

Calcium and Kidney Stones

What You Should Know



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” (no symptoms) or very painful.

What are the Different Types of Kidney Stones?

Kidney stones come in many different types. The way your kidney stones will be treated depends on the type of stone you have. The path to prevent new stones from forming will also depend on your stone type. Eighty percent of kidney stones are calcium stones. There are two types of calcium stones: calcium oxalate and calcium phosphate. Calcium oxalate is the most common type of kidney stone. Some people have too much calcium in their urine, raising their risk. Even with normal amounts of calcium in the urine, calcium stones may form for other reasons.

Your health care provider will tell you which kind of stone you have, and how you can prevent developing them in the future.

What Should I Eat if I Have Calcium Oxalate Stones?

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.

Eat the recommended amount of calcium. It may seem like you want to avoid calcium if you have calcium-based kidney stones, but the opposite is true. Foods with calcium help you keep your bones healthy, and lower your risk for kidney stones. Aim for about 1,000 mg of calcium per day, or 1,200 mg for women over age 50 and men over age 70. 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. If you do not think you are meeting your nutrient requirements through food alone, talk to your health care provider.

It may seem like you want to avoid calcium if you have calcium-based kidney stones, but the opposite is true. Dairy is good!

Reduce the amount of salt in your diet. *It may seem like you want to avoid calcium if you have calcium-based kidney stones, but the opposite is true. Dairy is good!* Instead of lowering dietary calcium intake, your doctor may try to reduce your urine calcium level by reducing your salt intake. Having too much salt in your diet is a risk factor for calcium stones. This is because too much salt is passing into the urine, keeping calcium from being reabsorbed from the urine and into the blood. Reducing salt in the diet lowers urine calcium. This will make it less likely for you to form stones. These foods are high in salt and should be eaten in moderation:

Calcium and Kidney Stones

What You Should Know

- Cheese (all types)
- Most frozen foods and meats, including salty cured meats, deli meats (cold cuts), hot dogs, bratwurst and sausages
- Canned soups and vegetables
- Breads, bagels, rolls and baked goods
- Salty snacks, like chips and pretzels
- Bottled salad dressings and certain breakfast cereals
- Pickles and olives
- Casseroles, other “mixed” foods, pizza and lasagna
- Canned and bottled sauces
- Certain condiments, table salt and some spice blends

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. You may be asked to limit certain high-oxalate foods, such as spinach, rhubarb and almonds. Or you can eat calcium-rich foods with meals to control your urinary oxalate level.

Eat less meat. If you have 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 may 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 to 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.

About the Urology Care Foundation

The Urology Care Foundation is the world’s leading urologic foundation – and the official foundation of the American Urological Association. We provide information for those actively managing their urologic health and those ready to make health changes. Our information is based on the American Urological Association resources and is reviewed by medical experts. To learn more, visit the Urology Care Foundation’s website, **UrologyHealth.org/UrologicConditions** or go to **UrologyHealth.org/FindAUrologist** to find a doctor near you.

Disclaimer

This information is not a tool for self-diagnosis or a substitute for professional medical advice. It is not to be used or relied on for that purpose. Please talk to your urologist or healthcare provider about your health concerns. Always consult a health care provider before you start or stop any treatments, including medications. For more information, visit **UrologyHealth.org/Download** or call 800-828-7866.