

# Kidney Stones



## What Are Kidney Stones?

Kidney stones are small pebbles of salt and minerals that form in the kidney from materials in urine. Kidney stones may stay in the kidney or break loose and move down the urinary tract. If they do break loose, they can cause pain, but usually not permanent damage. Kidney stones are more likely to occur in male adults, but women can get them too. You have a higher risk for kidney stones if you:

- Have had kidney stones in the past
- Have a family history of kidney stones
- Are dehydrated and not drinking enough water
- Eat a diet high in protein, salt, and sugar
- Are overweight or obese
- Have certain digestive diseases, like inflammatory bowel disease or chronic diarrhea
- Have had weight loss surgery



## What Are the Warning Signs of Kidney Stones?

- Severe pain in the side and/or back. Sometimes the pain can spread to the groin area. The pain can be steady or come and go.
- Nausea and vomiting
- Fever, if the stone has caused an infection
- Blood or pus in the urine
- Painful urination



## How Are Kidney Stones Diagnosed?

- Your doctor will ask questions about your medical history and give a physical exam.
- If your doctor thinks you have kidney stones, you may need blood and/or urine tests. Imaging tests, such as ultrasound or a CT scan, can also help your doctor make a diagnosis.
- Your doctor may ask you to urinate through a strainer to catch any stones that pass. These can then be tested to help your doctor learn more about what is causing your kidney stones.



## How Are Kidney Stones Treated?

Most kidney stones pass out of the body without a doctor's help. Passing kidney stones does not usually cause any permanent damage, but can be very painful.

- Your doctor may prescribe pain medicines. You should drink lots of water to help pass a kidney stone.
- Your doctor may give you a medicine to help you pass the kidney stone.
- If a stone is too large to pass by itself, you may need to have it removed.

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## Questions for My Doctor

- Could the stones cause any damage to my kidneys?
- Which method for removing large stones is best for me?
- What medicines should I take to help with the pain?
- Should I go to the emergency room if I think I am passing a stone?
- Why does my kidney stone need to be examined?
- How can I prevent kidney stones from coming back?



## Bottom Line

- Kidney stones are pebbles of salt and minerals that form in the kidney from materials in the urine.
- Symptoms of a kidney stone are severe pain in the back or side, nausea, vomiting, blood in the urine, and pain with urination.
- Your blood and urine may be tested to diagnose kidney stones. Imaging tests, like ultrasound or CT scans, can also help with diagnosis.
- Most kidney stones pass out of the body without a doctor’s help. For small stones, you may be prescribed pain medicines and medicine to help you pass the stone, and told to drink lots of water.
- For larger stones, there are different procedures to remove them. Talk to your doctor about which procedure is best for you.

## For More Information

**MedlinePlus:** [www.nlm.nih.gov/medlineplus/kidneystones.html](http://www.nlm.nih.gov/medlineplus/kidneystones.html)

**National Kidney Foundation:** <https://www.kidney.org/atoz/content/kidneystones>

**Urology Care Foundation:** [www.urologyhealth.org/urologic-conditions/kidney-stones](http://www.urologyhealth.org/urologic-conditions/kidney-stones)

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