

National Kidney Foundation

Diet and Kidney Stones

If you have kidney stones, you may need to follow a special diet. First, your doctor will run tests to find out what type of stones you form. From these, the doctor can determine which diet changes may be right for you. A registered dietitian can help you make the necessary changes in your diet.

What is a kidney stone?

A kidney stone is a hard mass that forms from crystals in the urine. In most people, natural chemicals in the urine stop stones from forming.

Are all kidney stones the same?

No. The most common types of kidney stones are made from calcium and oxalate. Individual treatment for kidney stones depends on the types of kidney stones that are formed.

Is there a diet I can follow to prevent me from having more kidney stones?

Sometimes following a special diet may be enough to prevent you from forming more kidney stones. Other times, diet and medications may be needed.

What kind of diet will I have to follow?

You may be asked to make changes to the amount of salt, calcium, oxalate, protein, potassium and fluid in your diet. A registered dietitian can help you with making these changes.

I had a calcium stone. What type of diet should I follow? Will I have to avoid high calcium foods?

If you have had a calcium stone, your doctor may ask you to cut back on the salt and sodium in your diet. Extra sodium causes you to lose more calcium in your urine, putting you at risk for developing another stone. Your doctor will probably advise you to limit your sodium to 2,000 to 3,000 milligrams a day. Your dietitian can help you make sodium changes in your diet.

You may not need to avoid excessive (to much) calcium in your diet. It is important that you learn from your doctor and dietitian the right balance of calcium you should eat. Following a diet low in calcium for a long period of time can lead to a loss of bone mass, or osteoporosis.

A registered dietitian or doctor can help determine if you need more or less calcium and help with the sodium changes in your diet.

I had an oxalate stone. What type of diet should I follow? Do I need to avoid foods high in oxalate?

If you have had a kidney stone that contains oxalate, some evidence (research) suggests that limiting high oxalate foods may help reduce your chance of forming another oxalate stone. Foods that are high in oxalate include: peanuts, tea, instant coffee (more than 8 ounces a day), rhubarb, beets, beans, beets, berries (blackberries, raspberries, strawberries, gooseberries, etc.), chocolate, concord grapes, dark leafy greens, oranges, tofu, sweet potatoes and draft beer. Because the stone contains calcium and oxalate, you may also need to follow the calcium recommendations from the last question.

My doctor told me to drink a lot of fluids. How much is “a lot”? Does it matter what kind of fluid I drink?

To lessen your risk of forming a new stone, it is important that you drink at least three to four quarts of fluid throughout the day. In hotter weather, you may need to drink more to make up for fluid loss from sweating. This will help keep your urine less concentrated. Less concentrated urine reduces the risk of stone formation. Most of the fluid you drink should be water.

Is there anything else I can do with my diet to help prevent the formation of kidney stones?

Reducing the amount of animal protein may help. Sources of animal protein include beef, chicken, pork, fish and eggs. Most people need only four to six ounces of high protein foods and three servings of milk or cheese a day. Check with your doctor or dietitian to be sure your protein intake is enough, but not too much.

Will it help/hurt me to take a vitamin or mineral supplement?

The B vitamins (which include thiamine, riboflavin, niacin, B6 and B12) have not been shown to be harmful to people with kidney stones. However, check with your doctor or dietitian for advice on the use of vitamin C, vitamin D, fish liver oils or mineral supplements containing calcium since some supplements can increase the chances of stone formation in some people.

The National Kidney Foundation would like to thank the Council on Renal Nutrition for the development of this fact sheet.

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