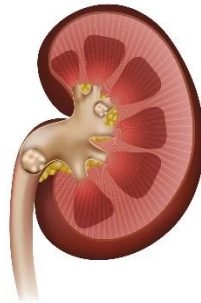




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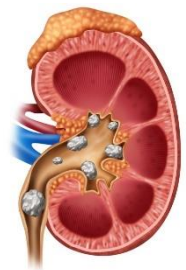
## Kidney Stones



Urinary stones are accumulations of salts and chemical compounds form insoluble crystals in urine. These insoluble crystals differ widely in size and composition.

It can be found anywhere in the urinary tract, from the kidneys to the bladder or urethra.

Men are affected more often than women. The incidence of urinary tract stones increases for those who have previously had them or a first-degree family member.



## what is the symptoms ?

Renal Colic



Pain in the side or lower abdomen



Nausea or vomiting



Frequent or difficult urination, or urine contains blood



High fever sometimes



## Reasons or factors may lead to stones

### formation?

- Genetic factors.
- Climate or weather, especially in case of drinking



inadequate amounts of water, so the

body will loss water because of high

temperature weather

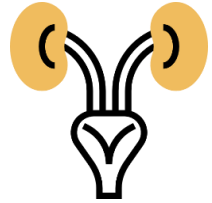


- Body loss of water via sweating with less times of urination make the urine more concentrated and fuller of salts.

# Reasons or factors may lead to stones

## formation?

- Inflammations of urinary tracts, especially the frequent inflammations



- Some gastro diseases



- Diabetes



- Obesity or sleeve gastrectomy



## Reasons or factors may lead to stones

### formation?

- Certain foods, such as spinach, chocolate, nuts,

and salty foods



- Medicines, especially excessive vitamins such as

vitamin C.



## What is the Therapy?

- It depends on the patient's condition. Renal colic pain, especially with high temperature or kidney failure, requires placing an internal stent in the ureter or an external tube from the skin to the kidney to drain urine temporarily.
- **Breaking up** some kidney stones with an external shock wave device. The waves will be more



effective if the size of the stones is less than 2 cm in the kidney pelvis or above the ureter.

- Laser lithotripsy by endoscopy anywhere in the urinary system, considering the complications associated with endoscopes such as wound and narrowing of the ureter, and pains associated with the stent is made for the ureter.

- There are special cases in which an urologist may resort to surgery through the abdomen to remove

the stones.





# What are the recommendations for preventing or reducing kidney stones ?

- Drink 2-3 liters of water in regular periods

during the day for it helps reduce the urine



concentration, which reduces the chance of salt concentration and precipitation.

- Avoid excessive soda and foods rich in salt, such as

spinach, chocolate, nuts, table salt, tea, and meats

of all kinds.



# What are the recommendations for preventing or reducing kidney stones

- Taking of more vegetables and fruits



- Better to avoid nutritional supplements and

vitamins if they are not under medical

supervision.



- Maintaining an ideal weight and sports.



# What are the recommendations for preventing or reducing kidney stones

- Adhere to medical instructions and see a doctor periodically for people with stones.



- It is advisable to consult a nutritionist to develop an appropriate eating plan for you.



## Scientific Review

The content of this booklet has been reviewed by the consultants of the  
Urology Department at King Fahd University Hospital

## Health Awareness Unit

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