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PREVENTION OF KIDNEY STONE FORMATION

Kidney stones result from crystals in the urine aggregating together when the urine becomes highly concentrated. Normally these crystals pass through the urinary tract without problems. Occasionally, stones large enough can cause obstruction of the kidneys which may result in severe pain, bleeding, infection or kidney failure.

After treatment of stones, further stone formation and symptoms will occur in 50% of patients within 10 years. General measures in kidney stone prevention revolve around maintaining a healthy lifestyle and normal weight, keeping up fluid intake, reducing animal protein intake and decreasing salt in the diet. Unfortunately stones can reform despite of these measures.

Increase Urine Volume

The best method to prevent stone formation is to drink more fluids, thereby diluting your urine. Fluid intake needs to be increased to 8 to 10 glasses (2.5L) in a 24 hour period. Ideal fluids include water and citrus juices eg lemon juice.

More oral fluids need to be consumed on hotter days or days of increased physical activity due to insensible losses from perspiration (sweating). A good measure of adequate volume intake is the colour of urine should be clear or a very pale yellow.

Decrease Salt Intake

The human body carefully regulates its sodium levels. When excess sodium is excreted in the urine, calcium is also excreted proportionally. In other words, the more sodium you take in and excrete, the more calcium you waste in the urine. Excess calcium in the urine can lead to new stone formation. Try to reduce dietary sources of sodium, including fast foods, packaged or canned foods, and salty snacks. Your goal should be less than 2000 mg/ day of sodium (one teaspoon of salt per day).

Reduce Protein Intake

Excessive protein intake can result in uric acid stones. As a general recommendation, limit your daily intake to 350 grams per day in total of beef, poultry, fish and pork.

Reduce Oxalate Intake

Dietary factors are not the most important aspect in preventing common Calcium Oxalate stone formation. However avoiding excessive oxalate rich foods such as **tea, cocoa, chocolate, rhubarb, spinach and nuts** is sensible.

Calcium Intake

There is no evidence restricting calcium intake reduces kidney stones from developing. Unless there is a specific abnormality detected through blood tests, calcium stones are not normally due a calcium excess. The recommended daily requirement of calcium is 1000 mg, and two-thirds is consumed in dairy containing products.