

KIDNEY STONES / URINARY CALCULI (STRUVITE STONES):

The formation of crystals and calculi due to mineral deposits in urine are known as urinary calculi, when formed in kidney are known as kidney stones but can form anywhere in the urinary tract and they are named depending on the site where they are formed. Struvite stones are also known as magnesium ammonium phosphate stones, triple phosphate or "infection stones". About 10% of kidney stones are struvite stones.

CAUSES

1. Family history of kidney stones.
2. Decreased intake of water.
3. Deficiency of vitamin B6 and magnesium.
4. Sedentary life style.
5. Hereditary disease - renal tubular acidosis develop kidney stones.
6. Cystic kidney disease.
7. Hormonal disorder.
8. Drugs used to treat HIV.
9. Struvite stones: usually seen in women.
10. Usually occur after or with kidney or urinary tract infections.

DIETARY MANAGEMENT

1. Kidney stones have tendency to reoccur, it can be prevented by some dietary changes. Depending upon the type of stones you can make necessary changes in your diet and prevent stone formation.
 - Fluid intake:
 - Drink lots of water, fruit juice, vegetable juice and other drinks. At least 50% total fluid intake should be water.
 - Drink about 3-5 liters of water as water dilutes urine and thereby hinders the stone formation.
 - Drink enough to ensure the passage of 2000 ml / 70 oz of urine per day.
 - Never let yourself become dehydrated. Drink more water if you are doing strenuous work or are working in hot humid climate.
 - Drink lots of orange juice or other citrus fruit juices like - grapefruit, cranberry and grape juice. Citrus fruits especially orange juice is rich in potassium and citrate, potassium citrate is commonly used to prevent kidney stones.
 - Reduce sodium intake. High sodium intake increases the risk of kidney stone by increasing urinary saturation of calcium phosphate and monosodium rate and decreases the inhibitory activity against calcium oxalate crystallization.
 - Consume good amount of B-complex vitamin daily, especially pyridoxine (Vitamin B-6) and B-1 (thiamine) as their deficiency is associated with formation of stones.
 - Reduce intake of sugar as it is associated with kidney stones.
 - If possible stick to vegetarian diet. Studies have shown that plant sources of oxalates and calcium are not the cause for stone formation. Diet high in animal protein affects certain minerals in the urine which aids in the formation of kidney stones.

- The main cause of struvite stone is infection so 1st treat the infection.
2. Struvite stones are dissolved in acidic urine. Hence consume foods high in citrates.
- Consume lots of vitamin C especially orange juice should be consumed in large quantities. Vitamin C makes urine acidic and there by aids in eliminating infection and dissolves the stone.
 - Urinary infection and stones can be prevented by daily consumption of much greater amounts of ascorbic acid (vitamin C).

CONSULT YOUR PHYSICIAN

- 1) If you have continuous pain with the above mentioned symptoms contact your physician for proper diagnosis and treatment.
- 2) Do not make changes in diet before medical evaluation of the stone / urine.
- 3) If you notice blood or pus in urine see you physician immediately.
- 4) If you have fever, frequent desire to urinate, continuous pain it is suggestive of infection see your physician immediately.
- 5) Do not self medicate or take any supplements without consulting your physician.
- 6) If you pass stone in urine take it for medical evaluation / chemical analysis of its content.

NOTE : PLEASE CONTACT WITH YOUR DOCTOR FOR EXACT DIET FOR THE HEALTH PRBLEMS YOU HAVE.THIS A SAMPLE DIET CHART TO GET THE IDEA OF YOUR DAILY ROUTINE FOOD INTAKE TO MAKE YOUR LIFE HEALTHY .