

Dietary advice for stone formers: frequently asked questions

How much do I need to drink?



Drinking enough fluid is the most important aspect of preventing stone formation and will reduce your risk of stone formation significantly. Not drinking enough fluid can make your urine concentrated and make stones more likely to form. Try and keep your intake distributed evenly throughout the day.

Aim to drink 2-3 litres of fluid each day. You should aim to keep your urine colourless throughout the day; this equates to a urine output of at least 2 litres per day. In patients with cystine stones, however, an output of 3.5 litres per day is required.

The fluid should be in the form of water, squash, diluted apple juice, mineral water with a low concentration of minerals, or herb or fruit tea.

Caffeinated tea, coffee can be consumed in moderation but are not as suitable as the above. Cola drinks, lemonades and soft drinks containing sugar, as well as alcoholic beverages are not suitable.

In addition, it is helpful to try and drink 1 or 2 glasses of water before going to bed and on rising in the morning

Is my diet important?

Diet is not as important a factor as fluid intake, but it certainly has a role to play. The most important aspect is to have a well balanced diet in which an excessive amount of calories is avoided. This means that the diet should include fresh fruits, salads and vegetables, low fat dairy produce, and whole grain products such as bread or cereals. A high fibre diet is also important, although wheat bran should not be eaten due to its high content of oxalate. Finally, a diet low in salt is important.

Can I eat meat and other protein?

Yes, but the intake of protein should be restricted to approximately 150g per day. A high intake of animal protein appears to increase the risk of stone formation. Avoid large portions of meat, fish or eggs.

I've heard that calcium is a bad thing to have in the diet if you have kidney stones. Is this true?

Severe calcium restriction can actually be harmful and increase the risk of stone formation because it will result in high levels of oxalate in your urine. A daily intake of up to 1000mg per day is recommended for calcium stone formers. It might be important to reduce the calcium in your diet, however, if you have excessive calcium in the urine. Discuss this with your doctor.

Calcium is found in dairy products such as milk, yoghurt, cream and cheese. A normal, varied diet will give the average person about 500mg of calcium before adding in any dairy products. Milk and yoghurt contain about 120mg per 100g, soft cheese about 400 mg per 100g, and hard cheeses up to 1000 mg per 100g.

Do oxalates play a part in stone formation?

Yes. You should try and avoid oxalate-rich foods to reduce the amount of oxalate in your urine. The following foods are high in oxalate:



Rhubarb, celery, spinach, beetroot and sesame seeds which should be avoided.

Black Tea, chocolate, nuts (including peanut butter), cocoa and carob which should be restricted.

It is not necessary to exclude oxalate-rich foods completely; simply eat them in small amounts.

Should I restrict the amount of salt I take?

Yes. A high salt intake can contribute to calcium stone formation. Do not add salt to your food at the table but use pepper, herbs, spices or vinegar as alternative flavourings. You can, however, add a small amount of salt during cooking. You should aim to keep your salt intake to 2,300 -3000 mg/day. Bear in mind that 1 teaspoon of salt contains approximately 2, 500 mg.

Try to eat low salt foods. Avoid high-salt, tinned, packet and processed foods (e.g. soups, salted crisps or nuts, tinned meats, meat paste, smoked fish and fish paste).

Is anything else important?



It is important to lose weight if you are overweight. Practicing physical activity is important, but if you sweat during this you must ensure that you drink plenty of fluid to avoid becoming dehydrated.

Are there any other tests that you can do to investigate why I form stones?

Yes. In all patients who have had a kidney stone blood tests are done to check the kidney function and also ensure that the levels of uric acid or calcium in the blood are not too high. In high risk stone formers, or those who have had recurrent stones, then collection of two 24hr urine specimens for analysis is important. Your doctor can tell you more about this.

Summary

Keeping your urine colourless is the single most important factor in trying to reduce the chance of forming a further stone. A normal calcium, low-salt, low-protein, dietary regime can reduce your risk of stone formation further.



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