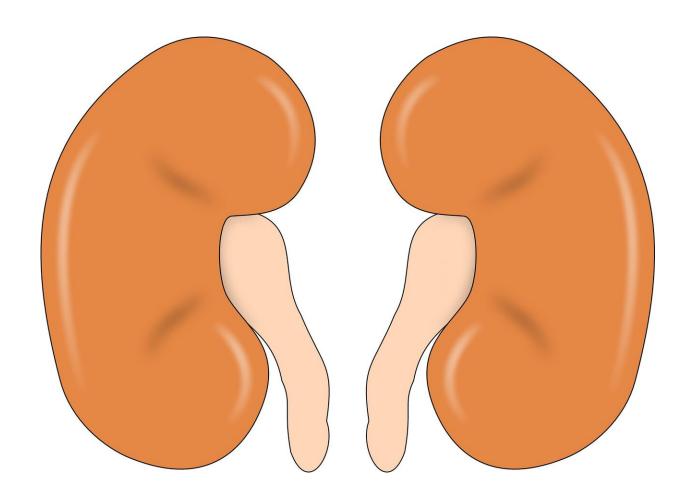


Q&A: reducing your risk of kidney stones

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Dear Mayo Clinic: My father has a history of kidney stones. He has changed his diet in the past year, which seemed to help. I'm concerned though, since I had heard kidney stones can increase during the summer. Is



this true? If so, are there any tips for how he can further reduce his risk?

Answer: As temperatures rise during the summer months, so does the risk of developing kidney stones, even if you have never had one before. There are several reasons why there is a rise in kidney stones during the summer months. Among these reasons are an increase in outdoor activities, and the amount and types of food and drink we consume.

Research shows that as the weather warms up, people spend more time outdoors, doing yardwork, spending time at the pool or around a barbeque. And often the body is not getting the type of fluids it needs while losing more than normal via the skin.

Kidney stones are hard deposits of minerals and salts that form inside your kidneys. They develop when your urine contains more crystal-forming substances, such as calcium, oxalate and uric acid, than the fluid in your urine can dilute.

There are several causes for kidney stones, including diet, which can play a significant role in the formation of kidney stones. A family or personal history of kidney stones raises your risk, as do certain medications and medical conditions.

Diseases and conditions may increase the risk of kidney stones include inflammatory bowel disease, chronic diarrhea, renal tubular acidosis, liver disease, cystinuria, hyperparathyroidism and urinary tract infections. High body mass index, large waist size and weight gain also are associated with kidney stones. Having gastric bypass surgery and taking certain medications can raise your risk, too.

One of the most straightforward ways to lower kidney <u>stone</u> risk is to drink plenty of fluids, water in particular. Extra fluids dilute urine, making stones less likely. During the summer months, it is important to



drink plenty of water to prevent dehydration. But consuming lots of liquid in the heat of summer can lower your risk for developing kidney stones, as well.

Typically this equates to drinking about eight to 10 glasses of water a day, which should allow for you to pass approximately 2{ liters of urine per day. One way to gauge whether you have adequate fluid intake is to check the appearance of your urine. If it's light or clear, you're likely drinking enough fluids. Avoid too many sugar sweetened beverages or colas as these can increase the risk. Added sodium in sports drinks and an excess of calcium also can increase your risk for stones.

The amount of salt in your diet makes a difference, too. Taking in too much salt increases the amount of calcium your kidneys have to filter, and that raises your risk of kidney stones.

Many foods that are popular during the summer, including processed foods and meats like hamburgers and hot dogs, which are laden with sodium and nitrates, also can affect your risk for kidney stones. Reducing the amount of salt in your diet may lower the risk of stones.

Crafting a diet to prevent kidney stones can be complicated, so if your father has not had a consultation with a dietitian, I would recommend that he do so. Together they can review his specific situation and work to create an eating plan tailored to his needs during the summer and beyond.

It is important for your father to know the type of stone he forms. This can help with dietary choices. For example, if his stones are calcium oxalate, he may need to limit foods rich in oxalates. This includes certain fruits and vegetables, as well as nuts and chocolate. In most cases, eating low-fat dairy products with meals can protect against kidney stones by lowering oxalate that is absorbed. Uric acid kidney stones can form in



people who don't drink enough fluids, have diabetes or metabolic syndrome, or eat a high-protein diet. In that case, choosing a diet low in animal protein can help.

If he has not already had one, I would recommend your father ask his health care provider for a test called a "metabolic urine profile." This test involves analyzing urine over a 24- to 48-hour period. It gives specific information about how the kidneys are working and helps identify modifiable risk factors for kidney stone development.

Given your father's history, it is important to know that heredity plays a role in kidney stones. People who have a family member with kidney stones are at least twice as likely to develop stones as those who don't have that family history. Though kidney stones can occur in people in their 20s, most people get their first kidney stone between the 40 and 60. After you have one stone, the chance of getting another within a year is about 15%. The likelihood of developing more stones in three to five years is 35% to 40%, and within 10 years, it's 50%.

By taking time to become educated about kidney stones and practice good hydration and diet, your father can reduce his risk for <u>kidney</u> stones despite the changing temperatures. Should he find that his <u>kidney</u> stones are increasing, he should follow up with his <u>health care provider</u> or a nephrologist.

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