

Title: Kidney Stones

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Abstract: There is approximately a 50% probability of developing symptoms from asymptomatic renal stones in 5 years making the elective treatment of asymptomatic stones a reasonable decision but not a mandatory one. This risk seems to increase in patients with history of past symptomatic renal stones which is important information to give when counseling a patient in their treatment options.

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How can you treat kidney stones?

If your kidney stone is small and you aren't sick you may be able to pee the stone out. There are some medicines that may help you pass the stone. A strainer over your toilet when you pee will catch any stones to make sure you know if they came out.

If your stone is too big or you are too sick to wait for it to come out when you pee you may need surgery. There are four different surgeries for stone removal...

1. **Ureteroscopy:** a small flexible wire that slides up your urethra to your kidney to grab the stone.
2. **ESWL:** a powerful beam of energy is aimed at the stone to break it up from outside your body.
3. **PCNL:** a tube is placed through the skin of your back to get to the kidney where the stone is. The stone is then removed through this tube.
4. **Open surgery:** a surgeon cuts into your back to get to your kidney. The kidney is then cut open to get the stone out.

Each method has risks and benefits that your doctor can explain to you. Your stone may be better treated with one option and not another based on factors such as stone size, composition, and location.

Resources

You can learn more about kidney stones from the following sources...

Mayo Clinic:

<http://www.mayoclinic.com/health/kidney-stones/ds00282>

National Kidney and Urologic Diseases Information Clearinghouse:

<http://kidney.niddk.nih.gov/kudiseases/pubs/stonesadults/>

Emedicine:

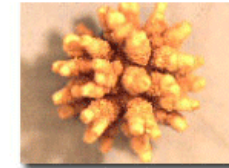
http://www.emedicinehealth.com/kidney_stones/article_em.htm

Medline:

http://www.nlm.nih.gov/medlineplus/kidney_stones.html



Kidney Stones



University of MN Medical School

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Patient Education Tool

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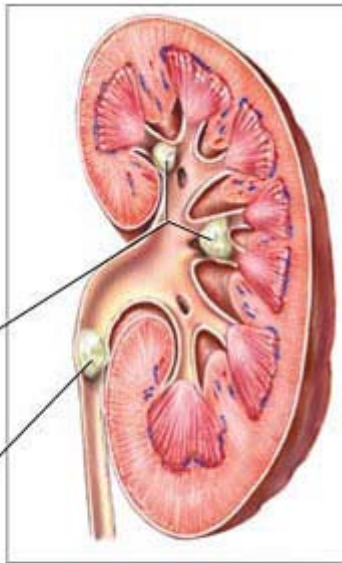
What Are Kidney Stones?

Kidney stones are stones that form in your kidneys. You may hear your doctor call them renal stones or nephrolithiasis, but these are just two ways to say the same thing. They are not the same as gallstones which are stones that form in your gallbladder. Kidney stones can range in size. Some are as small as a grain of sand while others are as large as a golf ball. There are several types of kidney stones, each made of a different material, the most common being calcium oxalate.



Kidney stones in the minor and major calyces of the kidney

Kidney stone in the ureter



What Causes Kidney Stones?

Many things can cause kidney stones. The most common cause of kidney stones is dehydration, or *not drinking enough water*. Other causes may include...

- The foods you eat (diet)
- The shape of your kidneys (genetics)
- Infection
- How your body breaks down and gets rid of waste in your body (metabolism)
- Certain medications

Because there are several different types of stones, not all stones will have the same cause.

How can you prevent kidney stones?

- Drink lots of water
- Eat less salt
- Eat less protein (meats, beans, nuts)
- Do NOT stop eating foods with calcium (cheese, milk, spinach)
- All stones are different. Talk to your doctor about specific recommendations for your type of kidney stone.

How do you know if you have stones?

Your doctor can take a picture of your kidneys to look for stones. There are different ways to do this including x-ray, CT scan, and ultrasound. Each of these methods is noninvasive meaning they don't require shots or surgery.



Symptoms of Kidney Stones:

- Back pain
- Blood in your pee
- Having to pee often
- Pain when you pee
- Nausea
- Vomiting
- Some people do not have any symptoms