STONES?

Your stone may not have caused you a lot of problems. Or you may have pain from a stone that caused your kidney to swell. What is important after you have a stone is preventing more in the future. Half of all people who get a stone will get another one.

Your health care provider should run tests to learn why you are getting stones. Based on the type of stone you have, your current health issues, age and nutrition needs, your health care provider can give you tips to prevent stones.

Medical and dietary history

Your health care provider will ask questions about your personal and family medical history. They may ask you to keep a food diary. This information will provide clues about how likely you are to form more stones and why.

Blood and urine tests

Blood tests detect if a medical problem is causing your stones. Your urine can be tested for a urinary tract infection or crystals in different stone types.

Imaging tests

These tests are done to find 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 you learn the best way to prevent future stones.

There is no “one-size-fits-all” for preventing kidney stones. Everyone is different. Results from these tests will provide

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DIET CAN HELP PREVENT ANY MORE STONES.**

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your health care provider with the best information to help you, specifically. You may have to change your diet and/or take medications to avoid getting another stone.

DIET TIPS TO PREVENT STONES

It is unlikely that you'll need to follow every tip below, but it's important to talk with your health care provider to learn which tips will help you. Check which tip your health care provider recommends.

❑ *Drink enough fluid 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 (about ten, 10-ounce glasses). This is a great way to lower your risk of forming new stones. Aim to replace fluids lost when you sweat from exercise or in hot weather. All fluids count, but try to drink water or 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 a high sodium diet and high urine calcium or cystine. You may benefit from avoiding foods that have a lot of salt. The Centers for Disease Control (CDC) and other health groups advise not to eat more than 2,300 mg of salt per day.

❑ *Eat plenty of fruits and vegetables*

Eating at least 5 to 9 servings of fruits and vegetables daily is recommended for everyone. Eating fruits and vegetables gives you potassium, fiber, magnesium, antioxidants, phytate and citrate. These elements are known to help keep stones from forming.

❑ *Eat foods with low oxalate levels*

Learning how to control oxalate in your diet depends on why your oxalate levels are high in the first. You may be asked to limit certain high-oxalate foods. Oxalate is found in many plant foods, but mostly spinach, rhubarb and almonds. It is usually not necessary to stop eating foods that contain oxalate since they're healthy foods. Rather, you can eat calcium-rich foods with meals to control your urinary

oxalate level. Calcium lowers the oxalate level in your body.

❑ *Eat less meat*

If you have cystine or calcium oxalate stones and your urine uric acid is high, animal protein may be to blame.

If your health care provider believes your diet is increasing your risk for stones, he or she will tell you to eat less meat. This includes fish, seafood, poultry, pork, lamb, and game meat. You may be asked to eat animal protein only once per day or less, and eat smaller portions. 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 or too little. Talk with your health care provider or dietitian about whether you need supplements. Foods and beverages, like broccoli, kefir or yogurt, are high in calcium but low in salt. Eating calcium-rich foods or beverages like milk with meals every day is a good habit. There are many non-dairy sources of calcium, such as calcium-fortified non-dairy milks (made from soy, almond, cashews or rice) as well. You can aim to get enough calcium in your diet without supplements.

Many foods and beverages have calcium in them. Some foods and beverages that might be easy to include on a daily basis with meals are:

Foods rich in calcium	Amount	Calcium (mg)
Calcium-fortified non-dairy milks, juices	1 cup	400-450
Milk, buttermilk (lower fat is best)	1 cup	300
Kefir	1 cup	300
Yogurt from cow's milk; soy yogurt	3/4 cup	150-300