

Kidney Stones &

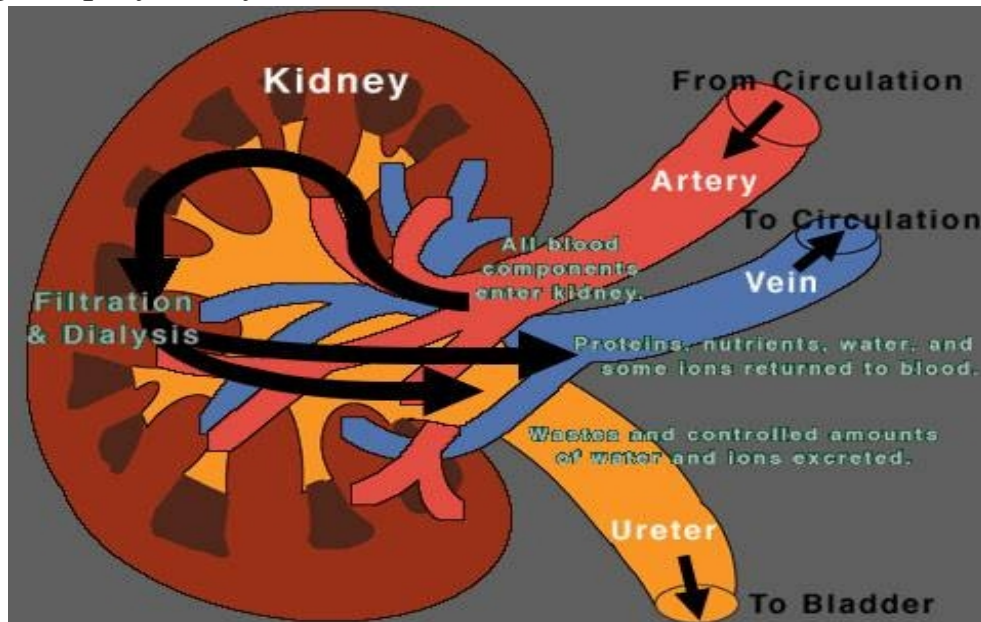
How to prevent or dissolve kidney stones?

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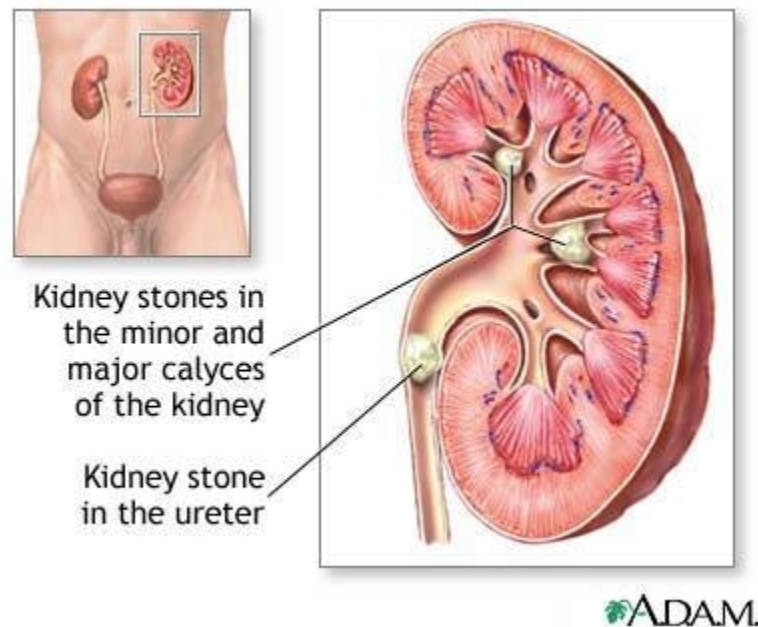
What are Kidney Stones?

- ◆ How do kidney stones form? - from the blood flowing through them, the kidneys produce urine by removing some fluid and certain salts dissolved in that fluid. When concentration levels of dissolved salts reach the point at which the salts no longer dissolve, they precipitate out of solution and become solid again, forming a solid mass of tiny crystals in the kidney's tubal system (nephrons), called a kidney stone.
- ◆ Kidney stone characteristics – size ranges from that of a grain of sand to a golf ball. Depending on their composition, they may be smooth, round, jagged, spiky or asymmetrical.



- ◆ Kidney stones can block urine flow to the bladder causing severe pain - one or more kidney stones can block urine flow through the ureter

carrying urine from the kidney to the bladder. Small stones may not be felt, but larger stones moving through the ureter may cause severe pain. A blockage can build up pressure in the kidney causing swelling (hydronephrosis), which over time can damage the kidney. A blockage further down the ureter can cause the muscular ureter to swell (hydroureter) initiating painful spasms,



What salts are in kidney stones?

The most common types of kidney stones are:

- ◆ **Calcium stones** (~80% of all kidney stones) -
 - Composed of *calcium* + *phosphate* or *oxalate*
 - High blood calcium levels can result from such as:
 - √ **Renal tubular acidosis** - If the kidneys do not effectively eliminate acid, it builds up in the blood. The kidney may be defective or simply overworked by an overly acid-forming diet.
 - √ **Acid-Alkaline Balance**
 - √ **Primary parathyroidism**
 - √ **Sarcoidosis**

- √ **Hyperthyroidism**
- √ **Hyperoxaluria**
- √ **Some cancers** – E.g. Multiple myeloma (cancer of bone marrow plasma cells),
- Possible dietary causes of calcium **PHOSPHATE** stones – high levels of phosphate fertilizers used in growing vegetables;
- Possible dietary causes of calcium **OXALATE** stones - include beer, black pepper, berries, broccoli, chocolate, spinach and tea.

◆ **Struvite Stones (10% of kidney stones)**

- Composed of **magnesium ammonium phosphate**
- Occur mostly in those having **chronic infection in the urinary tract (UTI's)** – and specifically caused by bacteria that produce urease, that makes urine more alkaline, allowing struvite to precipitate out of urine and form stones.

◆ **Uric acid stones (~5% of kidney stones)**

- Occur with **increased blood levels of uric acid** – Digestion produces uric acid and if the acid level in the urine is high, the uric acid may not stay dissolved and solid uric acid particles precipitate out in the urine, which can cling together to form a kidney stone.
- **About 50% of those with uric acid stones have uric acid deposits in other body parts, called gout** - E.g. big toe joint.
- **Causes of uric acid stones :**
 - √ **Dietary causes** – today, excess uric acid in the body is most likely due to excess consumption of fructose in sugars, such as in sodas, candies and sweetened foods. Also, uric acid levels are increased by consumption of alcohol (particularly beer and wine) and purine-rich foods, including offal, red meat and shellfish.
 - √ **Medical or disease causes** - include chemotherapy, certain bone

marrow disorders over-producing blood cells, and Lesch-Nyhan syndrome (an inherited disorder).

- ◆ Cystine stones (~2% of kidney stones)

- People with cystine stones process dietary amino acids abnormally – cystine is an amino acid

Kidney Stone Symptoms

- ◆ Crampy, spasmodic bouts of severe pain as stones pass into ureter – pain usually begins in the area between the lower ribs and the hip bone. As the stone nears the bladder, the pain often radiates along the inner thigh. Women may feel the pain in the vulva, while men often feel pain in the testicles.
- ◆ Nausea/vomiting and frequent/painful urination are common - can feel like you are peeing a combination of sharp broken glass and boiling acid!
- ◆ Fever and chills - usually resulting from obstruction of the ureter, which allows bacteria to become trapped in the kidney and cause a kidney infection (pyelonephritis).

Who gets Kidney Stones?

- ◆ ~600,000 persons in the U.S. develop kidney stones each year
- ◆ Men are ~4-5 times more likely to develop them than women - ~10% of men and 5% of women age 30-50 in U.S. suffer from kidney stones, with first episode at age 20-30.
- ◆ Up to 2/3 of men who have passed one stone will experience a recurrence – averaging 9 years between episodes
- ◆ Kidney stones are 4-5 times more common in whites than in African Americans

How to prevent or dissolve kidney stones?

How to Dissolve Kidney Stones

(And how to prevent them)

On this page:

- [Overview of kidney stone treatments](#)
- [Kidney stone treatment options](#)
- [Kidney stone prevention](#)
 - [General tactics to prevent kidney stones](#)
 - [Calcium oxalate stones](#)
 - [Uric acid stones](#)
 - [Foot reflexology](#)

Related Links:

- [Kidney Stones](#)
- [Emergency Kidney stone Dissolving Treatments](#)
- [Dr. Schulze Kidney Stone Dissolving Treatment](#)
- [Alternative Kidney stone Dissolving Treatment](#)

Overview of Kidney Stone Treatments

- ◆ Drink 2-3 qts water /day – believed to help stones pass more quickly;
- ◆ Transdermal magnesium – magnesium is a smooth muscle relaxant, which can help reduce pain and facilitate passing stones; oral magnesium supplementation takes too long to increase blood levels for this purpose.

[Transdermal Magnesium Chloride](#)

- ◆ Anti-lithic (stone dissolving) herbal remedies can assist in dissolving small kidney stones - including gravel root (*Eupatorium purpureum*), hydrangea root (*Hydrangea arborescens*), and Marshmallow root (*Althaea officinalis*).
- ◆ Starfruit (*Averrhoa carambola*) increases urine flow and relieves pain.
- ◆ Large stones may need medical intervention for removal - either surgically or by being pulverized (crushed) with shock waves (called [lithotripsy](#))

Kidney Stone Treatment Options

[Emergency Kidney stone Dissolving Treatments](#)

[Dr. Schulze Kidney Stone Dissolving Treatment](#)

[Alternative Kidney stone Dissolving Treatment](#)

Kidney Stone Prevention

GENERAL TACTICS TO PREVENT KIDNEY STONES

- ◆ Drink more water each day – at least 2 qts. /day
- ◆ Dietary changes can be made to reduce risk of future stone formation - and aid resorption of existing stones. Changes are dependent on type of stones.
- ◆ Regularly make and drink Dr. Schulze Kidney/Bladder tea in early afternoon and again in early evening - This tea tastes really good! – you can even add a dash of honey.
 - Pour 12oz boiling water over 1 rounded tablespoon of Dr. Schulze kidney tea - TIP: grind dry tea in a coffee grinder or Minimate® chopper for a few seconds to allow some of the chunkier herbs to infuse into the water better – however, to retain freshness, don't grind more than you will use in a few days;
 - Allow to steep 5-10 minutes
 - Strain into 2 - 8oz. cups - one cup for the a.m. and reheat 2nd cup or drink cold in p.m.
 - Optionally, add 1 dropperful of Dr. Schulze kidney bladder tonic to each tea – to enhance therapy

Dr. Schulze Kidney/bladder Tea and Tonic can be purchased at Dr.

Schulze's website:

<http://www.herbdoc.com>

Prices (Sep 2012): K/B tea - \$18, K/B Tonic (called K/B Formula) - \$28

- ◆ Passed kidney stones should be analyzed to determine the type of stone and its likely cause - passed stones should be caught for analysis by straining the urine through a sieve.

PREVENT CALCIUM OXALATE STONES

- ◆ Magnesium and B6 will dissolve calcium oxalate kidney stones - due to a lack of magnesium, this type of stone is produced when calcium precipitates and fixes to oxalic acid in such as potatoes, spinach and tomatoes; Studies have found that magnesium and B6 help prevent recurrence of calcium oxalate kidney stones by increasing the solubility of calcium in urine. Lack of magnesium is also indirectly responsible for rampant tooth decay, poor bone development, osteoporosis and slow healing of broken bones and fractures.

Magnesium against Calcium oxalate kidney stones
Magnesium – Missing Miracle Mineral
Transdermal Magnesium Chloride

Note: Magnesium is not involved in the production of uric acid or phosphate stones

- ◆ Eat less acid-forming protein and more alkaline-forming fruits and vegetables to lower blood calcium level – high-protein foods utilize calcium to neutralize their acidic effect on body fluids, including the blood. The irony here is that people eat high protein dairy foods for their calcium content. The alkalizing calcium (brought into the blood to neutralize acid formed from protein metabolism), overloads the kidneys, which excretes much of the calcium in urine. A better choice for calcium intake is low protein /high calcium /alkalizing foods, such as carrots, sesame seeds, citrus, and greens. (High-level blood calcium also contributes to plaque build-up in the arteries). Ounce for ounce home-made, organic carrot juice is on par with milk for calcium content, and

carrots don't need to neutralize acidic, pasteurized dairy and use up calcium supplies.

- ◆ Do not supplement more than 1 g/day of vitamin C - excess vitamin C in the body undergoes chemical conversion into oxalate leading to a rise in the levels of oxalate in the urine. Since accumulated oxalate gives rise to kidney stone formation, it is advised that people with kidney stones not exceed 1 gram /day of supplemental vitamin C.
- ◆ Avoid refined carbs, drinking pasteurized milk and a sedentary lifestyle - which increase blood calcium levels
<http://www.healthline.com/galecontent/guided-imagery>

PREVENT URIC ACID STONES

- ◆ Alkalinization of the urine through diet can dissolve uric acid crystals /stones - the best alkalizing diet includes:
 - A diet high in fruits and vegetables (raw is best) and juices is ideal - Limit or eliminate all animal based food.
 - A daily "green" drink supplement.
 - Avoid – refined sugars, junk foods, alcohol, soda, coffee, milk, or teas except for kidney cleansing teas.
- ◆ Avoid a high protein diet
- ◆ Limit alcohol consumption
- ◆ Do not consume more than 25g fructose/ day

Fructose consumption linked to kidney stones

Taylor EN, Curhan GC: Fructose consumption and the risk of kidney stones. Kidney Int 73 : 207– 212, 2008

A 12-ounce can of cola sweetened with high-fructose corn syrup, contains 22.5 g fructose

[Excess Fructose](#)