What can I do to prevent kidney stones?

If you have had a kidney stone in the past, you have a 60-80% chance of forming another stone at some point in your life. To reduce your chances of forming another kidney stone, the first step is to find out why the stone formed in the first place. If the stone was available for collection and was sent for stone analysis, you will be able to find out what kind of stone your body made.

Why is knowing the type of stone you formed important?

Knowing the chemical makeup of the stone and urinary profile will helps us understand why a person is prone to forming stones and what we can do to minimise/ stop stone formation.

What are the types of kidney stones?

Calcium-containing stones – These make up nearly 75% of kidney stones. People who form this type of stone either have too much of one type of three chemicals in their urine, or not enough of another. In particular, they have either too much calcium, oxalate, or urate in their urine, or too little citrate.

Uric acid stones – About 10 percent of kidney stones contain uric acid, a waste product created by the body. Ordinarily, uric acid dissolves in the blood, passing through the kidneys into the urine where it is eliminated. But when the body produces too much of it, or the kidneys are unable to get rid of it, the acid builds up, eventually crystallizing into deposits. Certain genetics, carrying extra weight and a diet rich in protein may increase your risk of uric acid stones. Men are more susceptible than women, particularly if they have gout.

Struvite stones – These form after an infection of the urine and makes up between 10-15% of kidney stones. Since women are more susceptible to urinary tract infections, they are also at greatest risk for this type of stones. Treatment is often two-fold – removing all the stones and preventing recurrent infection which might mean getting tested regularly to ensure your urine is bacteria-free.

Cystine stones – This stone form when the cystine leak through the kidneys and into the urine to form crystals. Although cystine stones account for only 1% of all kidney stones and forms in people with rare inherited disorders, they are difficult to treat and often require life-long treatment.

What can a dietitian do to help me with kidney stone prevention?

After your doctor has completed an evaluation which may include blood test, stone analysis and/ or 24-hour urinalysis, a dietitian can recommend changes to your current diet to help lower your risk of kidney stones. The kind of stone a person's body make determines what dietary changes may be needed.

How much fluid should I drink to prevent stone formation?

Drinking enough fluids is the most important way of preventing crystallisation and reduces your risk of stone formation by almost one third.

Drinking enough fluids helps to dilute your urine, making stone less likely to form. A good rule of thumb is to spread out your fluid intake evenly throughout the day. The amount of fluid you need depends on the weather, occupation and your activity level. If you sweat more, you will need to drink more. You need to drink enough to produce at least 2 litres of urine a day. Just watch your urine colour. On waking your urine will be darker because it's concentrated, urine colour should be pale and almost watery throughout the day.

My doctor tells me my uric acid levels are high and I need to cut down on my purines. What does this mean?

Purine is a compound found mainly in animal protein such as beef, pork, fish, chicken, lamb and mutton. When they are consumed, they are broken down into uric acid. When you eat a diet high in protein, you will have higher levels of uric acid, which may increase your risk of forming stones.

"I was told I had a Calcium oxalate stone. Does this mean that I should cut down on Calcium in my diet?"

Whilst in some circumstances reducing your Calcium helps. In most patients, having enough dietary calcium can actually protect against stones. Calcium binds with dietary oxalate, making less oxalate available for stone formation. Your body also needs Calcium to support bone and teeth.

"Why do I need to cut down sodium and what does it have to do with my kidney stones?"

The human body carefully regulates its sodium levels. One of the functions of the kidney is to remove the sodium from our body. When excess sodium is removed in the urine, calcium

is also removed proportionally. In other words, the more sodium you take in and is removed, the more calcium you waste in the urine. If you cut back on how much salt you have, then you also will reduce the amount of calcium in your urine which will help prevent new stones from forming.