

KIDNEY STONES



*Like pebbles through
an hourglass so are
passing kidney stones*

What are kidney stones?^{1,2}

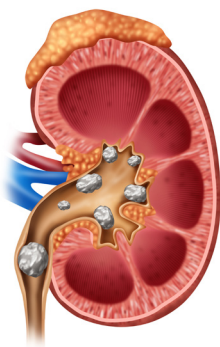
Kidney stones (medically known as renal lithiasis or urolithiasis) are hard masses formed when there is not enough liquid to dissolve waste chemicals like calcium, oxalate and phosphorus in the urine. The color, shape and size of kidney stones vary from that of small flecks to golf balls.

*Correct diet and drinking
lots of water can prevent
kidney stones*

How do kidney stones form?

Urine has various waste chemicals dissolved in it, which get eliminated by the kidneys. When the urine becomes overly concentrated meaning, there is too much waste in too little liquid, crystals begin to form. The crystals bind together to form hard, dry chunks².

At the same time, your urine may lack substances that prevent crystals from sticking together. So, the body compensates by forming stones with the excess substances⁶.



Causes and risk factors^{1,2}

A kidney stone often has no definite, single cause, but its prevalence is on the rise. The increase has been attributed to several factors:

- Insufficient water intake
- Dietary choices e.g. high-protein, high-sodium (salt), low-fibre intake
- Alcohol intake
- Exercise (too little or too much)
- Family or personal history of stone disease
- Pre-existing medical conditions e.g. dehydration, chronic diarrhoea, obesity, malabsorption, hypertension, diabetes, urinary tract infections
- Habitual use of certain medications e.g. antacids, laxatives
- Trauma or surgery e.g. gastric bypass surgery

Signs and symptoms of kidney stones^{1,2}

The symptoms could be one or more of the following:

- Severe pain (also known as renal colic) on either side of your lower back, which may be accompanied by high temperature
- Frequent urination and persistent urge to urinate
- Blood in the urine
- Urine that smells bad or looks cloudy

*1 in 10 people will have a kidney
stone at some time in their lives^{2,3}*

*Men have double the risk of
developing a kidney stone
than women^{2,3}*

*Kidney stones have been found in
children as young as 5 years of age^{2,3}*

How are kidney stones treated^{1,2,4?}

Preventative care

The main goal is to prevent the onset and recurrence of kidney stones

Drink adequate water daily, to make your urine pale yellow or almost colourless and to achieve urinary output of at least 2.5ml/day⁴

- Adjust your diet to limit intake of high-risk foods
- Avoid crash, extreme weight-loss diets
- Moderate your alcohol intake
- Check your family medical history
- Have regular medical check-ups
- Take steps to control underlying medical conditions
- Consult your healthcare provider, to get professional medical advice

Visually observe your urine colour and clarity

While the urine is generally darker in the morning, if it's consistently orange or brown, drink more water until it becomes light yellow or pale straw yellow. You can also check urine pH levels with pH test strips from your local pharmacy.

Pharmacological intervention^{1,4}

The treatment for kidney stones is similar in children and adults. Doctors may try to facilitate stone passage without surgery. In addition to lifestyle or dietary changes, you may get medication to

- Help pass your kidney stone (diuretic, alpha-blocker)
- Reduce renal colic episodes (non-steroid anti-inflammatory drugs)
- Make your urine less acidic (urinary-alkalinizer)
- Supportive care may also be provided with rehydration therapy, pain relievers, or anti-emetics (nausea, vomiting)

Surgical procedures^{1,4}

If all fails, surgical procedures may be considered to either break up, remove or bypass kidney stones that are

- too large, or block urinary flow
- delicately located and posing a risk of bleeding, kidney damage
- a sign of recurrent kidney stones and ongoing urinary tract infections

One kidney stone can lead to another

Once kidney stones are removed, without preventative measures you have a 50% chance of developing new stones within 5 years or so.⁵ The average rate of new stone formation in those who develop recurrent stones is 1 every 2 to 3 years.⁶

What Cystone® can do for you



Gives you clinically proven, safe, effective relief from kidney stones

- **Preventative effects** on kidney stone formation and prevents recurrence
- **Dissolving effects** cause the hard deposits to dissipate in urine and naturally break them apart into tiny fragments preventing any damage
- **Detox-cleansing effects** through normalising urine flow and promoting expulsion of small stones and gravel along with urine
- **Tissue protective effects** as an anti-inflammatory and antimicrobial agent
- **Restorative effects** by correcting the crystalloid-colloid imbalance and resuming normal kidney function

Cystone® is indicated for

- Kidney stones (adult and pediatric)
- Crystalluria (crystals in the urine)
- Recurrent kidney stones
- Dysuria (painful urination)
- Burning urination

Please note: This is an informational leaflet only and should not be used for diagnosis. For more information on kidney stones, consult your healthcare professional.

References: 1. Mayo Clinic. Kidney stones. Available at <http://www.mayoclinic.org>. Accessed on 21 May 2017 2. The National Kidney Foundation 2016. A to Z Health Guide: Kidney stones. Accessed <https://www.kidney.org/atoz/content/kidneystones> on 21st of May 2017 3. The global burden of disease, 2004 update. World Health Organization. 4. Justin B. Ziemba, Brian R. Matlaga. Guideline of guidelines: kidney stones. BJU International 2015; 116 (2), p184 -189. 5. Hall PM. Nephrolithiasis: treatment, causes, and prevention. Cleveland Clinic J Med. 2009; 76(10), p583-91. 6. Asplin JR, Coe FL, Favus MJ, Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, Loscalzo J. Nephrolithiasis. Harrison's Principles of Internal Medicine. 17th ed. New York, NY: McGraw Hill Medical; 2008:1815-20.



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