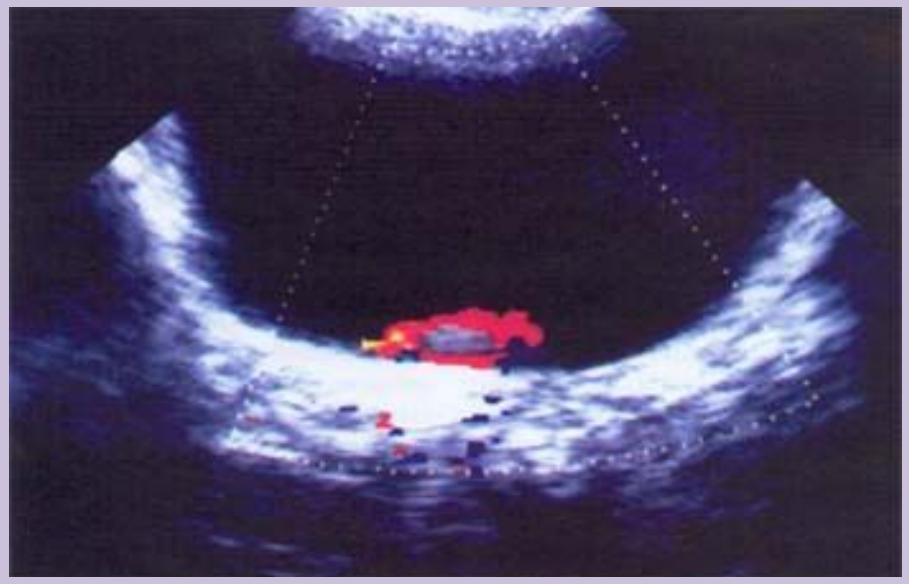
Kidney Stones in Adults and Ways of Their Treatment

Who gets kidney stones?

The persent of people in the Russian Federation with kidney stones - 10-15%

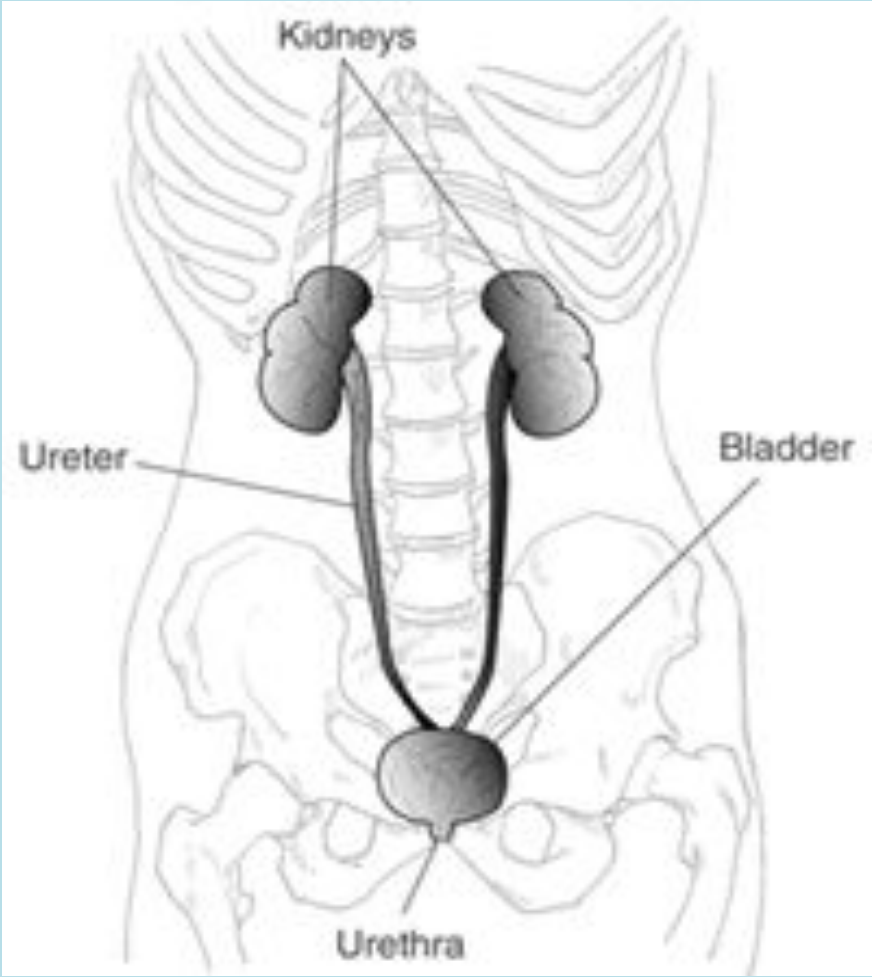
The prevalence of kidney stones rises in people from 20 to 50 years



Introduction to the Urinary Tract

The urinary tract, or system, consists of:

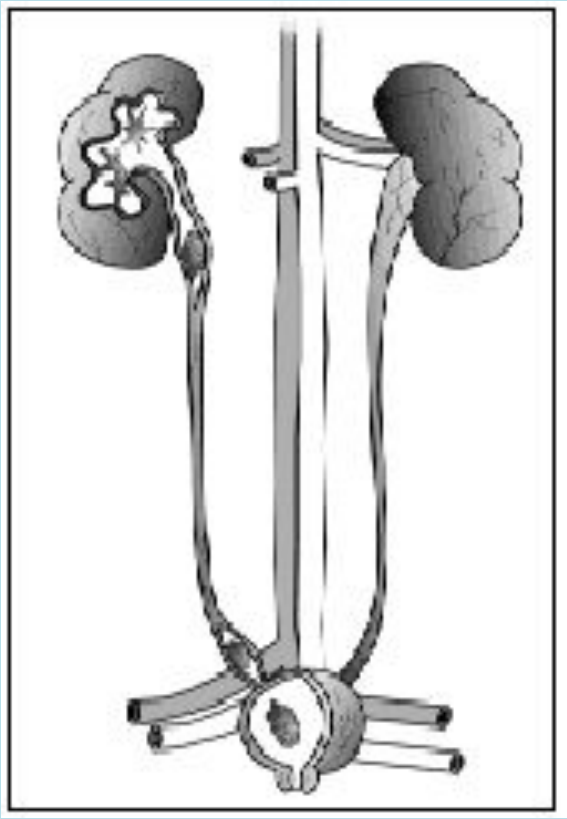
- ✔ kidneys
- ✔ ureters
- ✔ bladder
- ✔ urethra



What is a kidney stone?

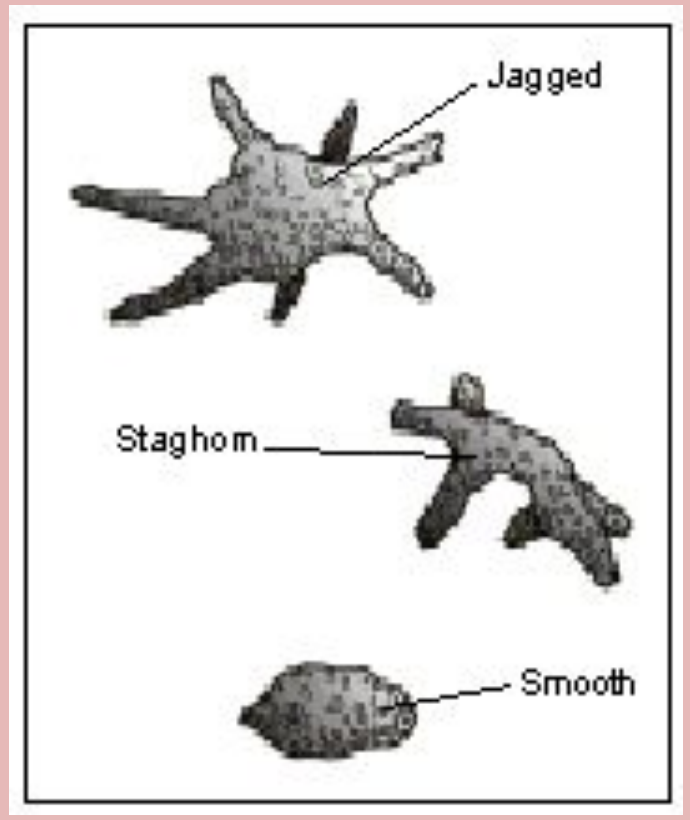
It is a hard mass developed from crystals that are made from the urine within the urinary tract.

The most common type of stone contains **calcium** in combination with either **oxalate** or **phosphate**



What causes kidney stones?

- Hereditary factors(hypercalciuria)
- Urinary tract infections
- Metabolic disorders (cystinuria, hyperoxaluria)



Foods and Drinks Containing Oxalate

High-oxalate foods—higher to lower

- spinach
- beets
- peanuts
- chocolate
- black Indian tea
- potatoes

Medium-oxalate foods

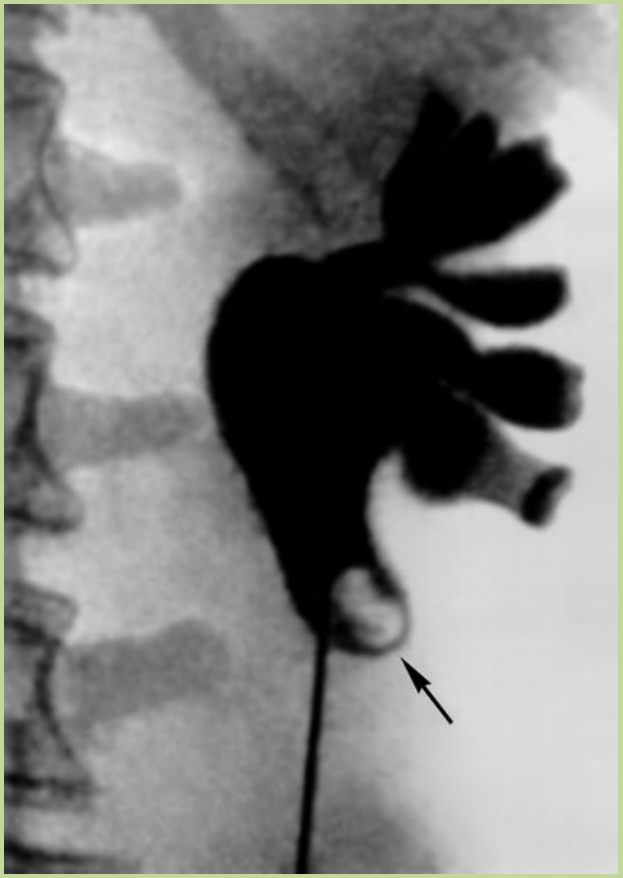
- grits
- grapes
- celery
- green pepper
- strawberries
- marmalade
- liver

What are the symptoms of kidney stones?

- Sudden extreme pain in the back and side in the area of the kidney or in the lower abdomen
- nausea and vomiting (sometimes)
- blood in the urine
- burning sensation during urination
- If fever and chills accompany any of these symptoms

How are kidney stones diagnosed?

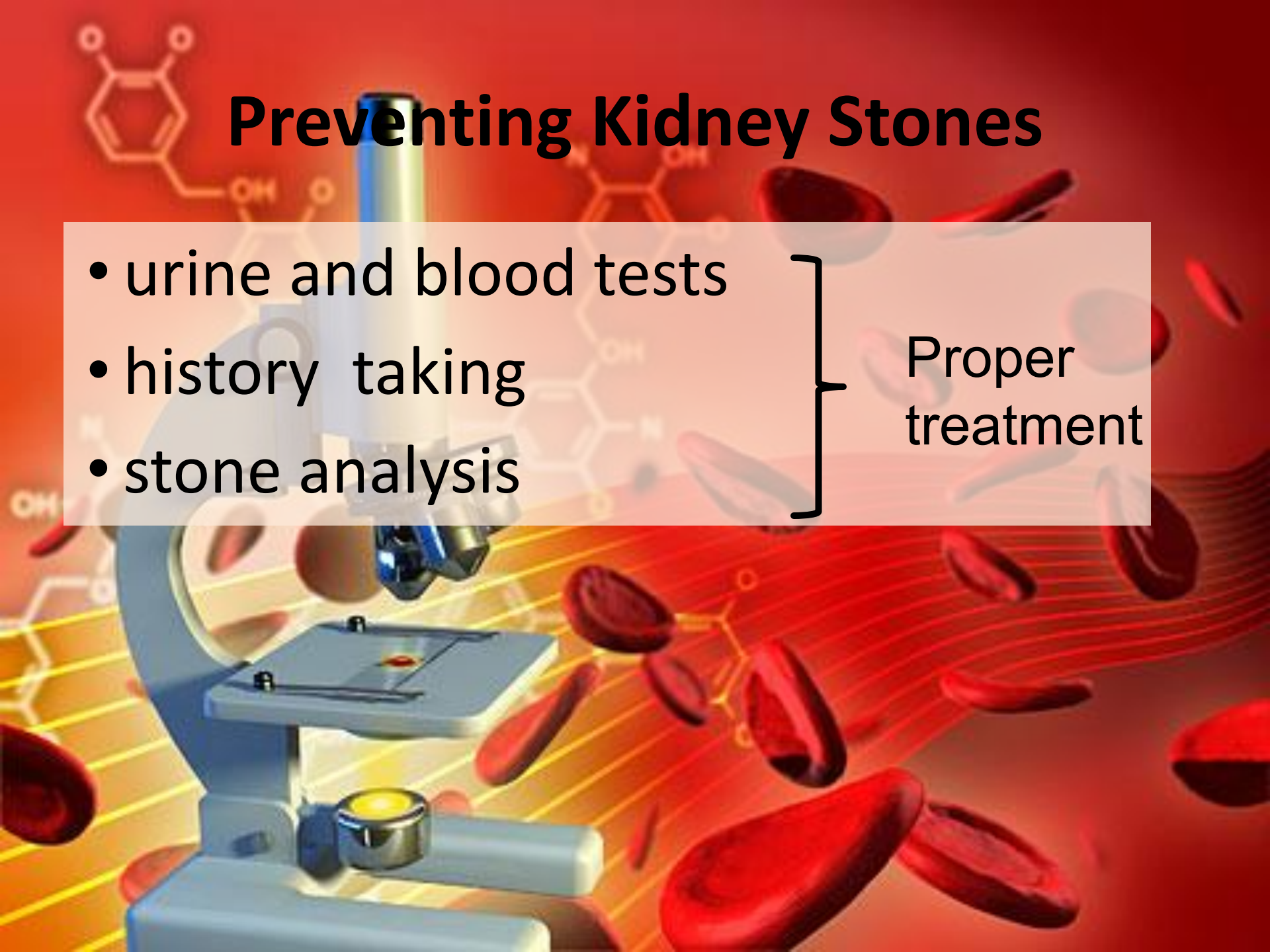
- X-rays, ultrasound
- Computerized Tomography(CT)
- Intravenous pyelogram (IVP)



Preventing Kidney Stones

- urine and blood tests
- history taking
- stone analysis

Proper treatment



Medical Therapy

A doctor may prescribe certain medications to help prevent and to treat calcium and uric acid stones.

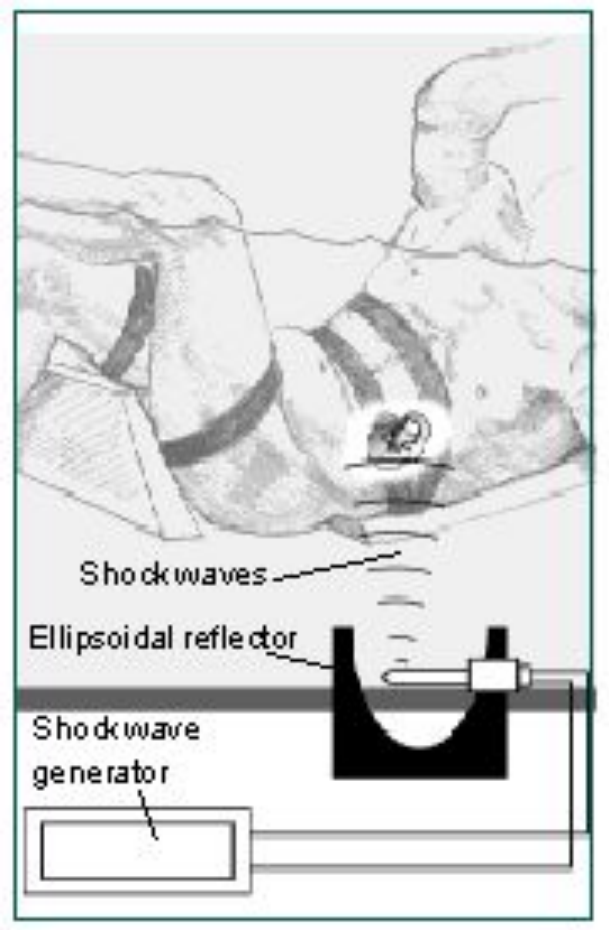
- Allopurinol
- Diuretics(hydrochlorothiazide)
- Thiola and Cuprimine
- Acetohydroxamic acid (AHA) with long-term antibiotic medicines

Surgical Treatment

may be needed to remove a kidney stone if it:

- does not pass after a reasonable period of time and causes constant pain
- is too large to pass on its own or is caught in a difficult place
- blocks the flow of urine
- causes an ongoing urinary tract infection
- damages kidney tissue or causes constant bleeding
- has grown larger, as seen on follow-up x rays

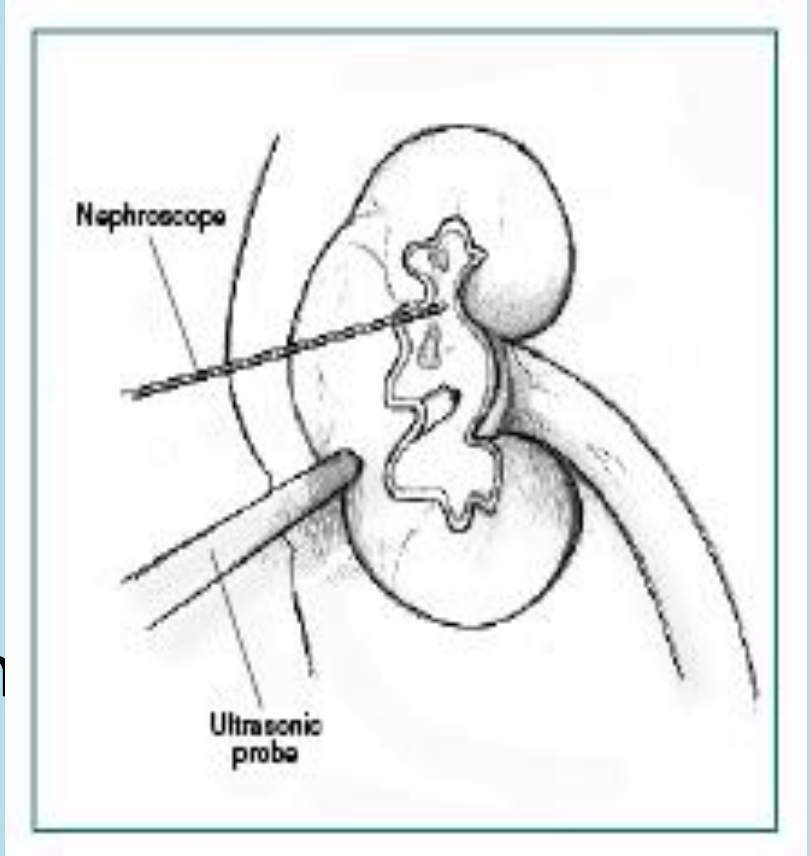
Extracorporeal Shock Wave Lithotripsy



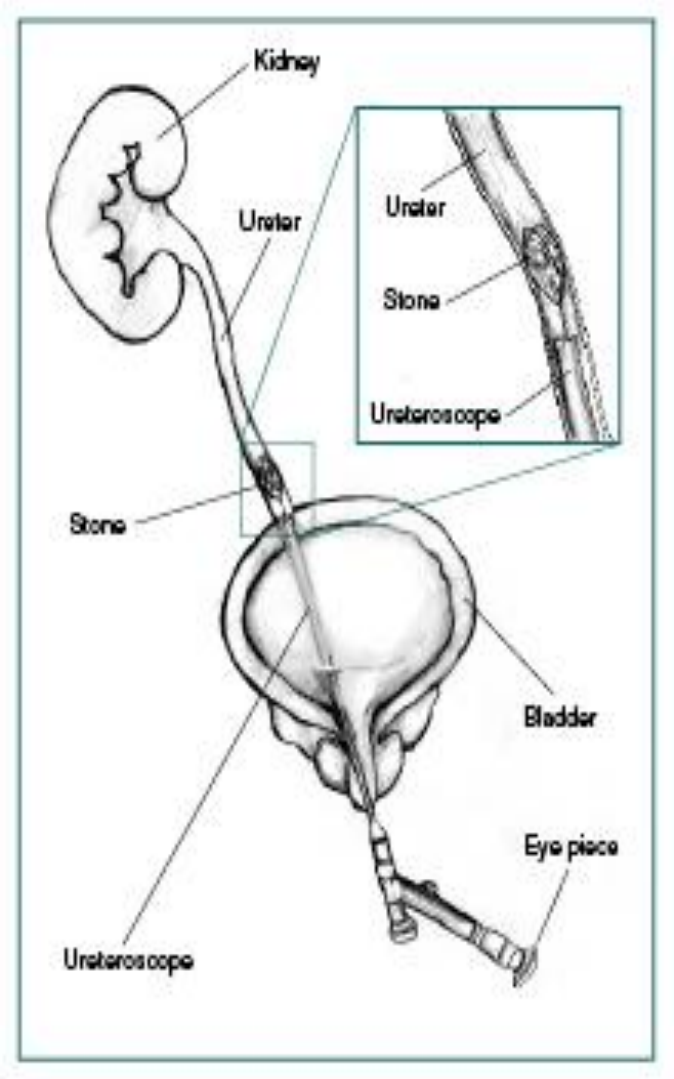
It is the most frequently used procedure for the treatment of kidney stones. In ESWL, shock waves that are created outside the body travel through the skin and body tissues until they hit the denser stones. The stones break down into small particles and are easily passed through the urinary tract in the urine.

Percutaneous Nephrolithotomy

In this procedure, the surgeon makes a tiny incision in the back and creates a tunnel directly into the kidney. Using an instrument called a nephroscope, the surgeon locates and removes the stone.



Ureteroscopic Stone Removal



It may be needed for mid- and lower-ureter stones. The surgeon passes a small fiberoptic instrument called a **ureteroscope** through the urethra and bladder into the ureter. The surgeon then locates the stone and either removes it with a cage-like device or shatters it with a special instrument that produces a form of shock wave.

Lifestyle Changes

- drink more liquids
- avoid products with high calcium content
- eat less meat, fish, and poultry

Points to Remember

- A person with a family history of stones may be more likely to develop more stones.
- Drink plenty of liquids—water is best.
- Blood and urine tests.
- Some people will need medicines to prevent stones from forming.
- People with chronic urinary tract infections and stones will often need a stone removed if the doctor determines that the stone is causing the infection.


Thank you for attention!
The presentation was made by Petrova A.I.,
student of 240 gr.
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