



KIDNEY STONE DISEASE



*Stones are for buildings,
Not for your Kidneys.*

KIDNEY STONES

Kidney stones occur when certain substances in the urine form crystals that stick to surfaces inside the kidney; if these remain small enough they can pass out of your body in the urine without even causing any symptoms. Most commonly, kidney stones are made from calcium combined with oxalate or phosphate. A less common type of stone is caused by infection in the urinary tract.

CAUSE OF FORMATION OF KIDNEY STONES

Stones are generally caused by any of the following causes,

- An inherited condition that causes you to excrete calcium in your urine.
- A low level of citrate in your urine, which may lead to calcium stones.
- A disorder that causes the parathyroid gland, to be overactive & release more hormone. This results in an increased level of calcium & phosphorus in your urine, which may lead to stone formation.
- Urinary tract infection or obstruction.
- Gout, which causes acid urine & may lead to uric acid or calcium stones.
- Chronic inflammatory bowel disease (Crohn's disease), which results in an increased level of oxalate in your urine & may lead to calcium oxalate stones.

Please note , more than 40% of cases have no obvious cause

SYMPTOMS OF KIDNEY STONES



Fever



Stomach Pain



Vomiting



Dizziness



Blood in urine



Backache

PLEASE CHECK THESE POINTS



To help prevent kidney stones, drink plenty of water min 10-12 glasses per day



If you observe symptoms of kidney stone, such as pain, nausea & vomiting, blood in urine, more frequent urination, fever & chills, please meet your doctor immediately.



Your doctor will do simple & economical blood & urine tests & ultrasonography(USG) to confirm the stone & decides the treatment accordingly



If you want to avoid repetition of stone forming, you may have to change your diet & continue on medication, (please discuss with your doctor).



Most stones pass on their own. Treatment may be needed if a stone is too large to pass, blocks the flow of urine, or causes infections, kidney damage or constant bleeding.

TREATMENT

If kidney stone is confirmed drink plenty of water min. 3-4 lit. Because most of the stones pass on their own, please check the diet & take advice from your doctor.

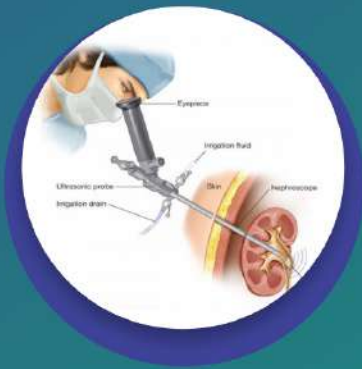
EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY (ESWL)

In this treatment, shock waves from a source outside the body are focused on the stone & when it hits the stone, it breaks down into small fragments that can pass out of the body with the urine. Patients may feel some pain as the stone fragments pass through the urinary tract.



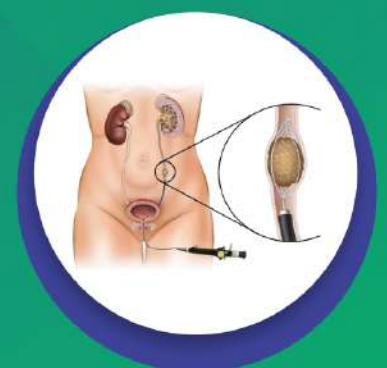
PERCUTANEOUS STONE REMOVAL

This treatment may be used when stone is very large or located in an area where ESWL is not effective. Surgeon makes a very small incision in the back & creates a tunnel into the kidney. The stone is then removed through a tube called nephroscope. Patient usually is being hospitalized for 1 or 2 days.



URETHROSCOPIC STONE REMOVAL

Surgeon passes a small fiber optic instrument through the urethra & bladder into the ureters. Once the stone is located, it is removed with a cage-like device or shattered with laser beams or shock waves.



HOW TO AVOID RECURRENT STONES

In most cases it may be possible to prevent stone, once your doctor knows the type & cause of kidney stone. Accordingly your doctor will recommend the medications & may change your diet pattern to help prevent future stones.

DIET

- Drink plenty of water 10-12 glasses per day.
- Eat less salt. A high salt diet can increase the amount of calcium in your urine or make some medications less effective.
- If stone was due to oxalate, your doctor will suggest you limit foods high in oxalate like, spinach, rhubarb, beets, strawberries, wheat bran, nuts & nut butters.
- Your doctor may suggest you eat less meat, fish & poultry to reduce the amount of calcium & acid in your urine.
- In some patients, Vit C, D, fish liver oil or supplements containing calcium may increase the chance of stone formation. Your doctor will advise you which vitamins & minerals & what amount is suitable for your body.



DIET SAY " YES "

Coconut water. As it contains dialyzable bio-molecules which can inhibit the initial mineral phase formation



Barely: as it exerts diuretic action & also rich in stone inhibitors



Bananas: Rich in Vit.B6 which breakdown oxalic acid in body & prevents stone formation



Almonds : Rich source of potassium & magnesium which acts as stone inhibitor



Lemons : Rich in Citrates, which prevents Calcium oxalate stone formation



Carrots & horse grams (kulith)



DIET SAY " NO "



To palak, chaulai & tomato. As they are high oxalate content & formation



Strawberries, Black grapes. High in oxalate content, Cauli-flower, cabbage, have high uric acid & purines.



Cashew nuts, Cucumber & Cocoa products : high oxalate content



Amla or Chikoo: High Oxalate content



Mushroom: High in Uric acid & purine content



High meat/fish intake & Milk products & Yeast: very high uric acid & purine content



Brinjal : High content of uric acid & purine content



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Diet management differs for people already
suffering from Chronic kidney disease, CKD

CONSULT A QUALIFIED NEPHRO DIETICIAN