published in Reader's Digest, 12 December 2018

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When life gives you kidney stones, it might help to make lemonade. Kidney stones cause symptoms in 9% of the population and they can be serious. Find out more.

### **Agony**

When kidney stones block urine flow, the kidney may stretch, causing pain akin to or worse than childbirth.

## **Blood**

If the stone scratches the kidney or ureters (the tubes that connect the kidneys to the bladder), blood may appear in the urine.

#### Calcium

Kidney stones are crystals made from chemicals in the urine. The 'Oxford Stone Group [4]' describe how the urine must be saturated with these chemicals for the stones to form – a bit like growing a crystal in a jar in school chemistry lessons.

They're commonly made of something called calcium oxalate....but cutting down on <u>calcium consumption [5]</u> is not advised, since it can actually increase the likelihood of kidney stones through some complex chemistry.

# **Drinking enough**

Dehydration is a common cause of kidney stones.

# **Egyptians**

One of the earliest recorded kidney stones is that found in an Egyptian mummy [6].



#### **Fever**

A high temperature does not usually accompany a kidney stone – if it does, it may herald an associated infection.

### Gout

Gout [7] can double the risk of kidney stones in men. The conditions are similar in that gout also involves the build-up of crystals, in the joints and tissues.

## History

Kidney stone formers include Napolean I, Oliver Cromwell, William Harvey [8] and Isaac Newton.

#### Infection

Bacteria can build up behind a kidney stone, leading to a kidney infection.

# **Jewellery**

"When we break up kidney stones [9] surgically, some of them are indeed quite beautiful — like a geode, like the rings on a tree, or something you'd hang on your wall," says Dr. Brian Matlaga. Any one for kidney stone jewellery?

# Kidney damage

Kidney stone formers have a higher risk of developing <u>chronic kidney disease [10]</u>, perhaps because the kidney is stretched and damaged by the build-up of urine in the ureters.

## Lithotripsy

Is the name given to the procedure in which kidney stones are shattered by soundwaves so that the smaller pieces can then be passed more easily in the urine.

#### Medication

Is usually directed towards pain relief. For those at high risk of kidney stones, some types of <u>water tablets [11]</u> can also help.

# Nausea

Feeling sick is a common symptom of kidney stones.

# **Oxalates**

These are natural substances found in foods such as nuts, spinach, chocolate, rhubarb, beetroot and strawberries. Excessive consumption can lead to kidney stones made up of calcium oxalate.

# **Parathyroid**

The parathyroid glands in your neck control the amount of calcium in your blood. High levels of <u>parathyroid</u> <u>hormone [12]</u> can cause kidney stones to form.

# Questions

Information and support can be found at groups such as 'Beat Kidney Stones' [13] and Kidney Research UK [14].

## **Restless**

The pain of kidney stones can make you restless and writhing.



#### Size

Most stones are small, being only a few millimetres in diameter, and can be passed easily in the urine. Stones larger than one centimetre are more troublesome; the largest kidney stone is reported to have weighed 1.36 kg!

#### Tea strainer

Your doctor may ask you to collect the stone by urinating through a tea strainer, a stocking or a coffee filter paper. Study of the stone will help inform treatment decisions.

### **Undetected**

Many stones cause no symptoms at all, and are instead a "chance" finding on a CT scan. They may stay in the kidney or pass out painlessly in the urine.

#### Vitamin C

Large doses of <u>Vitamin C [15]</u> may increase the amount of oxalate in your urine, increasing the risk of kidney stone formation. "A lot isn't necessarily better" when it comes to vitamin C and the kidney, writes <u>Harvard Health [16]</u>.

### Weight

Being overweight [17] can increase the risk of kidney stones developing.

# X ray

Can be useful in tracking the passage of a kidney stone. CT scans and ultrasound are also useful.

# Young people

The peak age of onset for kidney stone formation is 20-30 years.

## Zoo

Animals such as <u>Squeegee the seal [18]</u> and <u>Cloe the snow leopard [19]</u> were diagnosed with kidney stones; Cloe underwent lithotripsy to shatter her stones, in a world-first experiment.



Source URL: https://helencowan.co.uk/z-kidney-stones

#### Links

[1] https://www.readersdigest.co.uk/health/health-conditions/an-a-to-z-on-kidney-stones [2] https://helencowan.co.uk/../tags/kidney [3] https://helencowan.co.uk/../tags/surgery [4]

https://www.ndm.ox.ac.uk/osg/stone-formation [5] https://www.kidney.org/atoz/content/kidneystones\_prevent [6]

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# A to Z on kidney stones

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